

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549**

**FORM 10-K**

**ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**  
For the fiscal year ended September 30, 2016

**TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**  
For the transition period from \_\_\_\_\_ to \_\_\_\_\_  
Commission File Number 001-32833

**TransDigm Group Incorporated**

(Exact name of registrant as specified in its charter)

**Delaware**  
(State or other jurisdiction of incorporation or organization)

**41-2101738**  
(I.R.S. Employer Identification No.)

**1301 East 9<sup>th</sup> Street, Suite 3000, Cleveland, Ohio**  
(Address of principal executive offices)

**44114**  
(Zip Code)

**(216) 706-2960**  
(Registrants' telephone number, including area code)

**Securities registered pursuant to Section 12(b) of the Act:**

**Common Stock**  
(Title)

**New York Stock Exchange**  
(Name of exchange on which registered)

**Securities registered pursuant to Section 12(g) of the Act:**

None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes  No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes  No

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports) and (2) has been subject to such filing requirements for the past 90 days. Yes  No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes  No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer  Accelerated filer  Non-accelerated filer  Smaller reporting company

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes  No

The aggregate market value of the voting and non-voting common stock held by non-affiliates of the registrant as of March 31, 2016, based upon the last sale price of such voting and non-voting common stock on that date, was \$10,869,510,353.

The number of shares outstanding of TransDigm Group Incorporated's common stock, par value \$.01 per share, was 53,347,732 as of November 6, 2016.

Documents incorporated by reference: The registrant incorporates by reference in Part III hereof portions of its definitive Proxy Statement for its 2017 Annual Meeting of Stockholders.

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*Special Note Regarding Forward-Looking Statements*

*This report on Form 10-K contains forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and 27A of the Securities Act of 1933, as amended. Discussions containing such forward-looking statements may be found in Items 1, 1A, 2, 3, 5, 7 and 7A hereof and elsewhere within this Report generally. In addition, when used in this Report, the words "believe," "may," "will," "should," "expect," "intend," "plan," "predict," "anticipate," "estimate" or "continue" and other words and terms of similar meaning are intended to identify forward-looking statements. Although the Company (as defined below) believes that its plans, intentions and expectations reflected in or suggested by such forward-looking statements are reasonable, such forward-looking statements are subject to a number of risks and uncertainties that could cause actual results to differ materially from the forward-looking statements made in this Report. The more important of such risks and uncertainties are set forth under the caption "Risk Factors" and elsewhere in this Report. Many such factors are outside the control of the Company. Consequently, such forward-looking statements should be regarded solely as our current plans, estimates and beliefs. We do not undertake, and specifically decline, any obligation, to publicly release the results of any revisions to these forward-looking statements that may be made to reflect any future events or circumstances after the date of such statements or to reflect the occurrence of anticipated or unanticipated events. All forward-looking statements attributable to the Company or persons acting on its behalf are expressly qualified in their entirety by these cautionary statements.*

Important factors that could cause actual results to differ materially from the forward-looking statements made in this Annual Report on Form 10-K include but are not limited to: the sensitivity of our business to the number of flight hours that our customers' planes spend aloft and our customers' profitability, both of which are affected by general economic conditions; future geopolitical or other worldwide events; cyber-security threats and natural disasters; our reliance on certain customers; the U.S. defense budget and risks associated with being a government supplier; failure to maintain government or industry approvals; failure to complete or successfully integrate acquisitions; our indebtedness; potential environmental liabilities; increases in raw material costs, taxes and labor costs that cannot be recovered in product pricing; risks and costs associated with our international sales and operations; and other factors.

In this report, the term "TD Group" refers to TransDigm Group Incorporated, which holds all of the outstanding capital stock of TransDigm Inc. The terms "Company," "TransDigm," "we," "us," "our" and similar terms refer to TD Group, together with TransDigm Inc. and its direct and indirect subsidiaries. References to "fiscal year" mean the year ending or ended September 30. For example, "fiscal year 2016" or "fiscal 2016" means the period from October 1, 2015 to September 30, 2016.

**PART I**

**ITEM 1. BUSINESS**

**The Company**

TransDigm Inc. was formed in 1993 in connection with a leveraged buyout transaction. TD Group was formed in 2003 to facilitate a leveraged buyout of TransDigm Inc. The Company was owned by private equity funds until its initial public offering in 2006. TD Group's common stock is publicly traded on the New York Stock Exchange, or NYSE, under the ticker symbol "TDG."

We believe we are a leading global designer, producer and supplier of highly engineered aircraft components for use on nearly all commercial and military aircraft in service today. Our business is well diversified due to the broad range of products we offer to our customers. We estimate that about 90% of our net sales for fiscal year 2016 were generated by proprietary products. In addition, for fiscal year 2016, we estimate that we generated about 80% of our net sales from products for which we are the sole source provider.

Most of our products generate significant aftermarket revenue. Once our parts are designed into and sold on a new aircraft, we generate net sales from aftermarket consumption over the life of that aircraft, which is generally estimated to be approximately 25 to 30 years. A typical platform can be produced for 20 to 30 years, giving us an estimated product life cycle in excess of 50 years. We estimate that approximately 54% of our net sales in fiscal year 2016 were generated from aftermarket sales, the vast majority of which come from the commercial and military aftermarkets. These aftermarket revenues have historically produced a higher gross margin and been more stable than sales to original equipment manufacturers, or OEMs.

**Products**

We primarily design, produce and supply highly engineered proprietary aerospace components (and certain systems/subsystems) with significant aftermarket content. We seek to develop highly customized products to solve specific needs for aircraft operators and manufacturers. We attempt to differentiate ourselves based on engineering, service and manufacturing capabilities. We typically choose not to compete for non-proprietary "build to print" business because it frequently offers lower

margins than proprietary products. We believe that our products have strong brand names within the industry and that we have a reputation for high quality, reliability and customer support.

Our business is well diversified due to the broad range of products that we offer to our customers. Some of our more significant product offerings, substantially all of which are ultimately provided to end-users in the aerospace industry, include mechanical/electro-mechanical actuators and controls, ignition systems and engine technology, specialized pumps and valves, power conditioning devices, specialized AC/DC electric motors and generators, NiCad batteries and chargers, engineered latching and locking devices, rods and locking devices, engineered connectors and elastomers, databus and power controls, cockpit security components and systems, specialized cockpit displays, aircraft audio systems, specialized lavatory components, seat belts and safety restraints, engineered interior surfaces and related components, lighting and control technology, military personnel parachutes, high performance hoists, winches and lifting devices and cargo loading, handling and delivery systems.

## Segments

The Company's businesses are organized and managed in three reporting segments: Power & Control, Airframe and Non-aviation.

The Power & Control segment includes operations that primarily develop, produce and market systems and components that predominately provide power to or control power of the aircraft utilizing electronic, fluid, power and mechanical motion control technologies. Major product offerings include mechanical/electro-mechanical actuators and controls, ignition systems and engine technology, specialized pumps and valves, power conditioning devices, specialized AC/DC electric motors and generators, databus and power controls, high performance hoists, winches and lifting devices and cargo loading and handling systems. Primary customers of this segment are engine and power system and subsystem suppliers, airlines, third party maintenance suppliers, military buying agencies and repair depots. Products are sold in the OEM and aftermarket market channels.

The Airframe segment includes operations that primarily develop, produce and market systems and components that are used in non-power airframe applications utilizing airframe and cabin structure technologies. Major product offerings include engineered latching and locking devices, rods and locking devices, engineered connectors and elastomers, cockpit security components and systems, aircraft audio systems, specialized lavatory components, seat belts and safety restraints, engineered interior surfaces and related components, lighting and control technology, military personnel parachutes and cargo delivery systems. Primary customers of this segment are airframe manufacturers and cabin system suppliers and subsystem suppliers, airlines, third party maintenance suppliers, military buying agencies and repair depots. Products are sold in the OEM and aftermarket market channels.

The Non-aviation segment includes operations that primarily develop, produce and market products for non-aviation markets. Major product offerings include seat belts and safety restraints for ground transportation applications, mechanical/electro-mechanical actuators and controls for space applications, and refueling systems for heavy equipment used in mining, construction and other industries. Primary customers of this segment are off-road vehicle suppliers and subsystem suppliers, child restraint system suppliers, satellite and space system suppliers and manufacturers of heavy equipment used in mining, construction and other industries.

For financial information about our segments, see Note 16, "Segments" to our consolidated financial statements included herein.

## Sales and Marketing

Consistent with our overall strategy, our sales and marketing organization is structured to continually develop technical solutions that meet customer needs. In particular, we attempt to focus on products and programs that will lead to high-margin, repeatable sales in the aftermarket.

We have structured our sales efforts along our major product offerings, assigning a business unit manager to certain products. Each business unit manager is expected to grow the sales and profitability of the products for which he or she is responsible and to achieve the targeted annual level of bookings, sales, new business and profitability for such products. The business unit managers are assisted by account managers and sales engineers who are responsible for covering major OEM and aftermarket accounts. Account managers and sales engineers are expected to be familiar with the personnel, organization and needs of specific customers to achieve total bookings and new business goals at each account and, together with the business unit managers, to determine when additional resources are required at customer locations. Most of our sales personnel are evaluated, in part, on their bookings and their ability to identify and obtain new business opportunities.

Though typically performed by employees, the account manager function may be performed by independent representatives depending on the specific customer, product and geographic location. We also use a number of distributors to

provide logistical support as well as serve as a primary customer contact with certain smaller accounts. Our major distributors are Aviall, Inc. (a subsidiary of The Boeing Company) and Satair A/S (a subsidiary of Airbus S.A.S.).

### **Manufacturing and Engineering**

We maintain 57 principal manufacturing facilities. Most of our manufacturing facilities are comprised of manufacturing, distribution and engineering functions, and most facilities have certain administrative functions, including management, sales and finance. We continually strive to improve productivity and reduce costs, including rationalization of operations, developing improved control systems that allow for accurate accounting and reporting, investing in equipment, tooling, information systems and implementing broad-based employee training programs. Management believes that our manufacturing systems and equipment contribute to our ability to compete by permitting us to meet the rigorous tolerances and cost sensitive price structure of aircraft component customers.

We attempt to differentiate ourselves from our competitors by producing uniquely engineered products with high quality and timely delivery. Our engineering costs are recorded in cost of sales and in selling and administrative expenses and research and development costs are recorded in selling and administrative expenses in our consolidated statements of income. The aggregate of engineering expense and research and development expense represents approximately 7% of our operating units' aggregate costs, or approximately 4% of our consolidated net sales. Our proprietary products, and particularly our new product initiatives, are designed by our engineers and are intended to serve the needs of the aircraft component industry. These proprietary designs must withstand the extraordinary conditions and stresses that will be endured by products during use and meet the rigorous demands of our customers' tolerance and quality requirements.

We use sophisticated equipment and procedures to comply with quality requirements, specifications and Federal Aviation Administration ("FAA") and OEM requirements. We perform a variety of testing procedures as required by our customers, such as testing under different temperature, humidity and altitude levels, shock and vibration testing and X-ray fluorescent measurement. These procedures, together with other customer approved techniques for document, process and quality control, are used throughout our manufacturing facilities. Refer to Note 3, "Summary of Significant Accounting Policies" to the consolidated financial statements included herein with respect to total costs of research and development, which is incorporated herein by reference.

### **Customers**

We predominantly serve customers in the commercial, regional, business jet and general aviation aftermarket, which accounts for approximately 37% of total sales; the commercial aerospace OEM market, comprising large commercial transport manufacturers and regional and business jet manufacturers, which accounts for approximately 29% of total sales; and the defense market, which accounts for approximately 30% of total sales. Non-aerospace sales comprise approximately 4% of our total sales.

Our customers include: (1) distributors of aerospace components; (2) worldwide commercial airlines, including national and regional airlines; (3) large commercial transport and regional and business aircraft OEMs; (4) various armed forces of the United States and friendly foreign governments; (5) defense OEMs; (6) system suppliers; and (7) various other industrial customers. For the year ended September 30, 2016, Airbus S.A.S. (which includes Satair A/S, a distributor of commercial aftermarket parts to airlines throughout the world) accounted for approximately 13% of our net sales and The Boeing Company (which includes Aviall, Inc., also a distributor of commercial aftermarket parts to airlines throughout the world) accounted for approximately 12% of our net sales. Our top ten customers for fiscal year 2016 accounted for approximately 45% of our net sales. Products supplied to many of our customers are used on multiple platforms.

Active commercial production programs include the Boeing 737, 747, 767, 777 and 787, the Airbus A318/19/20/21 (including neo), A330/A340, A350 and A380, the Bombardier CRJ's, Challenger and Learjets, the Embraer RJ's, the Cessna Citation family, the Raytheon Premier and Hawker and most Gulfstream airframes. Military platforms include aircraft such as the Boeing C-17, F-15, F-18, P-8 and V-22, the Airbus A400M, the Lockheed Martin C-130J, F-16 and F-35 Joint Strikefighter, the Northrop Grumman E-2C Hawkeye, the Sikorsky UH-60 helicopter, CH-47 Chinook and AH-64 Apache helicopters, the General Atomics Predator Drone and the Raytheon Patriot Missile. TransDigm has been awarded numerous contracts for the development of engineered products for production on the Airbus A330neo, the Boeing 737 MAX and 777X, the Embraer 175/190/195 E2, the Sikorsky S-97 and JMR helicopter.

The markets in which we sell our products are, to varying degrees, cyclical and have experienced upswings and downturns. The demand for our commercial aftermarket parts and services depends on, among other things, the breadth of our installed OEM base, revenue passenger miles ("RPMs"), the size and age of the worldwide aircraft fleet and, to a lesser extent, airline profitability. The demand for defense products is specifically dependent on government budget trends, military campaigns and political pressures.

## **Competition**

The niche markets within the aerospace industry that we serve are relatively fragmented and we face several competitors for many of the products and services we provide. Due to the global nature of the commercial aircraft industry, competition in these categories comes from both U.S. and foreign companies. Competitors in our product offerings range in size from divisions of large public corporations to small privately-held entities with only one or two components in their entire product portfolios.

We compete on the basis of engineering, manufacturing and marketing high quality products, which we believe meet or exceed the performance and maintenance requirements of our customers, consistent and timely delivery, and superior customer service and support. The industry's stringent regulatory, certification and technical requirements, and the investments necessary in the development and certification of products, create barriers to entry for potential new competitors. As long as customers receive products that meet or exceed expectations and performance standards, we believe that they will have a reduced incentive to certify another supplier because of the cost and time of the technical design and testing certification process. In addition, we believe that the availability, dependability and safety of our products are reasons for our customers to continue long-term supplier relationships.

## **Government Contracts**

Companies engaged in supplying defense-related equipment and services to U.S. Government agencies are subject to business risks specific to the defense industry. These risks include the ability of the U.S. Government to unilaterally: (1) suspend us from receiving new contracts based on alleged violations of procurement laws or regulations; (2) terminate existing contracts; (3) reduce the value of existing contracts; (4) audit our contract-related costs and fees, including allocated indirect costs; and (5) control and potentially prohibit the export of our products.

## **Governmental Regulation**

The commercial aircraft component industry is highly regulated by the FAA in the United States and by the Joint Aviation Authorities in Europe and other agencies throughout the world, while the military aircraft component industry is governed by military quality specifications. We, and the components we manufacture, are required to be certified by one or more of these entities or agencies, and, in many cases, by individual OEMs, in order to engineer and service parts and components used in specific aircraft models.

We must also satisfy the requirements of our customers, including OEMs and airlines that are subject to FAA regulations, and provide these customers with products and services that comply with the government regulations applicable to commercial flight operations. In addition, the FAA requires that various maintenance routines be performed on aircraft components. We believe that we currently satisfy or exceed these maintenance standards in our repair and overhaul services. We also maintain several FAA approved repair stations.

In addition, our businesses are subject to many other laws and requirements typically applicable to manufacturers and exporters. Without limiting the foregoing, sales of many of our products that will be used on aircraft owned by foreign entities are subject to compliance with export control laws and the manufacture of our products and the operations of our businesses, including the disposal of hazardous wastes, are subject to compliance with applicable environmental laws.

## **Market Channels**

The commercial aerospace industry, including the aftermarket and OEM market, is impacted by the health of the global economy and geo-political events around the world. The commercial aerospace industry had shown strength with increases in revenue passenger miles, or RPMs, between 2003 and 2008, as well as increases in OEM production and backlog. However, in 2009, the global economic downturn negatively impacted the commercial aerospace industry causing RPMs to decline slightly. This market sector began to rebound in 2010 and positive growth has continued through 2016 with increases in RPMs, as well as the growth in the large commercial OEM sector (aircraft with 100 or more seats) with order announcements by The Boeing Company and Airbus S.A.S. leading to planned increases in production. The 2017 leading indicators and industry consensus suggest a continuation of current trends in the commercial transport market sector supported by continued RPM growth and increases in production at the OEM level.

The defense aerospace market is dependent on government budget constraints, the timing of orders and the extent of global conflicts. It is not necessarily affected by general economic conditions that affect the commercial aerospace industry.

Our presence in both the commercial aerospace and military sectors of the aerospace industry may mitigate the impact on our business of any specific industry risk. We service a diversified customer base in the commercial and military aerospace industry, and we provide components to a diverse installed base of aircraft, which mitigates our exposure to any individual airframe platform. At times, declines in sales in one channel have been offset by increased sales in another. However, due to differences between the profitability of our products sold to OEM and aftermarket customers, variation in product mix can cause variation in gross margin.

There are many short-term factors (including inventory corrections, unannounced changes in order patterns, strikes and mergers and acquisitions) that can cause short-term disruptions in our quarterly shipment patterns as compared to previous quarters and the same periods in prior years. As such, it can be difficult to determine longer-term trends in our business based on quarterly comparisons. To normalize for short-term fluctuations, we tend to look at our performance over several quarters or years of activity rather than discrete short-term periods.

There are also fluctuations in OEM and aftermarket ordering and delivery requests from quarter-to-quarter, as well as variations in product mix from quarter-to-quarter, that may cause positive or negative variations in gross profit margins since commercial aftermarket sales have historically produced a higher gross margin than sales to commercial OEMs. Again, in many instances these are timing events between quarters and must be balanced with macro aerospace industry indicators.

#### **Commercial Aftermarket**

The key growth factors in the commercial aftermarket include worldwide RPMs and the size and activity level of the worldwide fleet of aircraft. After a decline in RPMs in 2009, worldwide RPMs returned to growth between 2010 and 2016 and current industry consensus indicates that positive RPM growth will continue in 2017.

#### **Commercial OEM Market**

The commercial transport market sector, the largest sector in the commercial OEM market, grew modestly during 2016. Our commercial transport OEM shipments and revenues generally run ahead of the Boeing and Airbus airframe delivery schedules. As a result and consistent with prior years, our fiscal 2017 shipments will be a function of, among other things, the estimated 2017 and 2018 commercial airframe production rates. We have been experiencing increased sales in the large commercial OEM sector (aircraft with 100 or more seats) driven by an increase in production by The Boeing Company and Airbus S.A.S tied to previous order announcements. Industry consensus indicates this production increase will continue in 2017 and 2018, though the growth may continue to moderate and begin to flatten.

#### **Defense**

Our military business fluctuates from year to year, and is dependent, to a degree, on government budget constraints, the timing of orders and the extent of global conflicts. In recent years, defense spending has reached historic highs, due in part to the military engagements in Afghanistan and Iraq and the war on terrorism. For a variety of reasons, the military spending outlook is very uncertain. For planning purposes we assume that military related sales of our types of products to be flat in future years over the recent high levels.

#### **Raw Materials**

We require the use of various raw materials in our manufacturing processes. We also purchase a variety of manufactured component parts from various suppliers. At times, we concentrate our orders among a few suppliers in order to strengthen our supplier relationships. Most of our raw materials and component parts are generally available from multiple suppliers at competitive prices.

#### **Intellectual Property**

We have various trade secrets, proprietary information, trademarks, trade names, patents, copyrights and other intellectual property rights, which we believe, in the aggregate but not individually, are important to our business.

#### **Backlog**

As of September 30, 2016, the Company estimated its sales order backlog at \$1,554 million compared to an estimated sales order backlog of \$1,428 million as of September 30, 2015. The increase in estimated sales order backlog is primarily due to acquisitions. The majority of the purchase orders outstanding as of September 30, 2016 are scheduled for delivery within the next twelve months. Purchase orders may be subject to cancellation or deferral by the customer prior to shipment. The level of unfilled purchase orders at any given date during the year will be materially affected by the timing of the Company's receipt of purchase orders and the speed with which those orders are filled. Accordingly, the Company's backlog as of September 30, 2016 may not necessarily represent the actual amount of shipments or sales for any future period.

#### **Foreign Operations**

Although we manufacture a significant portion of our products in the United States, we manufacture some products in Belgium, China, Germany, Hungary, Malaysia, Mexico, Norway, Sri Lanka, Sweden, and the United Kingdom. Although the majority of sales of our products are made to customers (including distributors) located in the United States, our products are ultimately sold to and used by customers (including airlines and other end users of aircraft) throughout the world. A number of risks inherent in international operations could have a material adverse effect on our results of operations, including currency fluctuations, difficulties in staffing and managing multi-national operations, general economic and political uncertainties and potential for social unrest in countries in which we operate, limitations on our ability to enforce legal rights and remedies,

restrictions on the repatriation of funds, change in trade policies, tariff regulation, difficulties in obtaining export and import licenses and the risk of government financed competition.

#### **Environmental Matters**

Our operations and facilities are subject to a number of federal, state, local and foreign environmental laws and regulations that govern, among other things, discharges of pollutants into the air and water, the generation, handling, storage and disposal of hazardous materials and wastes, the remediation of contamination and the health and safety of our employees. Environmental laws and regulations may require that the Company investigate and remediate the effects of the release or disposal of materials at sites associated with past and present operations. Certain facilities and third-party sites utilized by the Company have been identified as potentially responsible parties under the federal superfund laws and comparable state laws. The Company is currently involved in the investigation and remediation of a number of sites under applicable laws.

#### **Employees**

As of September 30, 2016, we had approximately 9,300 full-time, part-time and temporary employees. Approximately 11% of our full-time and part-time employees were represented by labor unions. Collective bargaining agreements between us and these labor unions expire at various dates ranging from November 2016 to April 2020. We consider our relationship with our employees generally to be satisfactory.

#### **Available Information**

TD Group's Annual Report on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, including any amendments, will be made available free of charge on the Company's website, [www.transdigm.com](http://www.transdigm.com), as soon as reasonably practicable, following the filing of the reports with the Securities and Exchange Commission.

### **ITEM 1A. RISK FACTORS**

*Set forth below are important risks and uncertainties that could negatively affect our business and financial condition and could cause our actual results to differ materially from those expressed in forward-looking statements contained in this report.*

**Our commercial business is sensitive to the number of flight hours that our customers' planes spend aloft, the size and age of the worldwide aircraft fleet and our customers' profitability. These items are, in turn, affected by general economic and geopolitical and other worldwide conditions.**

Our commercial business is directly affected by, among other factors, changes in revenue passenger miles (RPMs), the size and age of the worldwide aircraft fleet and, to a lesser extent, changes in the profitability of the commercial airline industry. RPMs and airline profitability have historically been correlated with the general economic environment, although national and international events also play a key role. For example, in the past, the airline industry has been severely affected by the downturn in the global economy, higher fuel prices, the increased security concerns among airline customers following the events of September 11, 2001, the Severe Acute Respiratory Syndrome (SARS) epidemic, and the conflicts in Afghanistan and Iraq, and could be impacted by future geopolitical or other worldwide events, such as war, terrorist acts, or a worldwide infectious disease outbreak. In addition, global market and economic conditions have been challenging with turbulence in the U.S. and international markets and economies and have prolonged declines in business and consumer spending. As a result of the substantial reduction in airline traffic resulting from these events, the airline industry incurred large losses and financial difficulties. Some carriers have also parked or retired a portion of their fleets and have reduced workforces and flights. During periods of reduced airline profitability, some airlines may delay purchases of spare parts, preferring instead to deplete existing inventories. If demand for new aircraft and spare parts decreases, there would be a decrease in demand for certain of our products. An adverse change in demand could impact our results of operations, collection of accounts receivable and our expected cash flow generation from current and acquired businesses which may adversely impact our financial condition and access to capital markets.

**Our sales to manufacturers of aircraft are cyclical, and a downturn in sales to these manufacturers may adversely affect us.**

Our sales to manufacturers of large commercial aircraft, such as The Boeing Company, Airbus S.A.S, and related OEM suppliers, as well as manufacturers of business jets (which accounted for approximately 27% of our net sales in fiscal year 2016) have historically experienced periodic downturns. In the past, these sales have been affected by airline profitability, which is impacted by, among other things, fuel and labor costs, price competition, downturns in the global economy and national and international events. In addition, sales of our products to manufacturers of business jets are impacted by, among other things, downturns in the global economy. Downturns adversely affect our net sales, gross margin and net income.



**We rely heavily on certain customers for much of our sales.**

Our two largest customers for fiscal year 2016 were Airbus S.A.S. (which includes Satair A/S) and The Boeing Company (which includes Aviall, Inc.). Airbus S.A.S. accounted for approximately 13% of our net sales and The Boeing Company accounted for approximately 12% of our net sales in fiscal year 2016. Our top ten customers for fiscal year 2016 accounted for approximately 45% of our net sales. A material reduction in purchasing by one of our larger customers for any reason, including but not limited to economic downturn, decreased production, strike or resourcing, could have a material adverse effect on our net sales, gross margin and net income.

**We generally do not have guaranteed future sales of our products. Further, when we enter into fixed price contracts with some of our customers, we take the risk for cost overruns.**

As is customary in our business, we do not generally have long-term contracts with most of our aftermarket customers and, therefore, do not have guaranteed future sales. Although we have long-term contracts with many of our OEM customers, many of those customers may terminate the contracts on short notice and, in most cases, our customers have not committed to buy any minimum quantity of our products. In addition, in certain cases, we must anticipate the future volume of orders based upon the historic purchasing patterns of customers and upon our discussions with customers as to their anticipated future requirements, and this anticipated future volume of orders may not materialize.

We also have entered into multi-year, fixed-price contracts with some of our customers, pursuant to which we have agreed to perform the work for a fixed price and, accordingly, realize all the benefit or detriment resulting from any decreases or increases in the costs of making these products. Sometimes we accept a fixed-price contract for a product that we have not yet produced, and this increases the risk of cost overruns or delays in the completion of the design and manufacturing of the product. Most of our contracts do not permit us to recover increases in raw material prices, taxes or labor costs.

**U.S. military spending is dependent upon the U.S. defense budget.**

The military and defense market is significantly dependent upon government budget trends, particularly the U.S. Department of Defense (the "DOD") budget. In addition to normal business risks, our supply of products to the United States Government is subject to unique risks largely beyond our control. DOD budgets could be negatively impacted by several factors, including, but not limited to, a change in defense spending policy by the current presidential administration, the U.S. Government's budget deficits, spending priorities, the cost of sustaining the U.S. military presence in the Middle East and possible political pressure to reduce U.S. Government military spending, each of which could cause the DOD budget to remain unchanged or to decline. A significant decline in U.S. military expenditures could result in a reduction in the amount of our products sold to the various agencies and buying organizations of the U.S. Government.

**We intend to pursue acquisitions. Our business may be adversely affected if we cannot consummate acquisitions on satisfactory terms, or if we cannot effectively integrate acquired operations.**

A significant portion of our growth has occurred through acquisitions. Any future growth through acquisitions will be partially dependent upon the continued availability of suitable acquisition candidates at favorable prices and upon advantageous terms and conditions. We intend to pursue acquisitions that we believe will present opportunities consistent with our overall business strategy. However, we may not be able to find suitable acquisition candidates to purchase or may be unable to acquire desired businesses or assets on economically acceptable terms. In addition, we may not be able to raise the capital necessary to fund future acquisitions. Because we may actively pursue a number of opportunities simultaneously, we may encounter unforeseen expenses, complications and delays, including regulatory complications or difficulties in employing sufficient staff and maintaining operational and management oversight.

We regularly engage in discussions with respect to potential acquisition and investment opportunities. If we consummate an acquisition, our capitalization and results of operations may change significantly. Future acquisitions could result in margin dilution and further likely result in the incurrence of additional debt and contingent liabilities and an increase in interest and amortization expenses or periodic impairment charges related to goodwill and other intangible assets as well as significant charges relating to integration costs.

Acquisitions involve risks that the businesses acquired will not perform in accordance with expectations and that business judgments concerning the value, strengths and weaknesses of businesses acquired will prove incorrect. In addition, we may not be able to successfully integrate any business we acquire into our existing business. The successful integration of new businesses depends on our ability to manage these new businesses and cut excess costs. The successful integration of future acquisitions may also require substantial attention from our senior management and the management of the acquired business, which could decrease the time that they have to service, attract customers and develop new products and services or attend to other acquisition opportunities.

**We are subject to certain unique business risks as a result of supplying equipment and services to the U.S. Government.**

Companies engaged in supplying defense-related equipment and services to U.S. Government agencies are subject to business risks specific to the defense industry. These risks include the ability of the U.S. Government to unilaterally:

- suspend us from receiving new contracts based on alleged violations of procurement laws or regulations;
- terminate existing contracts;
- reduce the value of existing contracts; and
- audit our contract-related costs and fees, including allocated indirect costs.

Most of our U.S. Government contracts can be terminated by the U.S. Government for its convenience without significant notice. Termination for convenience provisions provide only for our recovery of costs incurred or committed, settlement expenses and profit on the work completed prior to termination.

On contracts for which the price is based on cost, the U.S. Government may review our costs and performance, as well as our accounting and general business practices. Based on the results of such audits, the U.S. Government may adjust our contract-related costs and fees, including allocated indirect costs. In addition, under U.S. Government purchasing regulations, some of our costs, including most financing costs, amortization of intangible assets, portions of research and development costs, and certain marketing expenses may not be subject to reimbursement.

Furthermore, even where the price is not based on cost, the U.S. Government may seek to review our costs to determine whether our pricing is “fair and reasonable.” Our subsidiaries are periodically subject to a pricing review. Such a review could be costly and time consuming for our management and could distract from our ability to effectively manage the business. As a result of such a review, we could be subject to providing a refund to the U.S. Government or we could be asked to enter into an arrangement whereby our prices would be based on cost or the DOD could seek to pursue alternative sources of supply for our parts. Any of those occurrences could lead to a reduction in our revenue from, or the profitability of certain of our supply arrangements with, certain agencies and buying organizations of the U.S. Government.

Moreover, U.S. Government purchasing regulations contain a number of additional operation requirements, which do not apply to entities not engaged in government contracting. Failure to comply with such government contracting requirements could result in civil and criminal penalties that could have a material adverse effect on the Company’s results of operations.

**Our business may be adversely affected if we would lose our government or industry approvals or if more stringent government regulations are enacted or if industry oversight is increased.**

The aerospace industry is highly regulated in the United States and in other countries. In order to sell our components, we and the components we manufacture must be certified by the FAA, the DOD and similar agencies in foreign countries and by individual manufacturers. If new and more stringent government regulations are adopted or if industry oversight increases, we might incur significant expenses to comply with any new regulations or heightened industry oversight. In addition, if material authorizations or approvals were revoked or suspended, our business would be adversely affected.

In addition to the aviation approvals, we are at times required to obtain approval from U.S. Government agencies to export our products. Failure to obtain approval to export or determination by the U.S. Government that we failed to receive required approvals or licenses could eliminate or restrict our ability to sell our products outside the United States, and the penalties that could be imposed by the U.S. Government for failure to comply with these laws could be significant.

**Our indebtedness could adversely affect our financial health and could harm our ability to react to changes to our business and prevent us from fulfilling our obligations under our indebtedness.**

We have a significant amount of indebtedness. As of September 30, 2016, our total indebtedness, excluding approximately \$17 million of outstanding letters of credit, was approximately \$10.2 billion, which was 106.8% of our total book capitalization as a result of our prior year dividends being funded with indebtedness and the addition of approximately \$1.8 billion in net new debt during fiscal 2016. We also incurred additional indebtedness subsequent to September 30, 2016 more fully described in Note 23, “Subsequent Events” in the notes to consolidated financial statements included herein.

In addition, we may be able to incur substantial additional indebtedness in the future. For example, as of September 30, 2016, we had approximately \$583 million of unused commitments under our revolving loan facility and \$50 million of unused capacity under our trade receivable securitization facility (the “Securitization Facility”) (with the availability of the capacity under the Securitization Facility being dependent on the amount of our trade receivables). Although our senior secured credit facility and the indentures governing the various senior subordinated notes outstanding (the “Indentures”) contain restrictions on the incurrence of additional indebtedness, these restrictions are subject to a number of significant qualifications and exceptions, and the indebtedness incurred in compliance with these qualifications and exceptions could be substantial. For example, if the usage of the revolving loan facility exceeds 25% of the total revolving commitments, the Company will be

required to maintain a maximum consolidated net leverage ratio of net debt, as defined, to trailing four-quarter EBITDA As Defined. A breach of any of the covenants or an inability to comply with the required leverage ratio could result in a default under the senior secured credit facility or the Indentures.

Our substantial debt could also have other important consequences to investors. For example, it could:

- increase our vulnerability to general economic downturns and adverse competitive and industry conditions;
- increase the risk we are subjected to downgrade or put on a negative watch by the ratings agencies;
- require us to dedicate a substantial portion of our cash flow from operations to payments on our indebtedness, thereby reducing the availability of our cash flow to fund working capital requirements, capital expenditures, acquisitions, research and development efforts and other general corporate requirements;
- limit our flexibility in planning for, or reacting to, changes in our business and the industry in which we operate;
- place us at a competitive disadvantage compared to competitors that have less debt; and
- limit, along with the financial and other restrictive covenants contained in the documents governing our indebtedness, among other things, our ability to borrow additional funds, make investments and incur liens.

In addition, all of our debt under the senior secured credit facility, which includes \$5.3 billion in term loans and a revolving loan facility of \$600 million, bears interest at floating rates. Accordingly, if interest rates increase, our debt service expense will also increase. Interest rate swap and cap agreements are used to manage interest rate risk associated with floating-rate borrowings under our credit facilities. For information about our interest rate swap and cap agreements, see Note 20, “Derivatives and Hedging Instruments” in the notes to the consolidated financial statements included herein.

Our substantial level of indebtedness increases the possibility that we may be unable to generate cash sufficient to pay, when due, the principal of, interest on or other amounts due in respect of our indebtedness, including the Indentures. We cannot assure that our business will generate sufficient cash flow from operations or that future borrowings will be available to us under the senior secured credit facility or otherwise in amounts sufficient to enable us to service our indebtedness. If we cannot service our debt, we will have to take actions such as reducing or delaying capital investments, selling assets, restructuring or refinancing our debt or seeking additional equity capital.

**To service our indebtedness, we will require a significant amount of cash. Our ability to generate cash depends on many factors beyond our control and any failure to meet our debt service obligations could harm our business, financial condition and results of operations.**

Our ability to make payments on and to refinance our indebtedness, including the Indentures, amounts borrowed under the senior secured credit facility, amounts due under our Securitization Facility, and to fund our operations, will depend on our ability to generate cash in the future, which, to a certain extent, is subject to general economic, financial, competitive, legislative, regulatory and other factors that are beyond our control.

We cannot assure that our business will generate sufficient cash flow from operations, that currently anticipated cost savings and operating improvements will be realized on schedule, or at all, or that future borrowings will be available to us under the senior secured credit facility or otherwise in amounts sufficient to enable us to service our indebtedness, including the amounts borrowed under the senior secured credit facility, amounts borrowed under our Securitization Facility and the Indentures, or to fund our other liquidity needs. If we cannot service our debt, we will have to take actions such as reducing or delaying capital investments, selling assets, restructuring or refinancing our debt or seeking additional equity capital. We cannot assure that any of these remedies could, if necessary, be effected on commercially reasonable terms, or at all. Our ability to restructure or refinance our debt will depend on the condition of the capital markets and our financial condition at such time. Any refinancing of our debt could be at higher interest rates and may require us to comply with more onerous covenants, which could further restrict our business operations. The terms of existing or future debt instruments, the Securitization Facility, the Indentures and the senior secured credit facility may restrict us from adopting any of these alternatives. In addition, any failure to make payments of interest and principal on our outstanding indebtedness on a timely basis would likely result in a reduction of our credit rating, which could harm our ability to incur additional indebtedness on acceptable terms and would otherwise adversely affect the Indentures.

**The terms of the senior secured credit facility and Indentures may restrict our current and future operations, particularly our ability to respond to changes or to take certain actions.**

Our senior secured credit facility and the Indentures contain a number of restrictive covenants that impose significant operating and financial restrictions on TD Group, TransDigm Inc. and its subsidiaries (in the case of the senior secured credit facility) and TransDigm Inc. and its subsidiaries (in the case of the Indentures) and may limit their ability to engage in acts that may be in our long-term best interests. The senior secured credit facility and Indentures include covenants restricting, among

other things, the ability of TD Group, TransDigm Inc. and its subsidiaries (in the case of the senior secured credit facility) and TransDigm Inc. and its subsidiaries (in the case of the Indentures) to:

- incur or guarantee additional indebtedness or issue preferred stock;
- pay distributions on, redeem or repurchase our capital stock or redeem or repurchase our subordinated debt;
- make investments;
- sell assets;
- enter into agreements that restrict distributions or other payments from our restricted subsidiaries to us;
- incur or allow to exist liens;
- consolidate, merge or transfer all or substantially all of our assets;
- engage in transactions with affiliates;
- create unrestricted subsidiaries; and
- engage in certain business activities.

A breach of any of these covenants could result in a default under the senior secured credit facility or the Indentures. If any such default occurs, the lenders under the senior secured credit facility and the holders of the senior subordinated notes may elect to declare all outstanding borrowings, together with accrued interest and other amounts payable thereunder, to be immediately due and payable. The lenders under the senior secured credit facility also have the right in these circumstances to terminate any commitments they have to provide further borrowings. In addition, following an event of default under the senior secured credit facility, the lenders under that facility will have the right to proceed against the collateral granted to them to secure the debt, which includes our available cash, and they will also have the right to prevent us from making debt service payments on the senior subordinated notes. If the debt under the senior secured credit facility or the senior subordinated notes were to be accelerated, we cannot assure that our assets would be sufficient to repay in full our debt.

**We could incur substantial costs as a result of violations of or liabilities under environmental laws and regulations.**

Our operations and facilities are subject to a number of federal, state, local and foreign environmental laws and regulations that govern, among other things, discharges of pollutants into the air and water, the generation, handling, storage and disposal of hazardous materials and wastes, the remediation of contamination and the health and safety of our employees. Environmental laws and regulations may require that the Company investigate and remediate the effects of the release or disposal of materials at sites associated with past and present operations. Certain facilities and third-party sites utilized by subsidiaries of the Company have been identified as potentially responsible parties under the federal superfund laws and comparable state laws. The Company is currently involved in the investigation and remediation of a number of sites under applicable laws.

Estimates of the Company's environmental liabilities are based on current facts, laws, regulations and technology. These estimates take into consideration the Company's prior experience and professional judgment of the Company's environmental advisors. Estimates of the Company's environmental liabilities are further subject to uncertainties regarding the nature and extent of site contamination, the range of remediation alternatives available, evolving remediation standards, imprecise engineering evaluations and cost estimates, the extent of corrective actions that may be required and the number and financial condition of other potentially responsible parties, as well as the extent of their responsibility for the remediation.

Accordingly, as investigation and remediation proceed, it is likely that adjustments in the Company's accruals will be necessary to reflect new information. The amounts of any such adjustments could have a material adverse effect on the Company's results of operations or cash flows in a given period. Based on currently available information, however, the Company does not believe that future environmental costs in excess of those accrued with respect to sites for which the Company has been identified as a potentially responsible party are likely to have a material adverse effect on the Company's financial condition.

**We are dependent on our highly trained employees and any work stoppage or difficulty hiring similar employees could adversely affect our business.**

Because our products are complicated and highly engineered, we depend on an educated and trained workforce. There is substantial competition for skilled personnel in the aircraft component industry, and we could be adversely affected by a shortage of skilled employees. We may not be able to fill new positions or vacancies created by expansion or turnover or attract and retain qualified personnel.

Although we believe that our relations with our employees are satisfactory, we cannot assure that we will be able to negotiate a satisfactory renewal of collective bargaining agreements or that our employee relations will remain stable. Because

we maintain a relatively small inventory of finished goods, any work stoppage could materially and adversely affect our ability to provide products to our customers.

**Our business is dependent on the availability of certain components and raw materials from suppliers.**

Our business is affected by the price and availability of the raw materials and component parts that we use to manufacture our components. Our business, therefore, could be adversely impacted by factors affecting our suppliers (such as the destruction of our suppliers' facilities or their distribution infrastructure, a work stoppage or strike by our suppliers' employees or the failure of our suppliers to provide materials of the requisite quality), or by increased costs of such raw materials or components if we were unable to pass along such price increases to our customers. Because we maintain a relatively small inventory of raw materials and component parts, our business could be adversely affected if we were unable to obtain these raw materials and components from our suppliers in the quantities we require or on favorable terms. Although we believe in most cases that we could identify alternative suppliers, or alternative raw materials or component parts, the lengthy and expensive FAA and OEM certification processes associated with aerospace products could prevent efficient replacement of a supplier, raw material or component part.

**Our operations depend on our manufacturing facilities, which are subject to physical and other risks that could disrupt production.**

A number of our manufacturing facilities are located in the greater Los Angeles area, an area known for earthquakes, and are thus vulnerable to damage. In addition, a number of our manufacturing facilities are located along the Eastern seaboard area susceptible to hurricanes. We are also vulnerable to damage from other types of disasters, including power loss, fire, explosions, floods, communications failures, terrorist attacks and similar events. Disruptions could also occur due to cyber-attacks, computer or equipment malfunction (accidental or intentional), operator error or process failures. Any disruption of our ability to operate our business could result in a material decrease in our revenues or significant additional costs to replace, repair or insure our assets, which could have a material adverse impact on our financial condition and results of operations.

**Operations and sales outside of the United States may be subject to additional risks.**

A number of risks inherent in international operations could have a material adverse effect on our results of operations, including currency fluctuations, difficulties in staffing and managing multi-national operations, general economic and political uncertainties and potential for social unrest in countries in which we operate, limitations on our ability to enforce legal rights and remedies, restrictions on the repatriation of funds, change in trade policies, tariff regulation, difficulties in obtaining export and import licenses and the risk of government financed competition. Furthermore, the Company is subject to laws and regulations, such as the Foreign Corrupt Practices Act, UK Bribery Act and similar local anti-bribery laws, which generally prohibit companies and their employees, agents and contractors from making improper payments for the purpose of obtaining or retaining business. Failure to comply with these laws could subject the Company to civil and criminal penalties that could materially adversely affect the Company's results of operations.

**We face significant competition.**

We operate in a highly competitive global industry and compete against a number of companies. Competitors in our product lines are both U.S. and foreign companies and range in size from divisions of large public corporations to small privately held entities. We believe that our ability to compete depends on high product performance, consistent high quality, short lead-time and timely delivery, competitive pricing, superior customer service and support and continued certification under customer quality requirements and assurance programs. We may have to adjust the prices of some of our products to stay competitive.

**We could be adversely affected if one of our components causes an aircraft to crash.**

Our operations expose us to potential liabilities for personal injury or death as a result of the failure of an aircraft component that we have designed, manufactured or serviced. While we maintain liability insurance to protect us from future product liability claims, in the event of product liability claims our insurers may attempt to deny coverage or any coverage we have may not be adequate. We also may not be able to maintain insurance coverage in the future at an acceptable cost. Any liability not covered by insurance or for which third party indemnification is not available could result in significant liability to us.

In addition, a crash caused by one of our components could damage our reputation for quality products. We believe our customers consider safety and reliability as key criteria in selecting a provider of aircraft components. If a crash were to be caused by one of our components, or if we were to otherwise fail to maintain a satisfactory record of safety and reliability, our ability to retain and attract customers may be materially adversely affected.

**We could incur substantial costs as a result of data protection concerns.**

The interpretation and application of data protection laws in the U.S., Europe and elsewhere are uncertain and evolving. It is possible that these laws may be interpreted and applied in a manner that is inconsistent with our data practices. Compliance could cause us to incur substantial costs or require us to change our business practices in a manner adverse to our business.

In addition, despite our efforts to protect confidential information, our facilities and systems may be vulnerable to data loss, including cyber-attacks. This could lead to negative publicity, legal claims, theft, modification or destruction of proprietary or key information, damage to or inaccessibility of critical systems, manufacture of defective products, production downtimes, operational disruptions and other significant costs, which could adversely affect our reputation, financial condition and results of operations.

**We have recorded a significant amount of intangible assets, which may never generate the returns we expect.**

Mergers and acquisitions have resulted in significant increases in identifiable intangible assets and goodwill. Identifiable intangible assets, which primarily include trademarks, trade names, trade secrets, and technology, were approximately \$1.8 billion at September 30, 2016, representing approximately 16% of our total assets. Goodwill recognized in accounting for the mergers and acquisitions was approximately \$5.7 billion at September 30, 2016, representing approximately 53% of our total assets. We may never realize the full value of our identifiable intangible assets and goodwill, and to the extent we were to determine that our identifiable intangible assets or our goodwill were impaired within the meaning of applicable accounting standards, we would be required to write-off the amount of any impairment.

**The Company may be subject to risks relating to changes in its tax rates or exposure to additional income tax liabilities.**

The Company is subject to income taxes in the United States and various non-U.S. jurisdictions. The Company's domestic and international tax liabilities are dependent upon the location of earnings among these different jurisdictions. The Company's future results of operations could be adversely affected by changes in the Company's effective tax rate as a result of changes in the mix of earnings in countries with differing statutory tax rates, changes in the valuation of deferred tax assets, challenges by tax authorities or changes in tax laws or regulations. In addition, the amount of income taxes paid by the Company is subject to ongoing audits by U.S. federal, state and local tax authorities and by non-U.S. tax authorities. If these audits result in assessments different from amounts reserved, future financial results may include unfavorable adjustments to the Company's tax liabilities, which could have a material adverse effect on the Company's results of operations.

**Our stock price may be volatile, and an investment in our common stock could suffer a decline in value.**

There has been significant volatility in the market price and trading volume of equity securities, which is unrelated to the financial performance of the companies issuing the securities. These broad market fluctuations may negatively affect the market price of our common stock. Shareholders may not be able to sell their shares at or above the purchase price due to fluctuations in the market price of our common stock caused by changes in our operating performance or prospects, including possible changes due to the cyclical nature of the aerospace industry and other factors such as fluctuations in OEM and aftermarket ordering, which could cause short-term swings in profit margins, or unrelated to our operating performance, including market conditions affecting the stock market generally or the stocks of aerospace companies more specifically.

**Future sales of our common stock in the public market could lower our share price.**

We may sell additional shares of common stock into the public markets or issue convertible debt securities to raise capital in the future. The market price of our common stock could decline as a result of sales of a large number of shares of our common stock in the public markets or the perception that these sales could occur. These sales, or the possibility that these sales may occur, also might make it more difficult for us to sell equity securities to raise capital at a time and price that we deem appropriate.

**Our corporate documents and Delaware law contain certain provisions that could discourage, delay or prevent a change in control of our company.**

Provisions in our amended and restated certificate of incorporation and bylaws may discourage, delay or prevent a merger or acquisition involving us that our stockholders may consider favorable. For example, our amended and restated certificate of incorporation authorizes our Board of Directors to issue up to 149,600,000 shares of "blank check" preferred stock. Without stockholder approval, the Board of Directors has the authority to attach special rights, including voting and dividend rights, to this preferred stock. With these rights, holders of preferred stock could make it more difficult for a third party to acquire us. Our amended and restated certificate of incorporation also provides that the affirmative vote of the holders of at least 75% of the voting power of our issued and outstanding capital stock, voting together as a single class, is required for the alteration, amendment or repeal of certain provisions of our amended and restated certificate of incorporation and certain provisions of our amended and restated bylaws, including the provisions relating to our stockholders' ability to call special meetings, notice provisions for stockholder business to be conducted at an annual meeting, requests for stockholder lists and corporate records, nomination and removal of directors, and filling of vacancies on our Board of Directors.

We are also subject to the anti-takeover provisions of Section 203 of the Delaware General Corporation Law. Under these provisions, if anyone becomes an “interested stockholder,” we may not enter into a “business combination” with that person for three years without special approval, which could discourage a third party from making a takeover offer and could delay or prevent a change of control. For purposes of Section 203, “interested stockholder” means, generally, someone owning 15% or more of our outstanding voting stock or an affiliate of ours that owned 15% or more of our outstanding voting stock during the past three years, subject to certain exceptions as described in Section 203.

**We do not regularly declare and pay quarterly or annual cash dividends on our stock.**

On July 3, 2013, June 4, 2014 and October 14, 2016, the Company’s Board of Directors authorized and declared special cash dividends of \$22.00, \$25.00 and \$24.00, respectively, on each outstanding share of common stock and cash dividend equivalent payments to holders of options under its stock option plans.

Notwithstanding the special cash dividends declared in July 2013, June 2014 and October 2016, we do not anticipate declaring regular quarterly or annual cash dividends on our common stock or any other equity security in the foreseeable future. The amounts that may be available to us to pay future special cash dividends are restricted under our debt and other agreements. Any payment of special cash dividends on our common stock in the future will be at the discretion of our Board of Directors and will depend on our results of operations, earnings, capital requirements, financial condition, future prospects, contractual restrictions and other factors deemed relevant by our Board of Directors. Therefore, shareholders should not rely on regular quarterly or annual dividend income from shares of our common stock and should not rely on special dividends with any regularity or at all.

**ITEM 1B. UNRESOLVED STAFF COMMENTS**

None.

**ITEM 2. PROPERTIES**

TransDigm's principal owned properties as of September 30, 2016 are as follows:

Location	Reporting Segment	Square Footage
Miesbach, Germany	Power & Control	242,000
Liberty, SC	Power & Control	219,000
Waco, TX	Power & Control	218,800
Ingolstadt, Germany	Airframe	191,900
Kent, OH	Airframe	185,000
Liverpool, NY	Power & Control	177,000
Bridport, United Kingdom	Airframe	174,700
Union Gap, WA	Airframe	142,000
Phoenix, AZ	Airframe	138,700
Paks, Hungary	Airframe	137,800
Los Angeles, CA	Power & Control	131,000
Bohemia, NY	Power & Control	124,000
Westbury, NY	Power & Control	112,300
Llangeinor, United Kingdom	Airframe	110,000
Letchworth, United Kingdom	Airframe	88,200
Placentia, CA	Airframe	86,600
Addison, IL	Power & Control	83,300
Painesville, OH	Power & Control	63,900
Clearwater, FL	Power & Control	61,000
South Euclid, OH	Power & Control	60,000
Wichita, KS	Power & Control	57,000
Earlysville, VA	Power & Control	53,000
Branford, CT	Airframe	52,000
Avenel, NJ	Power & Control	48,500
Herstal, Belgium	Airframe	45,700
Rancho Cucamonga, CA	Power & Control	45,000
Valencia, CA	Airframe	38,000
Pennsauken, NJ	Airframe	38,000
Ryde, United Kingdom	Power & Control	33,200
Rancho Cucamonga, CA	Airframe	32,700
Melaka, Malaysia	Power & Control	24,800
Deerfield Beach, FL	Non-aviation	20,000

The Liberty, Waco, Kent, Union Gap, Phoenix, Los Angeles, Placentia, Addison, Painesville, South Euclid, Wichita, Avenel and Deerfield Beach properties and the two Rancho Cucamonga properties are subject to mortgage liens under our senior secured credit facility. The Bohemia property will also become subject to a mortgage lien under our senior secured credit facility. The Earlysville property is currently vacant.

TransDigm's principal leased properties as of September 30, 2016 are as follows:

Location	Reporting Segment	Square Footage
Holmestrand, Norway	Airframe	149,000
Santa Ana, CA	Airframe	144,300
Dayton, NV	Airframe	144,000
Everett, WA	Airframe	121,000
Whippany, NJ	Power & Control	115,300



Location	Reporting Segment	Square Footage
Whippany, NJ	Power & Control	114,300
Nittambuwa, Sri Lanka	Airframe	113,000
Goldsboro, NC	Power & Control	101,000
Fullerton, CA	Airframe	100,000
Anaheim, CA	Airframe	99,900
Collegeville, PA	Airframe	90,000
Miesbach, Germany	Power & Control	81,000
Kunshan, China	Non-aviation	75,300
Camarillo, CA	Power & Control	70,000
Matamoros, Mexico	Power & Control	60,500
Elkhart, IN	Non-aviation	51,500
Tempe, AZ	Power & Control	40,200
Chongqing, China	Airframe	37,700
Northridge, CA	Power & Control	35,000
Erie, PA	Airframe	30,500
Ashford, United Kingdom	Power & Control	28,000
London, United Kingdom	Airframe	27,400
Nogales, Mexico	Airframe	27,000
Kunshan, China	Airframe	25,600
Bridgend, United Kingdom	Airframe	24,800
Memphis, TN	Power & Control	20,800
Pennsauken, NJ	Airframe	20,500
San Diego, CA	Power & Control	19,000
Lund, Sweden	Power & Control	17,600
Lake Elsinore, CA	Airframe	16,100
Cleveland, OH	Power & Control	13,100

Our Cleveland, OH and Pasadena, CA corporate facilities house our principal executive offices, and we currently lease approximately 20,100 square feet and 5,300 square feet, respectively, for those purposes. TransDigm also leases certain of its other non-material facilities. Management believes that our machinery, plants and offices are in satisfactory operating condition and that it will have sufficient capacity to meet foreseeable future needs without incurring significant additional capital expenditures.

### ITEM 3. LEGAL PROCEEDINGS

During the ordinary course of business, TransDigm is from time to time a party to legal actions and other proceedings related to its businesses, products or operations. While TransDigm is currently involved in some legal proceedings, management believes the results of these proceedings will not have a material effect on its financial condition, results of operations, or cash flows.

**PART II****ITEM 5. MARKET FOR REGISTRANT’S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES****Market Information**

Our common stock is traded on the New York Stock Exchange, or NYSE, under the ticker symbol “TDG.” The following chart sets forth, for the periods indicated, the high and low sales prices of the common stock on the NYSE.

**Quarterly Stock Prices**

	High	Low
<b>Fiscal 2015</b>		
For Quarter ended December 27, 2014	\$ 201.04	\$ 166.61
For Quarter ended March 28, 2015	226.21	194.30
For Quarter ended June 27, 2015	232.18	211.33
For Quarter ended September 30, 2015	244.90	208.35
<b>Fiscal 2016</b>		
For Quarter ended January 2, 2016	\$ 238.51	\$ 210.22
For Quarter ended April 2, 2016	232.42	180.76
For Quarter ended July 2, 2016	268.00	218.56
For Quarter ended September 30, 2016	294.38	257.28

**Holdings**

On November 4, 2016, there were 36 stockholders of record of our common stock. We estimate that there were approximately 48,000 beneficial stockholders as of November 4, 2016, which includes an estimated amount of stockholders who have their shares held in their accounts by banks and brokers.

**Dividends**

In June 2014, TD Group’s Board of Directors declared and paid a special cash dividend of \$25.00 on each outstanding share of common stock. No dividends were declared in fiscal 2015 or fiscal 2016. On October 14, 2016, TD Group’s Board of Directors authorized and declared a special cash dividend of \$24.00 on each outstanding share of common stock and cash dividend equivalent payments under options granted under its stock option plans. The record date for the special dividend was October 24, 2016, and the payment date for the dividend was November 1, 2016.

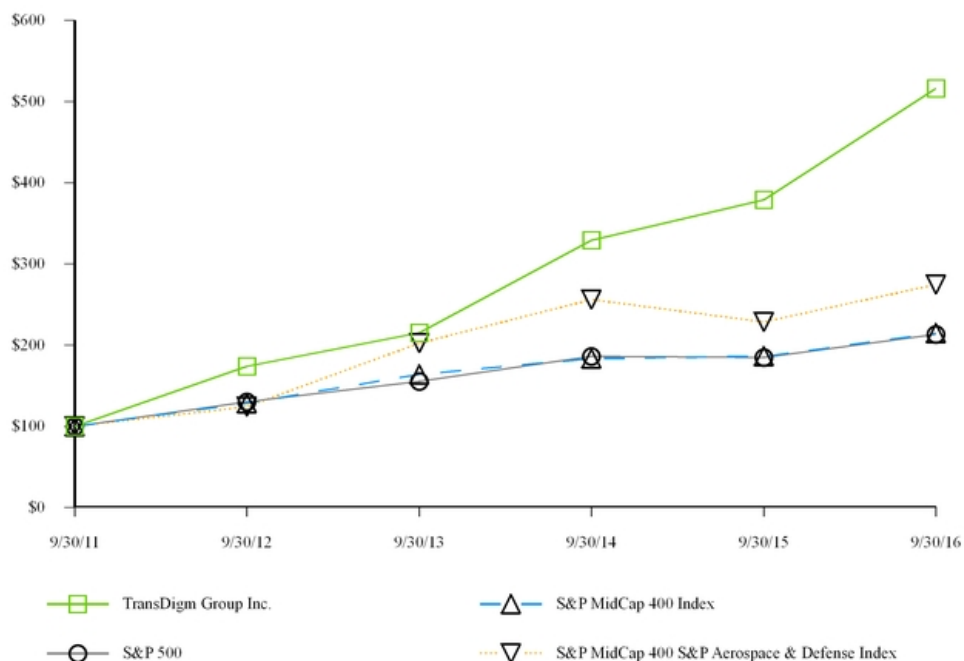
We do not anticipate declaring regular quarterly or annual cash dividends on our common stock in the near future. Any declaration of special cash dividends on our common stock in the future will be at the discretion of our Board of Directors and will depend upon our results of operations, earnings, capital requirements, financial condition, future prospects, contractual restrictions under the senior secured credit facility and Indentures, the availability of surplus under Delaware law and other factors deemed relevant by our Board of Directors. TD Group is a holding company and conducts all of its operations through direct and indirect subsidiaries. Unless TD Group receives dividends, distributions, advances, transfers of funds or other payments from our subsidiaries, TD Group will be unable to pay any dividends on our common stock in the future. The ability of any subsidiaries to take any of the foregoing actions is limited by the terms of our senior secured credit facility and Indentures and may be limited by future debt or other agreements that we may enter into.

**Performance Graph**

Set forth below is a line graph comparing the cumulative total return of a hypothetical investment in the shares of common stock of TD Group with the cumulative total return of a hypothetical investment in each of the S&P Midcap 400 Index, the S&P 500 Index (“S&P 500”) and the S&P MidCap 400 S&P Aerospace & Defense Index based on the respective market prices of each such investment on the dates shown below, assuming an initial investment of \$100 on September 30, 2011.

The following performance graph and related information shall not be deemed “soliciting material” nor to be “filed” with the SEC, nor shall such information be incorporated by reference into any future filings under the Securities Act of 1933 or the Securities Exchange Act of 1934, each as amended, except to the extent we specifically incorporate it by reference into such filing.

**COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN\***  
 Among TransDigm Group Inc., the S&P MidCap 400 Index, the S&P 500  
 and S&P MidCap 400 S&P Aerospace & Defense Index



\*\$100 invested on 9/30/11 in stock or index, including reinvestment of dividends.  
 Fiscal year ending September 30.  
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	9/30/11	9/30/12	9/30/13	9/30/14	9/30/15	9/30/16
TransDigm Group Inc.	100.00	173.71	215.42	328.96	379.07	515.97
S&P MidCap 400 Index	100.00	128.54	164.12	183.51	186.07	214.59
S&P 500	100.00	130.20	155.39	186.05	184.91	213.44
S&P MidCap 400 S&P Aerospace & Defense Index	100.00	123.91	202.38	255.90	228.69	274.73

**Purchases of Equity Securities by the Issuer or Affiliated Purchaser**

On October 22, 2014, our Board of Directors authorized a stock repurchase program permitting us to repurchase a portion of our outstanding stock not to exceed \$300 million in the aggregate. During fiscal 2016, until the \$300 million program was replaced on January 21, 2016, the Company had repurchased 452,187 shares of its common stock at a gross cost of approximately \$98.7 million at the weighted-average price per share of \$218.23.

On January 21, 2016, our Board of Directors authorized a stock repurchase program replacing the \$300 million program with a repurchase program permitting us to repurchase a portion of our outstanding common shares not to exceed \$450 million in the aggregate. As of September 30, 2016, the Company had repurchased 563,200 shares of its common stock at a gross cost of approximately \$109.1 million at the weighted-average price per share of \$193.67 under the \$450 million stock repurchase program. During the thirteen week period ended September 30, 2016, there were no repurchases of common stock. As of September 30, 2016, approximately \$340.9 million is available for repurchase under the \$450 million stock repurchase program, subject to the limitations in accordance with our credit agreement as described within the *Liquidity and Capital Resources* section of Item 7. - "Management's Discussion and Analysis of Financial Conditions and Results of Operations."

During the fiscal year ended September 30, 2016, the Company received 2,548 shares as forfeiture in lieu of payment for withholding taxes on the vesting of restricted stock, the deemed gross cost of the shares was approximately \$0.6 million at a weighted-average price per share of \$225.58.

## ITEM 6. SELECTED FINANCIAL DATA

The following table sets forth selected historical consolidated financial and other data of TD Group for the fiscal years ended September 30, 2012 to 2016, which have been derived from TD Group's audited consolidated financial statements.

Separate historical financial information of TransDigm Inc. is not presented since the 5.50% Senior Subordinated Notes issued in October 2012 (the "2020 Notes"), the 7.50% Senior Subordinated Notes issued in July 2013 (the "2021 Notes"), the 6.00% Senior Subordinated Notes issued in June 2014 (the "2022 Notes"), the 6.50% Senior Subordinated Notes issued June 2014 (the "2024 Notes"), the 6.50% Senior Subordinated Notes issued May 2015 (the "2025 Notes") and the 6.375% Senior Subordinated Notes issued June 2016 (the "2026 Notes") (also together with the 2020 Notes, the 2021 Notes, the 2022 Notes, the 2024 Notes, the 2025 Notes, and the 2026 Notes, the "Notes") are guaranteed by TD Group and all direct and indirect domestic restricted subsidiaries of TransDigm Inc. and since TD Group has no operations or significant assets separate from its investment in TransDigm Inc.

Acquisitions of businesses and product lines completed by TD Group during the last five fiscal years are as follows:

<b>Date</b>	<b>Acquisition</b>
December 9, 2011	Harco Laboratories, Inc.
February 15, 2012	AmSafe Global Holdings, Inc.
September 17, 2012	Aero-Instruments Co., LLC
June 5, 2013	Aerosonic Corporation
June 5, 2013	Arkwin Industries, Inc.
June 28, 2013	Whippany Actuation
December 19, 2013	Airborne Global Inc. ("Airborne")
March 6, 2014	Elektro-Metall Export GmbH ("EME")
March 26, 2015	Telair Cargo Group (comprised of Telair International GmbH, Telair US LLC and Nordisk Aviation Products)
March 31, 2015	Franke Aquarotter GmbH ("Adams Rite Aerospace GmbH")
May 14, 2015	Pexco LLC ("Pexco Aerospace")
August 19, 2015	PneuDrualics, Inc. ("PneuDrualics")
January 4, 2016	Breeze-Eastern Corporation ("Breeze-Eastern")
June 23, 2016	Data Device Corporation ("DDC")
September 23, 2016	Young & Franklin Inc. / Tactair Fluid Controls Inc. ("Tactair")

All of the acquisitions were accounted for using the acquisition method. The results of operations of the acquired businesses and product lines are included in TD Group's consolidated financial statements from the effective date of each acquisition.

The information presented below should be read together with “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and the consolidated financial statements and accompanying notes included elsewhere herein.

	Fiscal Years Ended September 30,				
	2016	2015	2014	2013	2012
(in thousands, except per share amounts )					
<b>Statement of Income Data:</b>					
Net sales	\$ 3,171,411	\$ 2,707,115	\$ 2,372,906	\$ 1,924,400	\$ 1,700,208
Gross profit <sup>(1)</sup>	1,728,063	1,449,845	1,267,874	1,049,562	945,717
Selling and administrative expenses	382,858	321,624	276,446	254,468	201,709
Amortization of intangible assets	77,445	54,219	63,608	45,639	44,233
Income from operations <sup>(1)</sup>	1,267,760	1,074,002	927,820	749,455	699,775
Interest expense—net	483,850	418,785	347,688	270,685	211,906
Refinancing costs	15,794	18,393	131,622	30,281	—
Income from continuing operations before income taxes	768,116	636,824	448,510	448,489	487,869
Income tax provision <sup>(2)</sup>	181,702	189,612	141,600	145,700	162,900
Net income	\$ 586,414	\$ 447,212	\$ 306,910	\$ 302,789	\$ 324,969
Net income applicable to common stock	\$ 583,414	\$ 443,847	\$ 180,284	\$ 131,546	\$ 321,670
<b>Denominator for basic and diluted earnings per share under the two-class method:</b>					
Weighted-average common shares outstanding	53,326	53,112	52,748	52,258	50,996
Vested options deemed participating securities	2,831	3,494	4,245	2,822	2,886
Total shares for basic and diluted earnings per share	56,157	56,606	56,993	55,080	53,882
<b>Net earnings per share:</b>					
Net earnings per share <sup>(3)</sup>	\$ 10.39	\$ 7.84	\$ 3.16	\$ 2.39	\$ 5.97
Cash dividends paid per common share	\$ —	\$ —	\$ 25.00	\$ 34.85	\$ —

	As of September 30,				
	2016	2015	2014	2013	2012
(in thousands)					
<b>Balance Sheet Data:</b>					
Cash and cash equivalents	\$ 1,586,994	\$ 714,033	\$ 819,548	\$ 564,740	\$ 440,524
Working capital <sup>(4,5)</sup>	2,178,094	1,128,993	1,066,735	968,207	787,834
Total assets <sup>(4,5)</sup>	10,726,277	8,303,935	6,626,786	6,046,029	5,368,293
Long-term debt, including current portion <sup>(5)</sup>	10,195,607	8,349,602	7,380,738	5,658,570	3,556,935
Stockholders’ (deficit) equity	(651,490)	(1,038,306)	(1,556,099)	(336,381)	1,218,834

- (1) Gross profit and income from operations include the effect of charges relating to purchase accounting adjustments to inventory associated with the acquisition of various businesses and product lines for the fiscal years ended September 30, 2016, 2015, 2014, 2013 and 2012 of \$23,449, \$11,362, \$10,441, \$7,352 and \$12,882, respectively.
- (2) For the fiscal year ended September 30, 2016, the income tax provision was impacted by the adoption of Accounting Standards Update (“ASU”) 2016-09, “Improvements to Employee Share-Based Payment Accounting.” Refer to Note 4, “Recent Accounting Pronouncements,” and Note 13, “Income Taxes” in the notes to the consolidated financial statements included herein for additional information.
- (3) Net earnings per share is calculated by dividing net income applicable to common stock by the basic and diluted weighted average common shares outstanding.
- (4) In connection with adopting ASU 2015-17, “Balance Sheet Classification of Deferred Taxes,” for reporting periods ended after October 1, 2015, the Company reclassified \$45,375, \$37,669, \$30,182 and \$29,134 from current deferred income tax assets in our consolidated balance sheets as of September 2015, 2014, 2013 and 2012, respectively, to non-

current deferred income tax liabilities. Refer to Note 4, “Recent Accounting Pronouncements,” in the notes to the consolidated financial statements included herein for additional information.

- (5) In connection with adopting ASU 2015-03, “Simplifying the Presentation of Debt Issuance Costs,” for reporting periods ended after October 1, 2015, the Company reclassified \$77,740, \$92,393, \$72,668 and \$62,190 from debt issuance costs in our consolidated balance sheets as of September 2015, 2014, 2013 and 2012, respectively, to the current portion of long-term and long-term-term debt. Refer to Note 4, “Recent Accounting Pronouncements,” in the notes to the consolidated financial statements included herein for additional information.

#### **Non-GAAP Financial Measures**

We present below certain financial information based on our EBITDA and EBITDA As Defined. References to “EBITDA” mean earnings before interest, taxes, depreciation and amortization, and references to “EBITDA As Defined” mean EBITDA plus, as applicable for each relevant period, certain adjustments as set forth in the reconciliations of net income to EBITDA and EBITDA As Defined and the reconciliations of net cash provided by operating activities to EBITDA and EBITDA As Defined presented below.

Neither EBITDA nor EBITDA As Defined is a measurement of financial performance under accounting principles generally accepted in the United States of America (“GAAP”). We present EBITDA and EBITDA As Defined because we believe they are useful indicators for evaluating operating performance and liquidity.

Our management believes that EBITDA and EBITDA As Defined are useful as indicators of liquidity because securities analysts, investors, rating agencies and others use EBITDA to evaluate a company’s ability to incur and service debt. In addition, EBITDA As Defined is useful to investors because the revolving commitments under our senior secured credit facility requires compliance under certain circumstances, on a pro forma basis, with a financial covenant that measures the ratio of the amount of our secured indebtedness to the amount of our Consolidated EBITDA defined in the same manner as we define EBITDA As Defined herein.

In addition to the above, our management uses EBITDA As Defined to review and assess the performance of the management team in connection with employee incentive programs and to prepare its annual budget and financial projections. Moreover, our management uses EBITDA As Defined to evaluate acquisitions.

Although we use EBITDA and EBITDA As Defined as measures to assess the performance of our business and for the other purposes set forth above, the use of these non-GAAP financial measures as analytical tools has limitations, and you should not consider any of them in isolation, or as a substitute for analysis of our results of operations as reported in accordance with GAAP. Some of these limitations are:

- neither EBITDA nor EBITDA As Defined reflects the significant interest expense, or the cash requirements necessary to service interest payments, on our indebtedness;
- although depreciation and amortization are non-cash charges, the assets being depreciated and amortized will often have to be replaced in the future, and neither EBITDA nor EBITDA As Defined reflects any cash requirements for such replacements;
- the omission of the substantial amortization expense associated with our intangible assets further limits the usefulness of EBITDA and EBITDA As Defined;
- neither EBITDA nor EBITDA As Defined includes the payment of taxes, which is a necessary element of our operations; and
- EBITDA As Defined excludes the cash expense we have incurred to integrate acquired businesses into our operations, which is a necessary element of certain of our acquisitions.

Because of these limitations, EBITDA and EBITDA As Defined should not be considered as measures of discretionary cash available to us to invest in the growth of our business. Management compensates for these limitations by not viewing EBITDA or EBITDA As Defined in isolation and specifically by using other GAAP measures, such as net income, net sales and operating profit, to measure our operating performance. Neither EBITDA nor EBITDA As Defined is a measurement of financial performance under GAAP, and neither should be considered as an alternative to net income or cash flow from operations determined in accordance with GAAP. Our calculation of EBITDA and EBITDA As Defined may not be comparable to the calculation of similarly titled measures reported by other companies.

Fiscal Years Ended September 30,

	2016	2015	2014	2013	2012
(in thousands)					
<b>Other Financial Data:</b>					
Cash flows provided by (used in):					
Operating activities	\$ 668,930	\$ 520,938	\$ 541,222	\$ 470,205	\$ 413,885
Investing activities	(1,443,046)	(1,679,149)	(329,638)	(502,442)	(876,292)
Financing activities	1,646,835	1,054,947	43,973	156,195	527,186
Depreciation and amortization	121,670	93,663	96,385	73,515	68,227
Capital expenditures	43,982	54,871	34,146	35,535	25,246
Ratio of earnings to fixed charges <sup>(1)</sup>	2.6x	2.5x	2.3x	2.6x	3.3x
<b>Other Data:</b>					
EBITDA <sup>(2)</sup>	\$ 1,373,636	\$ 1,149,272	\$ 892,583	\$ 792,689	\$ 768,002
EBITDA As Defined <sup>(2)</sup>	\$ 1,495,196	\$ 1,233,654	\$ 1,073,207	\$ 900,278	\$ 809,019

- (1) For purposes of computing the ratio of earnings to fixed charges, earnings consist of earnings from continuing operations before income taxes plus fixed charges. Fixed charges consist of interest expense, amortization of debt issuance costs and the portion (approximately 33%) of rental expense that management believes is representative of the interest component of rental expense.
- (2) EBITDA represents earnings from continuing operations before interest, taxes, depreciation and amortization. EBITDA As Defined represents EBITDA plus, as applicable for each relevant period, certain adjustments as set forth in the reconciliation of net income to EBITDA and EBITDA As Defined and the reconciliation of net cash provided by operating activities to EBITDA and EBITDA As Defined presented below. See “Non-GAAP Financial Measures” for additional information and limitations regarding these non-GAAP financial measures.

The following table sets forth a reconciliation of net income to EBITDA and EBITDA As Defined:

	2016	2015	2014	2013	2012
(in thousands)					
Net income	\$ 586,414	\$ 447,212	\$ 306,910	\$ 302,789	\$ 324,969
Adjustments:					
Depreciation and amortization expense	121,670	93,663	96,385	73,515	68,227
Interest expense, net	483,850	418,785	347,688	270,685	211,906
Income tax provision <sup>(1)</sup>	181,702	189,612	141,600	145,700	162,900
EBITDA	1,373,636	1,149,272	892,583	792,689	768,002
Adjustments:					
Inventory purchase accounting adjustments <sup>(2)</sup>	23,449	11,362	10,441	7,352	12,882
Acquisition integration costs <sup>(3)</sup>	18,539	12,554	7,239	10,942	7,896
Acquisition transaction-related expenses <sup>(4)</sup>	15,711	12,289	3,480	8,139	5,880
Acquisition earn-out adjustments <sup>(5)</sup>	—	—	—	—	(5,000)
Other acquisition accounting adjustments	—	—	—	—	(2,792)
Non-cash stock and deferred compensation expense <sup>(6)</sup>	48,306	31,500	26,332	48,884	22,151
Refinancing costs <sup>(7)</sup>	15,794	18,393	131,622	30,281	—
Other, net <sup>(8)</sup>	(239)	(1,716)	1,510	1,991	—
EBITDA As Defined	\$ 1,495,196	\$ 1,233,654	\$ 1,073,207	\$ 900,278	\$ 809,019

- (1) For the period ended September 30, 2016, the income tax provision was impacted by the adoption of ASU 2016-09, “Improvements to Employee Share-Based Payment Accounting.” Refer to Note 4, “Recent Accounting Pronouncements,” and Note 13, “Income Taxes” in the notes to the consolidated financial statements included herein for additional information.

- (2) Represents accounting adjustments to inventory associated with acquisitions of businesses and product lines that were charged to cost of sales when the inventory was sold.
- (3) Represents costs incurred to integrate acquired businesses and product lines into TD Group's operations, facility relocation costs and other acquisition-related costs.
- (4) Represents transaction-related costs comprising deal fees; legal, financial and tax due diligence expenses; and valuation costs that are required to be expensed as incurred.
- (5) Represents the reversal of the earn-out liability related to the Dukes Aerospace acquisition based on lower growth projections relative to the required growth targets of the four-year earn-out arrangement.
- (6) Represents the compensation expense recognized by TD Group under our stock incentive plans.
- (7) For the period ended September 30, 2016, represents debt issuance costs expensed in conjunction with the refinancing of our 2013 Tranche C Term Loans in June 2016. For the period ended September 30, 2015, represents debt issuance costs expensed in conjunction with the refinancing of our 2013 Tranche B Term Loans in May 2015. For the period ended September 30, 2014, represents debt issuance costs including the premium paid to redeem our 2018 Notes in June 2014. For the period ended September 30, 2013, represents debt issuance costs expensed in conjunction with the refinancing of our 2010 Term Loans and 2011 Term Loans in February 2013.
- (8) Primarily represents foreign currency transaction gain or loss on intercompany loans to be settled and gain or loss on sale of fixed assets.

The following table sets forth a reconciliation of net cash provided by operating activities to EBITDA and EBITDA As Defined:

	Fiscal Years Ended September 30,				
	2016	2015	2014	2013	2012
	(in thousands)				
Net cash provided by operating activities	\$ 668,930	\$ 520,938	\$ 541,222	\$ 470,205	\$ 413,885
Adjustments:					
Changes in assets and liabilities, net of effects from acquisitions of businesses	110,905	24,322	(27,967)	(71,618)	(11,749)
Net gain on sale of real estate	—	—	804	—	—
Interest expense, net <sup>(1)</sup>	467,639	402,988	333,753	258,752	199,362
Income tax provision—current <sup>(2)</sup>	175,894	188,952	151,016	148,314	138,100
Non-cash stock and deferred compensation expense <sup>(3)</sup>	(48,306)	(31,500)	(26,332)	(48,884)	(22,151)
Excess tax benefit from exercise of stock options <sup>(2)</sup>	—	61,965	51,709	66,201	50,555
Refinancing costs <sup>(4)</sup>	(1,426)	(18,393)	(131,622)	(30,281)	—
EBITDA	1,373,636	1,149,272	892,583	792,689	768,002
Adjustments:					
Inventory purchase accounting adjustments <sup>(5)</sup>	23,449	11,362	10,441	7,352	12,882
Acquisition integration costs <sup>(6)</sup>	18,539	12,554	7,239	10,942	7,896
Acquisition transaction-related expenses <sup>(7)</sup>	15,711	12,289	3,480	8,139	5,880
Acquisition earn-out adjustments <sup>(8)</sup>	—	—	—	—	(5,000)
Other acquisition accounting adjustments	—	—	—	—	(2,792)
Non-cash stock and deferred compensation expense <sup>(3)</sup>	48,306	31,500	26,332	48,884	22,151
Refinancing costs <sup>(4)</sup>	15,794	18,393	131,622	30,281	—
Other, net <sup>(9)</sup>	(239)	(1,716)	1,510	1,991	—
EBITDA As Defined	\$ 1,495,196	\$ 1,233,654	\$ 1,073,207	\$ 900,278	\$ 809,019

- (1) Represents interest expense excluding the amortization of debt issuance costs and note premium and discount.



- (2) For the period ended September 30, 2016, the income tax provision and Excess tax benefit from exercise of stock options were impacted by the adoption of ASU 2016-09, "Improvements to Employee Share-Based Payment Accounting." Refer to Note 4, "Recent Accounting Pronouncements," and Note 13, "Income Taxes" in the notes to the consolidated financial statements included herein for additional information.
- (3) Represents the compensation expense recognized by TD Group under our stock incentive plans.
- (4) For the period ended September 30, 2016, represents debt issuance costs expensed in conjunction with the refinancing of our 2013 Tranche C Term Loans in June 2016. For the period ended September 30, 2015, represents debt issuance costs expensed in conjunction with the refinancing of our 2013 Tranche B in May 2015. For the period ended September 30, 2014, represents debt issuance costs including the premium paid to redeem our 2018 Notes in June 2014. For the period ended September 30, 2013, represents debt issuance costs expensed in conjunction with the refinancing of our 2010 Term Loans and 2011 Term Loans in February 2013.
- (5) Represents accounting adjustments to inventory associated with acquisitions of businesses and product lines that were charged to cost of sales when the inventory was sold.
- (6) Represents costs incurred to integrate acquired businesses and product lines into TD Group's operations, facility relocation costs and other acquisition-related costs.
- (7) Represents transaction-related costs comprising deal fees; legal, financial and tax due diligence expenses; and valuation costs that are required to be expensed as incurred.
- (8) Represents the reversal of the earn-out liability related to the Dukes Aerospace acquisition based on lower growth projections relative to the required growth targets of the four-year earn-out arrangement.
- (9) Primarily represents foreign currency transaction gain or loss on intercompany loans to be settled and gain or loss on sale of fixed assets.

## ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

*The following discussion of our financial condition and results of operations should be read together with "Selected Financial Data" and TD Group's consolidated financial statements and the related notes included elsewhere in this report. The following discussion may contain predictions, estimates and other forward-looking statements that involve a number of risks and uncertainties, including those discussed under the heading entitled "Risk Factors" included elsewhere in this report. These risks could cause our actual results to differ materially from any future performance suggested below.*

### Overview

For fiscal year 2016, we generated net sales of \$3,171.4 million, gross profit of \$1,728.1 million or 54.5% of sales, and net income of \$586.4 million. We believe we have achieved steady, long-term growth in sales and improvements in operating performance since our formation in 1993 due to our competitive strengths and through execution of our value-driven operating strategy. More specifically, focusing our businesses on our value-driven operating strategy of obtaining profitable new business, carefully controlling the cost structure and pricing our highly engineered value-added products to fairly reflect the value we provide and the resources required to do so has historically resulted in improvements in gross profit and income from operations over the long term.

Our selective acquisition strategy has also contributed to the growth of our business. The integration of certain acquisitions into our existing businesses combined with implementing our proven operating strategy has historically resulted in improvements of the financial performance of the acquired business.

Our key competitive strengths and the elements of our business strategy are set forth in more detail below.

We believe our key competitive strengths include:

**Large and Growing Installed Product Base with Aftermarket Revenue Stream.** We provide components to a large and growing installed base of aircraft to which we supply aftermarket products. We estimate that our products are installed on approximately 95,000 commercial transport, regional transport, military and general aviation fixed wing turbine aircraft and rotary wing aircraft.

**Diversified Revenue Base.** We believe that our diversified revenue base reduces our dependence on any particular product, platform or market channel and has been a significant factor in maintaining our financial performance. Our products are installed on almost all of the major commercial aircraft platforms now in production. We expect to continue to develop new products for military and commercial applications.

**Significant Barriers to Entry.** We believe that the niche nature of our markets, the industry's stringent regulatory and certification requirements, the large number of products that we sell and the investments necessary to develop and certify products create barriers to entry for potential competitors.

Our business strategy is made up of two key elements: (1) a value-driven operating strategy focused around our three core value drivers and (2) a selective acquisition strategy.

**Value-Driven Operating Strategy.** Our three core value drivers are:

- **Obtaining Profitable New Business.** We attempt to obtain profitable new business by using our technical expertise and application skill and our detailed knowledge of our customer base and the individual niche markets in which we operate. We have regularly been successful in identifying and developing both aftermarket and OEM products to drive our growth.
- **Improving Our Cost Structure.** We are committed to maintaining and continuously improving our lean cost structure through detailed attention to the cost of each of the products that we offer and our organizational structure, with a focus on reducing the cost of each.
- **Providing Highly Engineered Value-Added Products to Customers.** We focus on the engineering, manufacturing and marketing of a broad range of highly engineered niche products that we believe provide value to our customers. We believe we have been consistently successful in communicating to our customers the value of our products. This has generally enabled us to price our products to fairly reflect the value we provide and the resources required to do so.

**Selective Acquisition Strategy.** We selectively pursue the acquisition of proprietary aerospace component businesses when we see an opportunity to create value through the application of our three core value-driven operating strategies. The aerospace industry, in particular, remains highly fragmented, with many of the companies in the industry being small private businesses or small non-core operations of larger businesses. We have significant experience among our management team in executing acquisitions and integrating acquired businesses into our company and culture. As of the date of this report, we have successfully acquired 58 businesses and/or product lines since our formation in 1993. Many of these acquisitions have been

integrated into an existing TransDigm production facility, which enables a higher production capacity utilization, which in turn improves gross profit levels due to the ability to spread the fixed manufacturing overhead costs over higher production volume.

Acquisitions and divestitures during the previous three fiscal years are more fully described in Note 2, “Acquisitions” in the notes to the consolidated financial statements included herein.

### **Critical Accounting Policies**

Our consolidated financial statements have been prepared in conformity with GAAP, which often requires the judgment of management in the selection and application of certain accounting principles and methods. Management believes that the quality and reasonableness of our most critical policies enable the fair presentation of our financial position and results of operations. However, investors are cautioned that the sensitivity of financial statements to these methods, assumptions and estimates could create materially different results under different conditions or using different assumptions.

Below are those policies applied in preparing our financial statements that management believes are the most dependent on the application of estimates and assumptions. For additional accounting policies, see Note 3, “Summary of Significant Accounting Policies” in the notes to the consolidated financial statements included herein.

*Revenue Recognition and Related Allowances:* Revenue is recognized from the sale of products when title and risk of loss passes to the customer, which is generally at the time of shipment. Substantially all product sales are made pursuant to firm, fixed-price purchase orders received from customers. Collectibility of amounts recorded as revenue is reasonably assured at the time of sale. Provisions for returns, uncollectible accounts and the cost of repairs under contract warranty provisions are provided for in the same period as the related revenues are recorded and are principally based on historical results modified, as appropriate, by the most current information available. We have a history of making reasonably dependable estimates of such allowances; however, due to uncertainties inherent in the estimation process, it is possible that actual results may vary from the estimates and the differences could be material.

Management estimates the allowance for doubtful accounts based on the aging of the accounts receivable and customer creditworthiness. The allowance also incorporates a provision for the estimated impact of disputes with customers. Management’s estimate of the allowance amounts that are necessary includes amounts for specifically identified credit losses and estimated credit losses based on historical information. The determination of the amount of the allowance for doubtful accounts is subject to significant levels of judgment and estimation by management. Depending on the resolution of potential credit and other collection issues, or if the financial condition of any of the Company’s customers were to deteriorate and their ability to make required payments were to become impaired, increases in these allowances may be required. Historically, changes in estimates in the allowance for doubtful accounts have not been significant.

*Inventories:* Inventories are stated at the lower of cost or market. Cost of inventories is generally determined by the average cost and the first-in, first-out (FIFO) methods and includes material, labor and overhead related to the manufacturing process. Because the Company sells products that are installed on airframes that can be in-service for 25 or more years, it must keep a supply of such products on hand while the airframes are in use. Where management estimated that the current market value was below cost or determined that future demand was lower than current inventory levels, based on historical experience, current and projected market demand, current and projected volume trends and other relevant current and projected factors associated with the current economic conditions, a reduction in inventory cost to estimated net realizable value was made by recording a provision included in cost of sales. Although management believes that the Company’s estimates of excess and obsolete inventory are reasonable, actual results may differ materially from the estimates and additional provisions may be required in the future. In addition, in accordance with industry practice, all inventories are classified as current assets as all inventories are available and necessary to support current sales, even though a portion of the inventories may not be sold within one year. Historically, changes in estimates in the net realizable value of inventories have not been significant.

*Goodwill and Other Intangible Assets:* In accordance with ASC 805, “Business Combinations,” the Company uses the acquisition method of accounting to allocate costs of acquired businesses to the assets acquired and liabilities assumed based on their estimated fair values at the dates of acquisition. The excess costs of acquired businesses over the fair values of the assets acquired and liabilities assumed were recognized as goodwill. The valuations of the acquired assets and liabilities will impact the determination of future operating results. In addition to using management estimates and negotiated amounts, the Company used a variety of information sources to determine the estimated fair values of acquired assets and liabilities including third-party appraisals for the estimated value and lives of identifiable intangible assets. Fair value adjustments to the Company’s assets and liabilities are recognized and the results of operations of the acquired business are included in our consolidated financial statements from the effective date of the merger or acquisition.

Intangible assets other than goodwill are recognized if the benefit of the intangible asset is obtained through contractual or other legal rights, or if the intangible asset can be sold, transferred, licensed or exchanged, regardless of the Company’s intent to do so. Goodwill and identifiable intangible assets are recorded at their estimated fair value on the date of acquisition and are reviewed at least annually for impairment based on cash flow projections and fair value estimates.

GAAP requires that the annual, and any interim, impairment assessment be performed at the reporting unit level. The reporting unit level is one level below an operating segment. Substantially all goodwill was determined and recognized for each reporting unit pursuant to the accounting for the merger or acquisition as of the date of each transaction. With respect to acquisitions integrated into an existing reporting unit, any acquired goodwill is combined with the goodwill of the reporting unit.

At the time of goodwill impairment testing, management determines the estimated fair value through the use of a discounted cash flow valuation model incorporating discount rates commensurate with the risks involved for each reporting unit. If the calculated estimated fair value is less than the current carrying value, impairment of goodwill of the reporting unit may exist. The use of a discounted cash flow valuation model to determine estimated fair value is common practice in impairment testing. The key assumptions used in the discounted cash flow valuation model for impairment testing includes discount rates, growth rates, cash flow projections and terminal value rates. Discount rates are set by using the Weighted Average Cost of Capital ("WACC") methodology. The WACC methodology considers market and industry data as well as company specific risk factors for each reporting unit in determining the appropriate discount rates to be used. The discount rate utilized for each reporting unit is indicative of the return an investor would expect to receive for investing in such a business.

Management, considering industry and company-specific historical and projected data, develops growth rates, sales projections and cash flow projections for each reporting unit. Terminal value rate determination follows common methodology of capturing the present value of perpetual cash flow estimates beyond the last projected period assuming a constant WACC and low long-term growth rates. As an indicator that each reporting unit has been valued appropriately through the use of the discounted cash flow valuation model, the aggregate of all reporting unit's estimated fair value is reconciled to the total market capitalization of the Company.

The Company had 32 reporting units with goodwill as of the first day of the fourth quarter of fiscal 2016, the date of the last annual impairment test. The estimated fair values of each of the reporting units was substantially in excess of their respective carrying values, and therefore, no goodwill impairment was recorded. The Company performed a sensitivity analysis on the discount rate, which is a significant assumption in the calculation of fair values. With a one percentage point increase in the discount rate, the reporting units would continue to have fair values substantially in excess of their respective carrying values.

Management tests indefinite-lived intangible assets for impairment at the asset level, as determined by appropriate asset valuation at the time of acquisition. The impairment test for indefinite-lived intangible assets consists of a comparison between the estimated fair values and carrying values. If the carrying amounts of intangible assets that have indefinite useful lives exceed their estimated fair values, an impairment loss will be recognized in an amount equal to the difference. Management utilizes the royalty savings valuation method to determine the estimated fair value for each indefinite-lived intangible asset. In this method, management estimates the royalty savings arising from the ownership of the intangible asset. The key assumptions used in estimating the royalty savings for impairment testing include discount rates, royalty rates, growth rates, sales projections and terminal value rates. Discount rates used are similar to the rates developed by the WACC methodology considering any differences in company-specific risk factors between reporting units and the indefinite-lived intangible assets. Royalty rates are established by management with the advice of valuation experts and periodically substantiated by valuation experts. Management, considering industry and company-specific historical and projected data, develops growth rates and sales projections for each significant intangible asset. Terminal value rate determination follows common methodology of capturing the present value of perpetual sales estimates beyond the last projected period assuming a constant WACC and low long-term growth rates.

The discounted cash flow and royalty savings valuation methodologies require management to make certain assumptions based upon information available at the time the valuations are performed. Actual results could differ from these assumptions. Management believes the assumptions used are reflective of what a market participant would have used in calculating fair value considering the current economic conditions.

*Stock-Based Compensation:* The cost of the Company's stock-based compensation is recorded in accordance with ASC 718, "Stock Compensation." The Company uses a Black-Scholes-Merton option pricing model to estimate the grant-date fair value of the stock options awarded. The Black-Scholes-Merton model requires assumptions regarding the expected volatility of the Company's common shares, the risk-free interest rate, the expected life of the stock options award and the Company's dividend yield. The Company utilizes historical data in determining these assumptions. An increase or decrease in the assumptions or economic events outside of management's control could have an impact on the Black-Scholes-Merton model.

*Income Taxes:* The Company estimates income taxes in each jurisdiction in which it operates. This involves estimating taxable earnings, specific taxable and deductible items, the likelihood of generating sufficient future taxable income to utilize deferred tax assets and possible exposures related to future tax audits. To the extent these estimates change, adjustments to deferred and accrued income taxes are made in the period in which the changes occur. Historically, such adjustments have not been significant.

## Results of Operations

The following table sets forth, for the periods indicated, certain operating data of the Company, including presentation of the amounts as a percentage of net sales (amounts in thousands):

	Fiscal Years Ended September 30,					
	2016	2016 % of Sales	2015	2015 % of Sales	2014	2014 % of Sales
Net sales	\$ 3,171,411	100.0%	\$ 2,707,115	100.0%	\$ 2,372,906	100.0%
Cost of sales	1,443,348	45.5	1,257,270	46.4	1,105,032	46.6
Selling and administrative expenses	382,858	12.1	321,624	11.9	276,446	11.7
Amortization of intangible assets	77,445	2.4	54,219	2.0	63,608	2.7
Income from operations	1,267,760	40.0	1,074,002	39.7	927,820	39.1
Interest expense, net	483,850	15.3	418,785	15.5	347,688	14.7
Refinancing costs	15,794	0.5	18,393	0.7	131,622	5.5
Income tax provision	181,702	5.7	189,612	7.0	141,600	6.0
Net Income	\$ 586,414	18.5%	\$ 447,212	16.5%	\$ 306,910	12.9%

### Fiscal year ended September 30, 2016 compared with fiscal year ended September 30, 2015

#### Total Company

*Net Sales.* Net organic sales and acquisition sales and the related dollar and percentage changes for the fiscal years ended September 30, 2016 and 2015 were as follows (amounts in millions):

	Fiscal Years Ended			% Change Total Sales
	September 30, 2016	September 30, 2015	Change	
Organic sales	\$ 2,762.2	\$ 2,707.1	\$ 55.1	2.0%
Acquisition sales	409.2	—	409.2	15.1%
	\$ 3,171.4	\$ 2,707.1	\$ 464.3	17.1%

Acquisition sales represent sales of acquired businesses for the period up to one year subsequent to their acquisition date. The amount of acquisition sales shown in the table above was attributable to the acquisitions of Breeze-Eastern and Data Device Corporation in fiscal year 2016 and the acquisitions of PneuDraulics, Pexco Aerospace, Adams Rite Aerospace GmbH and Telair Cargo Group in fiscal year 2015.

Commercial aftermarket organic sales increased by \$61.3 million, or 6.1%, commercial OEM organic sales decreased by \$8.8 million, or 1.1%, and defense organic sales were flat when comparing the fiscal year ended September 30, 2016 to the fiscal year ended September 30, 2015.

*Cost of Sales and Gross Profit.* Cost of sales increased by \$186.0 million, or 14.8%, to \$1,443.3 million for the fiscal year ended September 30, 2016 compared to \$1,257.3 million for the fiscal year ended September 30, 2015. Cost of sales and the related percentage of total sales for the fiscal years ended September 30, 2016 and 2015 were as follows (amounts in millions):

	Fiscal Years Ended			% Change
	September 30, 2016	September 30, 2015	Change	
Cost of sales—excluding costs below	\$ 1,405.6	\$ 1,235.1	\$ 170.5	13.8%
% of total sales	44.3%	45.6%		
Inventory purchase accounting adjustments	23.4	11.4	12.0	105.3%
% of total sales	0.7%	0.4%		
Acquisition integration costs	8.3	6.1	2.2	36.1%
% of total sales	0.3%	0.2%		
Stock compensation expense	6.0	4.7	1.3	27.7%
% of total sales	0.2%	0.2%		
Total cost of sales	1,443.3	1,257.3	\$ 186.0	14.8%
% of total sales	45.5%	46.4%		
Gross profit	\$ 1,728.1	\$ 1,449.8	\$ 278.3	19.2%
Gross profit percentage	54.5%	53.6%		

The increase in the dollar amount of cost of sales during the fiscal year ended September 30, 2016 was primarily due to increased volume associated with the sales from acquisitions and organic sales growth.

Gross profit as a percentage of sales increased by 0.9 percentage points to 54.5% for the fiscal year ended September 30, 2016 from 53.6% for the fiscal year ended September 30, 2015. The dollar amount of gross profit increased by \$278.3 million, or 19.2%, for the fiscal year ended September 30, 2016 compared to the comparable period last year due to the following items:

- Gross profit on the sales from the acquisitions indicated above (excluding acquisition-related costs) was approximately \$171.2 million for the fiscal year ended September 30, 2016, which represented gross profit of approximately 42% of the acquisition sales. The lower gross profit margin on the acquisition sales reduced gross profit as a percentage of consolidated sales by approximately 2 percentage points.
- Organic sales growth described above, application of our three core value-driven operating strategies (obtaining profitable new business, continually improving our cost structure, and providing highly engineered value-added products to customers), and positive leverage on our fixed overhead costs spread over a higher production volume, resulted in a net increase in gross profit of approximately \$122.6 million for the fiscal year ended September 30, 2016.
- Slightly offsetting the increases in gross profit was the impact of higher inventory purchase accounting adjustments, acquisition integration costs and stock compensation expense charged to cost of sales of approximately \$15.5 million.

*Selling and Administrative Expenses.* Selling and administrative expenses increased by \$61.3 million to \$382.9 million, or 12.1% of sales, for the fiscal year ended September 30, 2016 from \$321.6 million, or 11.9% of sales, for the comparable period last year. Selling and administrative expenses and the related percentage of total sales for the fiscal years ended September 30, 2016 and 2015 were as follows (amounts in millions):

	Fiscal Years Ended		Change	% Change
	September 30, 2016	September 30, 2015		
Selling and administrative expenses—excluding costs below	\$ 314.5	\$ 276.1	\$ 38.4	13.9%
% of total sales	9.9%	10.2%		
Stock compensation expense	42.4	26.8	15.6	58.2%
% of total sales	1.3%	1.0%		
Acquisition-related expenses	26.0	18.7	7.3	39.0%
% of total sales	0.8%	0.7%		
<b>Total selling and administrative expenses</b>	<b>\$ 382.9</b>	<b>\$ 321.6</b>	<b>\$ 61.3</b>	<b>19.1%</b>
% of total sales	12.1%	11.9%		

The increase in the dollar amount of selling and administrative expenses during the fiscal year ended September 30, 2016 is primarily due to higher selling and administrative expenses relating to recent acquisitions of approximately \$44.8 million, which was approximately 11% of acquisition sales, and higher acquisition-related and stock compensation expenses of \$7.3 million and \$15.6 million, respectively.

*Amortization of Intangible Assets.* Amortization of intangible assets increased to \$77.4 million for the fiscal year ended September 30, 2016 from \$54.2 million for the comparable period last year. The net increase of \$23.2 million was primarily due to the acquisitions of Breeze-Eastern and Data Device Corporation in fiscal 2016 and full year amortization recorded on the acquisitions made during fiscal 2015.

*Refinancing Costs.* Refinancing costs of \$15.8 million were recorded during the year ended September 30, 2016 representing debt issuance costs expensed in connection with the debt financing activity in June 2016. Included within the \$15.8 million was approximately \$1.4 million of unamortized debt issuance costs written off. Refinancing costs of \$18.4 million were recorded during the fiscal year ended September 30, 2015 representing debt issuance costs expensed in conjunction with the debt financing activity in May 2015. Included within the \$18.4 million was approximately \$10.2 million of unamortized debt issuance costs written off.

*Interest Expense-net.* Interest expense-net includes interest on borrowings outstanding, amortization of debt issuance costs and revolving credit facility fees offset by interest income. Interest expense-net increased \$65.1 million, or 15.5%, to \$483.9 million for the fiscal year ended September 30, 2016 from \$418.8 million for the comparable period last year. The net increase in interest expense-net was primarily due to an increase in the weighted average level of outstanding borrowings, which was approximately \$8,834 million for the fiscal year ended September 30, 2016 and approximately \$7,827 million for the fiscal year ended September 30, 2015 in addition to a slight increase in the weighted average cash interest rate during the fiscal year ended September 30, 2016 of 5.3% compared to the weighted average cash interest rate during the comparable prior period of 5.2%. The increase in weighted average level of borrowings was primarily due to the issuance of the 2026 Notes for \$950 million in June 2016, the additional incremental term loans of \$950 million in June 2016, the issuance of the 2025 Notes for \$450 million in May 2015 and the additional incremental term loans of \$1.0 billion in May 2015. The weighted average interest rate for cash interest payments on total borrowings outstanding at September 30, 2016 was 5.2%.

**Income Taxes.** Income tax expense as a percentage of income before income taxes was approximately 23.7% for the fiscal year ended September 30, 2016 compared to 29.8% for the fiscal year ended September 30, 2015. The Company's effective tax rate for these periods was less than the Federal statutory tax rate due primarily to excess tax benefits on equity compensation, foreign earnings taxed at rates lower than the U.S. statutory rates, and the domestic manufacturing deduction. The decrease in the effective tax rate for the fiscal year ended September 30, 2016 compared to the fiscal year ended September 30, 2015 was primarily due to the excess tax benefits on equity compensation and foreign earnings taxed at rates lower than the U.S. statutory rate.

**Net Income.** Net income increased \$139.2 million, or 31.1%, to \$586.4 million for the fiscal year ended September 30, 2016 compared to net income of \$447.2 million for the year ended September 30, 2015, primarily as a result of the factors referred to above.

**Earnings per Share.** The basic and diluted earnings per share were \$10.39 for the fiscal year ended September 30, 2016 and \$7.84 per share for the fiscal year ended September 30, 2015. Net income for the fiscal year ended September 30, 2016 of \$586.4 million was decreased by dividend equivalent payments of \$3.0 million resulting in net income available to common shareholders of \$583.4 million. Net income for the fiscal year ended September 30, 2015 of \$447.2 million was decreased by dividend equivalent payments of \$3.4 million resulting in net income available to common shareholders of \$443.8 million. The increase in earnings per share of \$2.55 per share to \$10.39 per share is a result of the factors referred to above.

## **Business Segments**

**Segment Net Sales.** Net sales by segment for the fiscal years ended September 30, 2016 and 2015 were as follows (amounts in millions):

	Fiscal Years Ended September 30,					
	2016	% of Sales	2015	% of Sales	Change	% Change
Power & Control	\$ 1,621.7	51.1%	\$ 1,330.1	49.1%	\$ 291.6	21.9%
Airframe	1,447.9	45.7%	1,280.7	47.3%	167.2	13.1%
Non-aviation	101.8	3.2%	96.3	3.6%	5.5	5.7%
	<u>\$ 3,171.4</u>	<u>100.0%</u>	<u>\$ 2,707.1</u>	<u>100.0%</u>	<u>\$ 464.3</u>	<u>17.2%</u>

Organic sales for the Power & Control segment decreased \$21.2 million, or a decrease of 1.6%, when compared to the fiscal year ended September 30, 2015. The organic sales decrease resulted primarily from decreases in commercial OEM sales (\$31.4 million, a decrease of 9.3%) and in defense sales (\$20.6 million, a decrease of 4.0%) partially offset by an increase in commercial aftermarket sales (\$32.1 million, an increase of 7.1%). Acquisition sales for the Power & Control segment totaled \$312.8 million, or an increase of 23.5%, resulting from the acquisitions of Breeze-Eastern and Data Device Corporation in fiscal year 2016 and the acquisitions of PneuDrualics, Telair International GmbH and Telair US LLC in fiscal year 2015.

Organic sales for the Airframe segment increased \$70.7 million, or an increase of 5.5%, when compared to the fiscal year ended September 30, 2015. The organic sales increase primarily resulted from increases in commercial aftermarket (\$29.3 million, an increase of 5.3%), commercial OEM sales (\$19.6 million, an increase of 4.5%) and defense sales (\$21.6 million, an increase of 7.7%). Acquisition sales for the Airframe segment totaled \$96.5 million, or an increase of 7.5%, resulting from the acquisitions of Pexco Aerospace, Adams Rite Aerospace GmbH and Nordisk Aviation Products in fiscal year 2015.

Sales for the Non-aviation segment increased \$5.5 million when compared to the fiscal year ended September 30, 2015. The sales increase was primarily due to an increase in commercial OEM sales of approximately \$3.0 million. There was no impact from acquisitions in the results of the Non-aviation segment.

**EBITDA As Defined.** EBITDA As Defined by segment for the fiscal years ended September 30, 2016 and 2015 were as follows (amounts in millions):

	Fiscal Years Ended September 30,					
	2016	% of Segment Sales	2015	% of Segment Sales	Change	% Change
Power & Control	\$ 787.4	48.6%	\$ 653.0	49.1%	\$ 134.4	20.6%
Airframe	709.9	49.0%	585.5	45.7%	124.4	21.2%
Non-aviation	28.2	27.7%	22.4	23.3%	5.8	25.9%
	<u>\$ 1,525.5</u>	<u>48.1%</u>	<u>\$ 1,260.9</u>	<u>46.6%</u>	<u>\$ 264.6</u>	<u>21.0%</u>

Organic EBITDA As Defined for the Power & Control segment increased approximately \$22.9 million for the fiscal year ended September 30, 2016 compared to the fiscal year ended September 30, 2015. EBITDA As Defined from the acquisitions

of Breeze-Eastern and Data Device Corporation in fiscal year 2016 and the acquisitions of PneuDrualics, Telair International GmbH and Telair US LLC in fiscal year 2015 was approximately \$111.5 million for the fiscal year ended September 30, 2016.

Organic EBITDA As Defined for the Airframe segment increased approximately \$76.9 million for the fiscal year ended September 30, 2016 compared to the fiscal year ended September 30, 2015. EBITDA As Defined from the fiscal year 2015 acquisitions of Pexco Aerospace, Adams Rite Aerospace GmbH and Nordisk Aviation Products was approximately \$47.5 million for the fiscal year ended September 30, 2016.

EBITDA As Defined for the Non-aviation segment increased approximately \$5.8 million for the fiscal year ended September 30, 2016 compared to the fiscal year ended September 30, 2015. There was no impact from acquisitions in the results of the Non-aviation segment.

**Fiscal year ended September 30, 2015 compared with fiscal year ended September 30, 2014**

**Total Company**

*Net Sales.* Net organic sales and acquisition sales and the related dollar and percentage changes for the fiscal years ended September 30, 2015 and 2014 were as follows (amounts in millions):

	Fiscal Years Ended			% Change Total Sales
	September 30, 2015	September 30, 2014	Change	
Organic sales	\$ 2,450.9	\$ 2,372.9	\$ 78.0	3.3%
Acquisition sales	256.2	—	256.2	10.8%
	<u>\$ 2,707.1</u>	<u>\$ 2,372.9</u>	<u>\$ 334.2</u>	<u>14.1%</u>

Acquisition sales represent sales of acquired businesses for the period up to one year subsequent to their acquisition dates. The amount of acquisition sales shown in the table above was attributable to the acquisitions of Telair Cargo Group, Adams Rite Aerospace GmbH, Pexco Aerospace and PneuDrualics in fiscal 2015 and Airborne and EME in fiscal 2014.

Commercial aftermarket sales increased \$36.9 million, or an increase of 4.2%, defense sales increased \$29.8 million, or an increase of 4.3%, and commercial OEM sales increased \$16.4 million, or an increase of 2.4%, for the fiscal year ended September 30, 2015 compared to fiscal year ended September 30, 2014.

*Cost of Sales and Gross Profit.* Cost of sales increased by \$152.3 million, or 13.8%, to \$1,257.3 million for the fiscal year ended September 30, 2015 compared to \$1,105.0 million for the fiscal year ended September 30, 2014. Cost of sales and the related percentage of total sales for the fiscal years ended September 30, 2015 and 2014 were as follows (amounts in millions):

	Fiscal Years Ended			% Change
	September 30, 2015	September 30, 2014	Change	
Cost of sales—excluding acquisition-related costs below	\$ 1,235.1	\$ 1,084.5	\$ 150.6	13.9%
% of total sales	45.6%	45.7%		
Inventory purchase accounting adjustments	11.4	10.4	1.0	9.6%
% of total sales	0.4%	0.4%		
Acquisition integration costs	6.1	6.1	—	—%
% of total sales	0.2%	0.3%		
Stock compensation expense	4.7	4.0	0.7	17.5%
% of total sales	0.2%	0.2%		
Total cost of sales	<u>\$ 1,257.3</u>	<u>\$ 1,105.0</u>	<u>\$ 152.3</u>	<u>13.8%</u>
% of total sales	<u>46.6%</u>	<u>45.5%</u>		
Gross profit	<u>\$ 1,449.8</u>	<u>\$ 1,267.9</u>	<u>\$ 181.9</u>	<u>14.3%</u>
Gross profit percentage	<u>53.6%</u>	<u>53.4%</u>		

The increase in the dollar amount of cost of sales during the fiscal year ended September 30, 2015 was primarily due to increased volume associated with the sales from acquisitions and organic sales growth.

Gross profit as a percentage of sales increased by 0.2 percentage points to 53.6% for the fiscal year ended September 30, 2015 from 53.4% for the fiscal year ended September 30, 2014. The dollar amount of gross profit increased by \$181.9 million, or 14.3%, for the fiscal year ended September 30, 2015 compared to the comparable period last year due to the following items:

- Gross profit on the sales from the acquisitions indicated above (excluding acquisition-related costs) was approximately \$100 million for the fiscal year ended September 30, 2015, which represented gross profit of approximately 39% of



the acquisition sales. The lower gross profit margin on the acquisition sales reduced gross profit as a percentage of consolidated sales by approximately 2 percentage points.

- Organic sales growth described above, application of our three core value-driven operating strategies (obtaining profitable new business, continually improving our cost structure, and providing highly engineered value-added products to customers), and positive leverage on our fixed overhead costs spread over a higher production volume, resulted in a net increase in gross profit of approximately \$83 million for the fiscal year ended September 30, 2015.
- Slightly offsetting the increases in gross profit was the impact of higher inventory purchase accounting adjustments charged to cost of sales of approximately \$1 million.

*Selling and Administrative Expenses.* Selling and administrative expenses increased by \$45.2 million to \$321.6 million, or 11.9% of sales, for the fiscal year ended September 30, 2015 from \$276.4 million, or 11.6% of sales, for the comparable period last year. Selling and administrative expenses and the related percentage of total sales for the fiscal years ended September 30, 2015 and 2014 were as follows (amounts in millions):

	Fiscal Years Ended			
	September 30, 2015	September 30, 2014	Change	% Change
Selling and administrative expenses—excluding costs below	\$ 276.1	\$ 249.4	\$ 26.7	10.7%
% of total sales	10.2%	10.5%		
Stock compensation expense	26.8	22.4	4.4	19.6%
% of total sales	1.0%	0.9%		
Acquisition-related expenses	18.7	4.6	14.1	306.5%
% of total sales	0.7%	0.2%		
<b>Total selling and administrative expenses</b>	<b>\$ 321.6</b>	<b>\$ 276.4</b>	<b>\$ 45.2</b>	<b>16.4%</b>
% of total sales	11.9%	11.6%		

The increase in the dollar amount of selling and administrative expenses during the fiscal year ended September 30, 2015 is primarily due to higher selling and administrative expenses relating to recent acquisitions of approximately \$23 million, which was approximately 9% of acquisition sales, and higher acquisition-related and stock compensation expenses of \$14.1 million and \$4.4 million, respectively.

*Amortization of Intangible Assets.* Amortization of intangible assets decreased to \$54.2 million for the fiscal year ended September 30, 2015 from \$63.6 million for the comparable period last year. The net decrease of \$9.4 million was primarily due to order backlog amortization expense from prior acquisitions becoming fully amortized.

*Refinancing Costs.* Refinancing costs of \$18.4 million were recorded during the fiscal year ended September 30, 2015 representing debt issuance costs expensed in connection with the debt financing activity in May 2015. Included within the \$18.4 million was approximately \$10.2 million of unamortized debt issuance costs written off. Refinancing costs of \$131.6 million were recorded during the fiscal year ended September 30, 2014 representing debt issuance costs expensed in conjunction with the repurchase of the 2018 Notes. The \$131.6 million expense consisted of the premium of \$121.1 million paid to redeem the 2018 Notes and the write-off of debt issuance costs of \$10.5 million.

*Interest Expense-net.* Interest expense-net includes interest on borrowings outstanding, amortization of debt issuance costs and revolving credit facility fees offset by interest income. Interest expense-net increased \$71.1 million, or 20.4%, to \$418.8 million for the fiscal year ended September 30, 2015 from \$347.7 million for the comparable period last year. The net increase in interest expense-net was primarily due to an increase in the weighted average level of outstanding borrowings, which was approximately \$7,827 million for the fiscal year ended September 30, 2015 and approximately \$6,310 million for the fiscal year ended September 30, 2014 slightly offset by a decrease in the weighted average cash interest rate during the fiscal year ended September 30, 2015 of 5.2% compared to the weighted average cash interest rate during the comparable prior period of 5.3%. The increase in weighted average level of borrowings was primarily due to the issuance of the 2025 Notes for \$450.0 million in May 2015 and the additional incremental term loan of \$1,000.0 million in May 2015. The weighted average interest rate for cash interest payments on total borrowings outstanding at September 30, 2015 was 5.0%.

*Income Taxes.* Income tax expense as a percentage of income before income taxes was approximately 29.8% for the fiscal year ended September 30, 2015 compared to 31.6% for the fiscal year ended September 30, 2014. The Company's effective tax rate for these periods was less than the Federal statutory tax rate due primarily to the domestic manufacturing deduction, foreign earnings taxed at rates lower than the U.S. statutory rates, and a discrete adjustment from filing fiscal 2014 and 2013 U.S. income tax returns. The decrease in the effective tax rate for the fiscal year ended September 30, 2015 compared to the fiscal year ended September 30, 2014 was primarily due to the ability to recognize the benefit from the utilization of foreign tax

credits in the current and future years, foreign earnings taxed at rates lower than the U.S. statutory rate, and a discrete adjustment related to the closing of the fiscal year 2012 and 2013 IRS examination.

*Net Income.* Net income increased \$140.3 million, or 45.7%, to \$447.2 million for the fiscal year ended September 30, 2015 compared to net income of \$306.9 million for the year ended September 30, 2014, primarily as a result of the factors referred to above.

*Earnings per Share.* The basic and diluted earnings per share were \$7.84 for the fiscal year ended September 30, 2015 and \$3.16 per share for the fiscal year ended September 30, 2014. Net income for the fiscal year ended September 30, 2015 of \$447.2 million was decreased by dividend equivalent payments of \$3.4 million resulting in net income available to common shareholders of \$443.8 million. Net income for the fiscal year ended September 30, 2014 of \$306.9 million was decreased by dividend equivalent payments of \$126.6 million resulting in net income available to common shareholders of \$180.3 million. The increase in earnings per share of \$4.68 per share to \$7.84 per share is a result of the factors referred to above.

### **Business Segments**

*Segment Net Sales.* Net sales by segment for the fiscal years ended September 30, 2015 and 2014 were as follows (amounts in millions):

	Fiscal Years Ended September 30,					
	2015		2014		Change	
		% of Sales		% of Sales		% Change
Power & Control	\$ 1,330.1	49.1%	\$ 1,161.8	49.0%	\$ 168.3	14.5%
Airframe	1,280.7	47.3%	1,115.6	47.0%	165.1	14.8%
Non-aviation	96.3	3.6%	95.5	4.0%	0.8	0.8%
	<u>\$ 2,707.1</u>	<u>100.0%</u>	<u>\$ 2,372.9</u>	<u>100.0%</u>	<u>\$ 334.2</u>	<u>14.1%</u>

Organic sales for the Power & Control segment increased approximately \$32 million when compared to the fiscal year ended September 30, 2014. The sales increase was primarily due to an increase in defense sales of approximately \$23 million, or an increase of 5.0%. Acquisition sales for the Power & Control segment totaled \$136 million, or an 11.7% increase in segment sales, resulting from the acquisitions of Telair International, Telair US and PneuDrualics in fiscal 2015.

Organic sales for the Airframe segment, increased approximately \$45 million when compared to the fiscal year ended September 30, 2014. The sales increase was primarily due to an increase in commercial aftermarket sales of approximately \$34 million, or an increase of 7.2%, and an increase in commercial OEM sales of approximately \$12 million, or an increase of 3.1%. Acquisition sales for the Airframe segment totaled \$120 million, or a 10.8% increase in segment sales, resulting from the acquisitions of Nordisk Aviation Products, Adams Rite Aerospace GmbH and Pexco Aerospace in fiscal 2015 and Airborne and EME in fiscal 2014.

Sales for the Non-aviation segment increased approximately \$0.8 million when compared to the fiscal year ended September 30, 2014. The sales increase was primarily due to an increase in commercial OEM sales of approximately \$0.6 million. There was no impact from acquisitions in the results of the Non-aviation segment.

*EBITDA As Defined.* EBITDA As Defined by segment for the fiscal years ended September 30, 2015 and 2014 were as follows (amounts in millions):

	Fiscal Years Ended September 30,					
	2015		2014		Change	
		% of Segment Sales		% of Segment Sales		% Change
Power & Control	\$ 653.0	49.1%	\$ 585.6	50.4%	\$ 67.4	11.5%
Airframe	585.5	45.7%	494.1	44.3%	91.4	18.5%
Non-aviation	22.4	23.3%	18.5	19.3%	3.9	21.1%
	<u>\$ 1,260.9</u>	<u>46.6%</u>	<u>\$ 1,098.2</u>	<u>46.3%</u>	<u>\$ 162.7</u>	<u>14.8%</u>

Organic EBITDA As Defined for the Power & Control segment increased approximately \$26 million for the fiscal year ended September 30, 2015 compared to the fiscal year ended September 30, 2014. EBITDA As Defined from the acquisitions in fiscal years 2015 and 2014 was approximately \$41 million for the fiscal year ended September 30, 2015.

Organic EBITDA As Defined for the Airframe segment increased approximately \$49 million for the fiscal year ended September 30, 2015 compared to the fiscal year ended September 30, 2014. EBITDA As Defined from the acquisitions in fiscal years 2015 and 2014 was approximately \$42 million for the fiscal year ended September 30, 2015.

EBITDA As Defined for the Non-aviation segment increased approximately \$4 million for the fiscal year ended September 30, 2015 compared to the fiscal year ended September 30, 2014. There was no impact from acquisitions in the results of the Non-aviation segment.

#### **Backlog**

For information about our backlog, see Item 1. - "Business."

#### **Foreign Operations**

Our direct sales to foreign customers were approximately \$1,169.5 million, \$881.1 million, and \$735.9 million for fiscal years 2016, 2015 and 2014, respectively. Sales to foreign customers are subject to numerous additional risks, including foreign currency fluctuations, the impact of foreign government regulations, political uncertainties and differences in business practices. There can be no assurance that foreign governments will not adopt regulations or take other action that would have a direct or indirect adverse impact on the business or market opportunities of the Company within such governments' countries. Furthermore, there can be no assurance that the political, cultural and economic climate outside the United States will be favorable to our operations and growth strategy.

#### **Inflation**

Many of the Company's raw materials and operating expenses are sensitive to the effects of inflation, which could result in changing operating costs. The effects of inflation on the Company's businesses during the fiscal years 2016, 2015 and 2014 were immaterial.

#### **Liquidity and Capital Resources**

We have historically maintained a capital structure comprising a mix of equity and debt financing. We vary our leverage both to optimize our equity return and to pursue acquisitions. We expect to meet our current debt obligations as they come due through internally generated funds from current levels of operations and/or through refinancing in the debt markets prior to the maturity dates of our debt.

We continually evaluate our debt facilities to assess whether they most efficiently and effectively meet the current and future needs of our business. The Company evaluates from time to time the appropriateness of its current leverage, taking into consideration the Company's debt holders, equity holders, credit ratings, acquisition opportunities and other factors. The Company's debt leverage ratio, which is computed as total debt divided by EBITDA As Defined for the applicable twelve-month period, has varied widely during the Company's history, ranging from approximately 3.5 to 7.0. Our debt leverage ratio at September 30, 2016 was approximately 6.8.

The Company regularly engages in discussions with respect to potential acquisitions and investments. However, there can be no assurance that the Company will be able to consummate an agreement with respect to any future acquisition. The Company's acquisition strategy may require substantial capital, and no assurance can be given that the Company will be able to raise any necessary funds on acceptable terms or at all. If the Company incurs additional debt to finance acquisitions, total interest expense will increase.

If the Company has excess cash, it may consider methods by which it can provide cash to its debt or equity holders through a dividend, prepayment of indebtedness, repurchase of stock, repurchase of debt or other means. Whether the Company undertakes additional stock repurchases or other aforementioned activities will depend on prevailing market conditions, the Company's liquidity requirements, contractual restrictions and other factors. The amounts involved may be material. In addition, the Company may issue additional debt if prevailing market conditions are favorable to doing so.

The Company's ability to make scheduled interest payments on, or to refinance, the Company's indebtedness, or to fund non-acquisition related capital expenditures and research and development efforts, will depend on the Company's ability to generate cash in the future. This is subject to general economic, financial, competitive, legislative, regulatory and other factors that are beyond its control.

As a result of the debt financings in June 2016 and October 2016, interest payments will increase going forward in line with the terms of the related debt agreements. Based on its current levels of operations and absent any disruptive events, management believes that the continued application of our three core value-driven operating strategies (obtaining profitable new business, continually improve our cost structure and providing highly engineered value-added products to customers), will provide the internally generated funds, combined with the borrowings available under our revolving loan facility, to finance its operations, non-acquisition related capital expenditures, research and development efforts and long-term indebtedness obligations through at least fiscal 2017. There can be no assurance, however, that the Company's business will generate sufficient cash flow from operating activities or that future borrowings will be available to the Company under the senior secured credit facility in an amount sufficient to enable it to pay its indebtedness or to fund its other liquidity needs. The Company may need to refinance all or a portion of its indebtedness on or before maturity. Also, to the extent the Company

accelerates its growth plans, consummates acquisitions or has lower than anticipated sales or increases in expenses, the Company may also need to raise additional capital. In particular, increased working capital needs occur whenever the Company consummates acquisitions or experiences strong incremental demand. There can be no assurance that the Company will be able to raise additional capital on commercially reasonable terms or at all.

In the future, the Company may increase its borrowings in connection with acquisitions, if cash flow from operating activities becomes insufficient to fund current operations or for other short-term cash needs or for stock repurchases or dividends. Our future leverage will also be impacted by the then current conditions of the credit markets.

*Operating Activities.* The Company generated \$668.9 million of net cash from operating activities during fiscal 2016 compared to \$520.9 million during fiscal 2015, a net increase of \$148.0 million. The increase is primarily attributable to a \$139.2 million increase in income from operations. Other items impacting the change in net cash from operating activities were items adjusting net income for non-cash expenses and income, which increased by \$33.4 million when excluding the impact of the Company's adoption of ASU 2016-09 in fiscal 2016. The prospective adoption of ASU 2016-09 in fiscal 2016 (as further detailed in Note 4 to the consolidated financial statements included herein) resulted in an increase in net cash flow from operating activities of approximately \$43.6 million compared to a decrease in net cash flow from operating activities of approximately \$62.0 million in fiscal 2015. Partially offsetting the increase in net cash from operating activities was higher interest payments of \$49.7 million and higher income tax payments of \$55.9 million. The increase in interest payments is attributable to timing differences of the payments and the increase in principal from the June 2016 and May 2015 debt financing activities. The increase in income tax payments is attributable to higher income before income taxes and lower excess tax benefits on share-based payment arrangements compared to fiscal 2015.

Changes in trade accounts receivable, inventories, and accounts payable provided approximately \$48.3 million less cash flow when compared to fiscal 2015. The change in trade accounts receivable during fiscal 2016 was a use of \$80.1 million in cash compared to a use of cash of \$25.4 million in fiscal 2015, which is an additional use of cash of \$54.7 million year over year. The higher use of cash in fiscal 2016 compared to fiscal 2015 is attributable to the timing of sales and collections on trade accounts receivable that resulted from stronger sales in the latter half of the fourth quarter which pushed collections on the related trade accounts receivable into fiscal 2017. The Company has also had a higher volume of sales and trade accounts receivable with foreign jurisdictions, which historically have had longer collection periods. Days sales outstanding at September 30, 2016 increased to 54 days from 50 days sales outstanding at September 30, 2015.

The change in inventories was a use of cash of \$2.1 million in fiscal 2016 compared to a use of cash of \$26.0 million in fiscal 2015. The decrease in the use of cash in fiscal 2016 was primarily attributable to the stronger sales volume in the latter half of the fourth quarter of fiscal 2016 which depleted on-hand inventory levels at a higher rate than during the fourth quarter of fiscal 2015 in connection with increased monitoring of inventory management. Inventory turnover was at 2.22 at September 30, 2016 compared to 2.60 at September 30, 2015.

The change in accounts payable during fiscal 2016 was a use of cash of \$6.7 million compared to a source of cash of \$13.5 million in fiscal 2015. The increase in the use of cash was primarily attributable to a lower volume of purchases in response to the increased monitoring of inventory management during the fourth quarter of fiscal 2016 as well as the timing of payments to vendors.

The Company generated \$520.9 million of net cash from operating activities during fiscal 2015 compared to \$541.2 million during fiscal 2014. The net decrease of \$20.3 million was due primarily to higher interest payments due to the Company's current debt structure offset by an increase in income from operations.

*Investing Activities.* Net cash used in investing activities was \$1,443.0 million during fiscal 2016 consisting primarily of cash paid in connection with the acquisitions of Breeze-Eastern, Data Device Corporation and Tactair for \$1,401.5 million and capital expenditures of \$44.0 million during the fiscal year ended September 30, 2016. Slightly offsetting the cash outflows was receipt of a \$2.0 million working capital settlement from the PneuDrualics acquisition in the second quarter of fiscal 2016. The Company expects its capital expenditures in fiscal year 2017 to be between \$85 million and \$90 million. The Company's capital expenditures incurred from year to year are primarily for projects that are consistent with our three core value-driven operating strategies (obtaining profitable new business, continually improve our cost structure and providing highly engineered value-added products to customers).

Net cash used in investing activities was \$1,679.1 million during fiscal 2015 consisting primarily of the acquisitions of Telair Cargo Group, Adams Rite Aerospace GmbH, Pexco Aerospace and PneuDrualics for a total of \$1,624.3 million and capital expenditures of \$54.9 million.

Net cash used in investing activities was \$329.6 million during fiscal 2014 consisting primarily of the acquisitions of Airborne and EME for a total of \$311.9 million and capital expenditures of \$34.1 million offset by the cash proceeds on the sale of real estate of \$16.4 million.

*Financing Activities.* Net cash provided by financing activities during fiscal 2016 was \$1,646.8 million, which was primarily comprised of net proceeds from the 2016 term loans of \$1,725.9 million, net proceeds from the 2026 Notes of \$939.6 million and \$30.1 million of cash proceeds from the exercise of stock options. These increases were partially offset by \$834.4 million of repayments on our existing term loans, \$207.8 million in treasury stock purchases under the Company’s share repurchase programs and the impact from the prospective adoption of ASU 2016-09 which resulted in the excess tax benefits related to share-based payment arrangements being classified within operating activities beginning in fiscal 2016. In October 2016, the Company completed additional financing in connection with the tendering of its 2021 Notes and declaration of a special dividend of \$24.00 per common share along with cash dividend equivalent payments on options granted under its stock option plans. The total cash payment related to the special dividend and dividend equivalent payments in the first quarter of fiscal 2017 will be approximately \$1,400 million. Refer to Note 23, “Subsequent Events,” to our consolidated financial statements included herein for further details.

Net cash provided by financing activities during fiscal 2015 was \$1,054.9 million, which comprised \$1,505.7 million of net proceeds under our Tranche E Term Loans, \$445.3 million of net proceeds from our 2025 Notes, and \$123.6 million of cash for tax benefits related to share-based payment arrangements and from the exercise of stock options offset by \$1,025.3 million of repayments on our term loans and \$3.4 million of dividend equivalent payments.

Net cash provided by financing activities during fiscal 2014 was \$44.0 million, which comprised \$2,326.4 million of net proceeds from our 2022 Notes and 2024 Notes, \$805.4 million of additional net proceeds under our 2014 Term Loans, \$199.2 million of net proceeds from the trade receivable securitization facility, and \$78.4 million of cash for tax benefits related to share-based payment arrangements and from the exercise of stock options offset by \$1,451.4 million of dividends and dividend equivalent payments, \$1,721.0 million for the repurchase of our 2018 Notes, \$159.9 million of treasury stock purchases, and \$33.1 million of repayments on the 2014 Term Loans.

*Description of Senior Secured Term Loans and Indentures*

*Senior Secured Credit Facilities*

On June 9, 2016, TD Group and certain subsidiaries of TransDigm entered into Amendment No. 1 to the Second Amended and Restated Credit Agreement (the “Credit Agreement”). Refer to Note 11, “Debt” to our Consolidated Financial Statements included herein for further information regarding the Tranche F Term Loans, the conversion of a portion of the existing Tranche C Term Loans to Tranche F Term Loans, the repricing of the Tranche E Terms Loans and the increase to the Revolving Commitments.

TransDigm has \$5,289 million in fully drawn term loans (the “Term Loan Facility”) and a \$600 million revolving credit facility. The Term Loan Facility consists of four tranches of term loans as follows (aggregate principal amount disclosed is as of September 30, 2016):

Term Loan Facility	Aggregate Principal	Maturity Date	Interest Rate
Tranche C	\$1,228 million	February 28, 2020	LIBO rate <sup>(1)</sup> +3.00%
Tranche D	\$807 million	June 4, 2021	LIBO rate <sup>(1)</sup> + 3.00%
Tranche E	\$1,518 million	May 14, 2022	LIBO rate <sup>(1)</sup> + 3.00%
Tranche F	\$1,736 million	June 9, 2023	LIBO rate <sup>(1)</sup> + 3.00%

(1) LIBO rate is subject to a floor of 0.75%.

The Term Loan Facility requires quarterly aggregate principal payments of \$13.3 million. The revolving commitments consist of four tranches which includes up to \$100 million of multicurrency revolving commitments. At September 30, 2016, the Company had \$17 million in letters of credit outstanding and \$583 million in borrowings available under the revolving commitments.

The interest rates per annum applicable to the loans under the Credit Agreement will be, at TransDigm’s option, equal to either an alternate base rate or an adjusted LIBO rate for one, two, three or six-month (or to the extent agreed to by each relevant lender, nine or twelve-month) interest periods chosen by TransDigm, in each case plus an applicable margin percentage. The adjusted LIBO rate is subject to a floor of 0.75%. At September 30, 2016, the applicable interest rate was 3.75% on the Tranche C, Tranche D, Tranche E and Tranche F Term Loans.

Under the terms of the Credit Agreement, TransDigm is entitled, on one or more occasions, to request additional revolving commitments, additional term loans or a combination thereof, to the extent that the existing or new lenders agree to provide such additional commitments provided that, among other conditions, our consolidated net leverage ratio would be no

greater than 7.25 to 1.00 and the consolidated secured net debt ratio would be no greater than 4.25 to 1.00, in each case, after giving effect to such additional revolving commitments or additional term loans.

The Credit Agreement requires mandatory prepayments of principal based on certain percentages of Excess Cash Flow (as defined in the Credit Agreement), commencing 90 days after the end of each fiscal year, subject to certain exceptions. In addition, subject to certain exceptions (including, with respect to asset sales, the reinvestment in productive assets), TransDigm will be required to prepay the loans outstanding under the Credit Agreement at 100% of the principal amount thereof, plus accrued and unpaid interest, with the net cash proceeds of certain asset sales and issuance or incurrence of certain indebtedness. No prepayments were required during the fiscal year ended September 30, 2016.

Interest rate swaps and caps used to hedge and offset, respectively, the variable interest rates on the credit facility are described in Note 20, “Derivatives and Hedging Activities” to the consolidated financial statements included herein.

On October 14, 2016, the Company entered into an Incremental Term Loan Assumption Agreement (the “Assumption Agreement”) with Credit Suisse AG, as administrative agent and collateral agent, and as a lender, in connection with the 2016 term loans. The Assumption Agreement, among other things, provides for (i) additional tranche F term loans in an aggregate principal amount equal to \$650 million, which were fully drawn on October 14, 2016 (the “Initial Additional Tranche F Term Loans”), and (ii) additional delayed draw tranche F term loans in an aggregate principal amount not to exceed \$500 million, which were fully drawn on October 27, 2016 (the “Delayed Draw Additional Tranche F Term Loans”, and together with the Initial Additional Tranche F Term Loans, the “Additional Tranche F Term Loans”), the proceeds of which were used to repurchase its 7.50% Senior Subordinated Notes due 2021 in connection with the tender offer announced on October 13, 2016. The terms and conditions that apply to the Additional Tranche F Term Loans are substantially the same as the terms and conditions that apply to the Tranche F Term Loans under the 2016 term loans immediately prior to the Assumption Agreement.

*Indentures*

Senior Subordinated Notes	Aggregate Principal	Maturity Date	Interest Rate
2020 Notes	\$550 million	October 15, 2020	5.50%
2021 Notes <sup>(1)</sup>	\$500 million	July 15, 2021	7.50%
2022 Notes	\$1,150 million	July 15, 2022	6.00%
2024 Notes	\$1,200 million	July 15, 2024	6.50%
2025 Notes	\$450 million	May 15, 2025	6.50%
2026 Notes	\$950 million	June 15, 2026	6.375%

- (1) On October 14, 2016, the Company entered into an Incremental Term Loan Assumption Agreement in which part of the proceeds will be used to repurchase its 2021 Notes in the first quarter of fiscal 2017. Refer to Note 23, “Subsequent Events” to the consolidated financial statements included herein for further details.

The 2020 Notes, 2021 Notes, the 2022 Notes, the 2024 Notes, the 2025 Notes and the 2026 Notes were issued at a price of 100% of the principal amount. Such notes do not require principal payments prior to their maturity. Interest under the Notes is payable semi-annually. The Notes represent unsecured obligations of TransDigm Inc. ranking subordinate to TransDigm Inc.’s senior debt, as defined in the applicable Indentures.

The Notes are subordinated to all of TransDigm’s existing and future senior debt, rank equally with all of its existing and future senior subordinated debt and rank senior to all of its future debt that is expressly subordinated to the Notes. The Notes are guaranteed on a senior subordinated unsecured basis by TD Group and its wholly-owned domestic subsidiaries named in the indentures. The guarantees of the Notes are subordinated to all of the guarantors’ existing and future senior debt, rank equally with all of their existing and future senior subordinated debt and rank senior to all of their future debt that is expressly subordinated to the guarantees of the Notes. The Notes are structurally subordinated to all of the liabilities of TD Group’s non-guarantor subsidiaries. The Notes contain many of the restrictive covenants included in the 2014 Term Loans. TransDigm is in compliance with all the covenants contained in the Notes.

*Certain Restrictive Covenants in Our Debt Documents*

The term loans and the Indentures governing the Notes contain restrictive covenants that, among other things, limit the incurrence of additional indebtedness, the payment of dividends, transactions with affiliates, asset sales, acquisitions, mergers and consolidations, liens and encumbrances, and prepayments of other indebtedness.

Pursuant to the Amendment to the Credit Agreement and subject to certain conditions, TransDigm may make certain additional restricted payments, including to declare or pay dividends or repurchase stock, in an aggregate amount not to exceed

\$1,500 million on or prior to December 31, 2016. Subsequent to December 31, 2016, the aggregate amount of restricted payments remaining, not to exceed \$500 million, may be made solely to the extent that the proceeds are used to repurchase stock. On October 14, 2016, the Company announced that TD Group's Board of Directors authorized and declared a special cash dividend of \$24.00 on each outstanding share of common stock and cash dividend equivalent payments on options granted under its stock option plans. The record date for the special dividend was October 24, 2016, and the payment date for the dividend was November 1, 2016. The total cash payment related to the special dividend and dividend equivalent payments in the first quarter of fiscal 2017 will be approximately \$1,400 million. Refer to Note 23, "Subsequent Events," to our consolidated financial statements included herein for further details.

In addition, under the Credit Agreement, if the usage of the revolving credit facility exceeds 25% of the total revolving commitments, the Company will be required to maintain a maximum consolidated net leverage ratio of net debt, as defined, to trailing four-quarter EBITDA As Defined. A breach of any of the covenants or an inability to comply with the required leverage ratio could result in a default under the Credit Agreement or the Indentures.

If any such default occurs, the lenders under the Credit Agreement and the holders of the Notes may elect to declare all outstanding borrowings, together with accrued interest and other amounts payable thereunder, to be immediately due and payable. The lenders under the Credit Agreement also have the right in these circumstances to terminate any commitments they have to provide further borrowings. In addition, following an event of default under the Credit Agreement, the lenders thereunder will have the right to proceed against the collateral granted to them to secure the debt, which includes our available cash, and they will also have the right to prevent us from making debt service payments on the Notes.

As of September 30, 2016, the Company was in compliance with all of its debt covenants.

#### Trade Receivables Securitization

For information about our trade receivables securitization, see Note 11, "Debt" to our consolidated financial statements included herein.

#### Stock Repurchase Program

For information about our stock repurchase programs, see Note 15, "Capital Stock" to our consolidated financial statements included herein.

#### Contractual Obligations

The following is a summary of contractual cash obligations as of September 30, 2016 (in millions):

	2017	2018	2019	2020	2021	2022 and thereafter	Total
Senior Secured Term Loans <sup>(1)</sup>	\$ 53.1	\$ 53.1	\$ 53.1	\$ 1,230.3	\$ 805.5	\$ 3,093.6	\$ 5,288.7
2020 Notes	—	—	—	—	550.0	—	550.0
2021 Notes <sup>(3)</sup>	—	—	—	—	500.0	—	500.0
2022 Notes	—	—	—	—	—	1,150.0	1,150.0
2024 Notes	—	—	—	—	—	1,200.0	1,200.0
2025 Notes	—	—	—	—	—	450.0	450.0
2026 Notes	—	—	—	—	—	950.0	950.0
Scheduled Interest Payments <sup>(2)</sup>	562.3	567.7	563.2	516.4	448.8	909.4	3,567.8
Operating Leases	16.8	14.0	11.6	9.9	10.8	30.2	93.3
Purchase Obligations	229.3	41.6	3.2	4.9	—	—	279.0
<b>Total Contractual Cash Obligations</b>	<b>\$ 861.5</b>	<b>\$ 676.4</b>	<b>\$ 631.1</b>	<b>\$ 1,761.5</b>	<b>\$ 2,315.1</b>	<b>\$ 7,783.2</b>	<b>\$ 14,028.8</b>

(1) The Tranche C Term Loans mature in February 2020, the Tranche D Term Loans mature in June 2021, the Tranche E Term Loans mature in May 2022, and the Tranche F Term Loans mature in June 2023. The term loans require quarterly principal payments totaling \$13.3 million.

(2) Assumes that the variable interest rate on our Tranche C, Tranche D, Tranche E and Tranche F borrowings under our Senior Secured Term Loans range from approximately 3.75% to 4.25% based on anticipated movements in the LIBO rate. In addition, interest payments include the impact of the 5.4% interest rate fixed through our swap agreements from September 30, 2014 through June 30, 2019 on an aggregate notional amount of \$1,000 million, the impact of the 5.8% interest rate fixed through our swap agreements from March 31, 2016 through June 30, 2020 on an aggregate notional amount of \$750 million, and the impact of the 4.8% interest rate fixed through our forward-starting swap agreements from June 28, 2019 through June 30, 2021 on an aggregate notional amount of \$1,000 million.

- (3) On October 14, 2016, the Company entered into an Incremental Term Loan Assumption Agreement in which part of the proceeds will be used to repurchase its 2021 Notes in the first quarter of fiscal 2017. Refer to Note 23, "Subsequent Events" to our consolidated financial statements included herein for further details.

In addition to the contractual obligations set forth above, the Company incurs capital expenditures for the purpose of maintaining and replacing existing equipment and facilities and, from time to time, for facility expansion. Capital expenditures totaled approximately \$44.0 million, \$54.9 million, and \$34.1 million during fiscal years 2016, 2015, and fiscal 2014, respectively. The Company expects its capital expenditures in fiscal year 2017 to be between \$85 million and \$90 million.

#### **Off-Balance Sheet Arrangements**

The Company utilizes letters of credit to back certain payment and performance obligations. Letters of credit are subject to limits based on amounts outstanding under the Company's revolving credit facility.

#### **New Accounting Standards**

For information about new accounting standards, see Note 4, "Recent Accounting Pronouncements" to our consolidated financial statements included herein.

#### **Additional Disclosure Required by Indentures**

Separate financial statements of TransDigm Inc. are not presented since TD Group has no operations or significant assets separate from its investment in TransDigm Inc. and since the Notes are guaranteed by TD Group and all direct and indirect domestic restricted subsidiaries of TransDigm Inc. TransDigm Inc.'s immaterial wholly owned foreign subsidiaries are not obligated to guarantee the Notes.

### **ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK**

#### *Interest Rate Risk*

Our main exposure to market risk relates to interest rates. Our financial instruments that are subject to interest rate risk principally include fixed-rate and floating-rate long-term debt. At September 30, 2016, we had borrowings under our term loans of approximately \$5,235 million that were subject to interest rate risk. Borrowings under our term loans bear interest, at our option, at a rate equal to either an alternate base rate or an adjusted LIBOR for a one-, two-, three- or six-month (or to the extent available to each lender, nine- or twelve-month) interest period chosen by us, in each case, plus an applicable margin percentage. Accordingly, the Company's cash flows and earnings will be exposed to the market risk of interest rate changes resulting from variable rate borrowings under our term loans. The effect of a hypothetical one percentage point increase in interest rates would increase the annual interest costs under our term loans by approximately \$52 million based on the amount of outstanding borrowings at September 30, 2016. The weighted average interest rate on the \$5,235 million of borrowings under our term loans on September 30, 2016 was 4.2%.

Interest rate swaps and caps used to hedge and offset, respectively, the variable interest rates on the credit facility are described in Note 20, "Derivatives and Hedging Activities" to our consolidated financial statements included herein. We do not hold or issue derivative instruments for speculative purposes.

For information about the fair value of the aggregate principal amount of borrowings under our term loans and the fair value of the Notes, see Note 19, "Fair Value Measurements" to our consolidated financial statements included herein.

### **ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA**

The information required by this Item is contained on pages F-1 through F-40 of this Report.

### **ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE**

None.

### **ITEM 9A. CONTROLS AND PROCEDURES**

#### **Evaluation of Disclosure Controls and Procedures**

As of September 30, 2016, TD Group carried out an evaluation, under the supervision and with the participation of TD Group's management, including its Chief Executive Officer (Principal Executive Officer) and Chief Financial Officer



(Principal Financial Officer), of the effectiveness of the design and operation of TD Group's disclosure controls and procedures. Based upon that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that TD Group's disclosure controls and procedures are effective to ensure that information required to be disclosed by TD Group in the reports it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified by the Securities and Exchange Commission's rules and forms, and that such information is accumulated and communicated to TD Group's management, including its Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. In designing and evaluating the disclosure controls and procedures, TD Group's management recognized that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and management necessarily was required to apply its judgment in designing and evaluating the controls and procedures.

#### **Management's Report on Internal Control Over Financial Reporting**

The management of TD Group is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Exchange Act Rule 13a-15(f). Using criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (COSO) in Internal Control-Integrated Framework, TransDigm's management assessed the effectiveness of the Company's internal control over financial reporting as of September 30, 2016. Based on our assessment, management concluded that the Company's internal control over financial reporting was effective as of September 30, 2016.

During fiscal 2016, we completed the acquisitions of Breeze-Eastern, Data Device Corporation and Tactair. The results of operations are included in our consolidated financial statements from the date of acquisition. As permitted by the Securities and Exchange Commission, we have elected to exclude Breeze-Eastern, Data Device Corporation and Tactair from our assessment of the effectiveness of our internal control over financial reporting as of September 30, 2016. Total assets, net sales and income from operations of these fiscal 2016 acquisitions represented approximately 4.1% of net sales, 15.0% of total assets and 3.2% of income from operations as reported in our consolidated financial statements for fiscal 2016.

The effectiveness of the Company's internal control over financial reporting as of September 30, 2016 has been audited by Ernst & Young LLP, an independent registered public accounting firm, as stated in their report, which is included elsewhere in this Annual Report on Form 10-K and is incorporated herein by reference.

#### **Changes in Internal Control Over Financial Reporting**

On September 23, 2016, we acquired Tactair. Tactair operated under its own set of systems and internal controls and we are currently maintaining those systems and much of that control environment until we are able to incorporate Tactair's processes into our own systems and control environment. We expect to complete the incorporation of Tactair's operations into our systems and control environment in fiscal 2017.

There have been no other changes in the Company's internal control over financial reporting that occurred during the fourth quarter of fiscal 2016 that materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

**Report of Independent Registered Public Accounting Firm**

The Board of Directors and Shareholders of

TransDigm Group Incorporated

We have audited TransDigm Group Incorporated's internal control over financial reporting as of September 30, 2016, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). TransDigm Group Incorporated's management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with policies and procedures may deteriorate.

As indicated in the accompanying Management's Report on Internal Control Over Financial Reporting, management's assessment of and conclusion on the effectiveness of internal control over financial reporting did not include the internal controls of Breeze-Eastern Corporation, Data Device Corporation and Tactair, which are included in the 2016 consolidated financial statements of TransDigm Group Incorporated and constituted 15.0% of total assets as of September 30, 2016 and 4.1% and 3.2% of revenues and income from operations, respectively, for the year then ended. Our audit of internal control over financial reporting of TransDigm Group Incorporated also did not include an evaluation of the internal control over financial reporting of Breeze-Eastern Corporation, Data Device Corporation and Tactair.

In our opinion, TransDigm Group Incorporated maintained, in all material respects, effective internal control over financial reporting as of September 30, 2016, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of TransDigm Group Incorporated as of September 30, 2016 and 2015, and the related consolidated statements of income, comprehensive income, changes in stockholders' deficit and cash flows for each of the three years in the period ended September 30, 2016 of TransDigm Group Incorporated and our report dated November 15, 2016 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Cleveland, Ohio  
November 15, 2016

**ITEM 9B. OTHER INFORMATION**

None.

**PART III****ITEM 10. DIRECTORS, EXECUTIVE OFFICERS, AND CORPORATE GOVERNANCE****Directors and Executive Officers**

Information regarding TD Group's directors will be set forth under the caption "Proposal One: Election of Directors" in our Proxy Statement, which is incorporated herein by reference. The following table sets forth certain information concerning TD Group's executive officers:

<u>Name</u>	<u>Age</u>	<u>Position</u>
W. Nicholas Howley	64	Chief Executive Officer, President and Chairman of the Board of Directors
Robert S. Henderson	60	Chief Operating Officer—Airframe
Kevin Stein	50	Chief Operating Officer—Power & Control
Terrance M. Paradie	48	Executive Vice President and Chief Financial Officer
Bernt G. Iversen II	59	Executive Vice President—Mergers and Acquisitions
James Skulina	57	Executive Vice President
Peter Palmer	52	Executive Vice President
John Leary	69	Executive Vice President
Jorge Valladares III	42	Executive Vice President
Roger V. Jones	56	Executive Vice President
Joel Reiss	46	Executive Vice President

Mr. Howley was named Chairman of the Board of Directors of TD Group in July 2003. He has served as Chief Executive Officer of TD Group since December 2005 and of TransDigm Inc. since December 2001. Mr. Howley served as President of TD Group from July 2003 through December 2005, as Chief Operating Officer of TransDigm Inc. from December 1998 through December 2001 and as President of TransDigm Inc. from December 1998 through September 2005. Mr. Howley was a director of Polypore International Inc., a NYSE-listed manufacturer of polymer-based membranes used in separation and filtration processes through October 2012. Mr. Howley was a director of Satair A/S, a Danish public company that is an aerospace distributor, including a distributor of the Company's products through October 2011.

Mr. Henderson was appointed Chief Operating Officer—Airframe in October 2014. Prior to that, Mr. Henderson served as Executive Vice President from December 2005 to October 2014, and as President of the AdelWiggins Group, a division of TransDigm Inc., from August 1999 to April 2008.

Mr. Stein was appointed Chief Operating Officer—Power in October 2014. Prior to that, Mr. Stein served as Executive Vice President and President of the Structurals division of Precision Castparts Corp. from November 2011 to October 2014 and Executive Vice President and President of the Fasteners division of Precision Castparts Corp. from January 2009 through November 2011.

Mr. Paradie was appointed Executive Vice President and Chief Financial Officer in April 2015. Prior to that, Mr. Paradie held various titles since 2007 at Cliffs Natural Resources Inc., a NYSE-listed international mining company, including Chief Financial Officer (from October 2012 to April 2015) and Executive Vice President (from March 2013 to April 2015).

Mr. Iversen was appointed Executive Vice President—Mergers & Acquisitions and Business Development in May 2012. Prior to that, Mr. Iversen served as Executive Vice President of TD Group from December 6, 2010 through May 2012 and as President of Champion Aerospace LLC, a wholly-owned subsidiary of TransDigm Inc., from June 2006 to December 2010.

Mr. Skulina was appointed Executive Vice President in January 2012. Prior to that, Mr. Skulina served as President of the Aero Fluid Products division of AeroControlex Group, Inc., a wholly-owned subsidiary of TransDigm Inc., from September 2009 to December 2011, and as Controller of TransDigm Inc., from August 2007 to August 2009.

Mr. Palmer was appointed Executive Vice President in February 2012. Prior to that, Mr. Palmer served as President of AdelWiggins Group, a division of TransDigm Inc., from April 2010 to February 2012, and as President of CEF Industries, LLC, a wholly-owned subsidiary of TransDigm Inc., from June 2008 to March 2010.

Mr. Leary was appointed Executive Vice President May 2012. Prior to that, he served as President of Hartwell Corporation, a wholly-owned subsidiary of TransDigm Inc., from October 2011 to May 2012, and as President of Adams Rite Aerospace, Inc., a wholly-owned subsidiary of TransDigm Inc., from June 1999 to September 2011.

Mr. Valladares was appointed Executive Vice President in October 2013. Prior to that, Mr. Valladares served as President of AvtechTyee, Inc. (formerly Avtech Corporation), a wholly-owned subsidiary of TransDigm Inc., from August 2009 to September 2013, and as President of AdelWiggins Group, a division of TransDigm Inc., from April 2008 to July 2009.

Mr. Jones was appointed Executive Vice President in October 2015. Prior to that, Mr. Jones served as President of AeroControlex, a wholly-owned subsidiary of TransDigm Inc., from September 2009 to October 2015.

Mr. Reiss was appointed Executive Vice President in October 2015. Prior to that, Mr. Reiss served as President of Hartwell Corporation, a wholly-owned subsidiary of TransDigm Inc., from May 2012 to October 2015, and as President of Skurka Aerospace, also a wholly-owned subsidiary of TransDigm Inc., from July 2010 to May 2012.

#### **Section 16(a) Beneficial Ownership Reporting Compliance**

The information regarding compliance with Section 16 of the Securities Exchange Act of 1934 will be set forth under the caption entitled “Section 16(a) Beneficial Ownership Reporting Compliance” in our Proxy Statement, which is incorporated herein by reference.

#### **Code of Ethics**

We have adopted a Code of Business Conduct and Ethics, which applies to all of our directors, officers, and employees and a Code of Ethics for Senior Financial Officers which includes additional ethical obligations for our senior financial management (which includes our chief executive officer, chief financial officer, president, division presidents, controllers, treasurer, and chief internal auditor). Please refer to the information set forth under the caption “Corporate Governance—Codes of Ethics & Whistleblower Policy” in our Proxy Statement, which is incorporated herein by reference. Our Code of Business Conduct and Ethics and our Code of Ethics for Senior Financial Officers is available on our website at [www.transdigm.com](http://www.transdigm.com). Any person may receive a copy without charge by writing to us at TransDigm Group Incorporated, 1301 East 9<sup>th</sup> Street, Suite 3000, Cleveland, Ohio 44114. We intend to disclose on our website any amendment to, or waiver from, a provision of our Code of Business Conduct and Ethics that applies to directors and executive officers and that is required to be disclosed pursuant to the rules of the Securities and Exchange Commission.

#### **Nominations of Directors**

The procedure by which stockholders may recommend nominees to our Board of Directors will be set forth under the caption “Corporate Governance—Board Committees—Nominating and Corporate Governance Committee” in our Proxy Statement, which is incorporated herein by reference.

#### **Audit Committee**

The information regarding the audit committee of our Board of Directors and audit committee financial experts will be set forth under the caption “Corporate Governance—Board Committees—Audit Committee” in our Proxy Statement, which is incorporated herein by reference.

### **ITEM 11. EXECUTIVE COMPENSATION**

The information required by this item will be set forth under the captions “Executive Compensation”, “Compensation of Directors”, “Compensation Committee Interlocks and Insider Participation” and “Compensation Committee Report” in our Proxy Statement, which is incorporated herein by reference.

### **ITEM 12. SECURITY OWNERSHIP OF BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS**

The information regarding security ownership of certain beneficial owners and management will be set forth under the caption “Security Ownership of Certain Beneficial Owners and Management” in our Proxy Statement, which is incorporated herein by reference.

**Equity Compensation Plan Information**

<u>Plan category</u>	Number of Securities to Be Issued upon Exercise of Outstanding Options, Warrants and Rights (a)	Weighted-Average Exercise Price of Outstanding Options, Warrants and Rights (b)	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (excluding securities reflected in column (a)) (c)
Equity compensation plans approved by security holders <sup>(1)</sup>	5,474,135 <sup>(2)</sup>	\$ 135.59	4,852,065 <sup>(3)</sup>

(1) Includes information related to the 2003 stock option plan, the 2006 stock incentive plan and the 2014 stock option plan.

(2) This amount represents 86,329, 5,239,871 and 147,935 shares subject to outstanding stock options under our 2003 stock option plan, 2006 stock incentive plan and 2014 stock option plan, respectively. No further grants may be made under our 2003 stock option plan and 2006 stock incentive plan, although outstanding stock options continue in force in accordance with their terms.

(3) This amount represents remaining shares available for award under our 2014 stock option plan.

**ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE**

The information required by this item will be set forth under the captions entitled “Certain Relationships and Related Transactions,” “Compensation of Directors,” and “Independence of Directors” in our Proxy Statement, which is incorporated herein by reference.

**ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES**

The information required by this item will be set forth under the caption “Principal Accounting Fees and Services” in our Proxy Statement, which is incorporated herein by reference.

**PART IV**

**ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES**

**(a) Documents Filed with Report**

**(a) (1) Financial Statements**

	<u>Page</u>
Report of Independent Registered Public Accounting Firm	<a href="#">F-1</a>
Consolidated Balance Sheets as of September 30, 2016 and 2015	<a href="#">F-2</a>
Consolidated Statements of Income for Fiscal Years Ended September 30, 2016, 2015 and 2014	<a href="#">F-3</a>
Consolidated Statements of Comprehensive (Loss) Income for Fiscal Years Ended September 30, 2016, 2015 and 2014	<a href="#">F-4</a>
Consolidated Statements of Changes in Stockholders' (Deficit)/Equity for Fiscal Years Ended September 30, 2016, 2015 and 2014	<a href="#">F-5</a>
Consolidated Statements of Cash Flows for Fiscal Years Ended September 30, 2016, 2015 and 2014	<a href="#">F-6</a>
Notes to Consolidated Financial Statements for Fiscal Years Ended September 30, 2016, 2015 and 2014	pages F-7 to F-39

**(a) (2) Financial Statement Schedules**

Valuation and Qualifying Accounts for the Fiscal Years Ended September 30, 2016, 2015 and 2014	<a href="#">F-40</a>
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**(a) (3) Exhibits**

<b>Exhibit No.</b>	<b>Description</b>	<b>Filed Herewith or Incorporated by Reference From</b>
2.1	Purchase Agreement, dated February 20, 2015, among AAR International, Inc., AAR Manufacturing, Inc., TransDigm Inc. and TransDigm Germany GmbH	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed February 24, 2015 (File No. 001-32833)
2.2	Agreement and Plan of Merger dated as of May 23, 2016 among TransDigm Inc., Thunder Merger Sub Inc., ILC Holdings, Inc. and Behrman Capital PEP L.P.	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed May 26, 2016 (File No. 001-32833)
3.1	Second Amended and Restated Certificate of Incorporation, filed April 28, 2014, of TransDigm Group Incorporated	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed April 28, 2014 (File No. 001-32833)
3.2	Second Amended and Restated Bylaws of TransDigm Group Incorporated	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed April 28, 2014 (File No. 001-32833)
3.3	Certificate of Incorporation, filed July 2, 1993, of NovaDigm Acquisition, Inc. (now known as TransDigm Inc.)	Incorporated by reference to TransDigm Inc. and TransDigm Holding Company's Form S-4 filed January 29, 1999 (File No. 333-71397)
3.4	Certificate of Amendment, filed July 22, 1993, of the Certificate of Incorporation of NovaDigm Acquisition, Inc. (now known as TransDigm Inc.)	Incorporated by reference to TransDigm Inc. and TransDigm Holding Company's Form S-4 filed January 29, 1999 (File No. 333-71397)
3.5	Bylaws of NovaDigm Acquisition, Inc. (now known as TransDigm Inc.)	Incorporated by reference to TransDigm Inc. and TransDigm Holding Company's Form S-4 filed January 29, 1999 (File No. 333-71397)
3.6	Certificate of Incorporation, filed July 10, 2009, of Acme Aerospace Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed August 25, 2009 (File No. 001-32833)
3.7	Bylaws of Acme Aerospace Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed August 25, 2009 (File No. 001-32833)
3.8	Articles of Incorporation, filed July 30, 1986, of ARP Acquisition Corporation (now known as Adams Rite Aerospace, Inc.)	Incorporated by reference to TransDigm Inc. and TransDigm Holding Company's Form S-4 filed January 29, 1999 (File No. 333-71397)
3.9	Certificate of Amendment, filed September 12, 1986, of the Articles of Incorporation of ARP Acquisition Corporation (now known as Adams Rite Aerospace, Inc.)	Incorporated by reference to TransDigm Inc. and TransDigm Holding Company's Form S-4 filed January 29, 1999 (File No. 333-71397)
3.10	Certificate of Amendment, filed January 27, 1992, of the Articles of Incorporation of Adams Rite Products, Inc. (now known as Adams Rite Aerospace, Inc.)	Incorporated by reference to TransDigm Inc. and TransDigm Holding Company's Form S-4 filed January 29, 1999 (File No. 333-71397)
3.11	Certificate of Amendment, filed December 31, 1992, of the Articles of Incorporation of Adams Rite Products, Inc. (now known as Adams Rite Aerospace, Inc.)	Incorporated by reference to TransDigm Inc. and TransDigm Holding Company's Form S-4 filed January 29, 1999 (File No. 333-71397)
3.12	Certificate of Amendment, filed August 11, 1997, of the Articles of Incorporation of Adams Rite Sabre International, Inc. (now known as Adams Rite Aerospace, Inc.)	Incorporated by reference to TransDigm Inc. and TransDigm Holding Company's Form S-4 filed January 29, 1999 (File No. 333-71397)

<b>Exhibit No.</b>	<b>Description</b>	<b>Filed Herewith or Incorporated by Reference From</b>
3.13	Amended and Restated Bylaws of Adams Rite Aerospace, Inc.	Incorporated by reference to TransDigm Inc. and TransDigm Holding Company's Form S-4 filed January 29, 1999 (File No. 333-71397)
3.14	Certificate of Incorporation, filed June 18, 2007, of AeroControlex Group, Inc.	Incorporated by reference to TransDigm Inc. and TransDigm Group Incorporated's Form S-4 filed July 6, 2007 (File No. 333-144366)
3.15	Bylaws of AeroControlex Group, Inc.	Incorporated by reference to TransDigm Inc. and TransDigm Group Incorporated's Form S-4 filed July 6, 2007 (File No. 333-144366)
3.16	Certificate of Formation, filed September 25, 2013, of Aerosonic LLC	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 5, 2014 (File No. 001-32833)
3.17	Limited Liability Company Agreement of Aerosonic LLC	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 5, 2014 (File No. 001-32833)
3.18	Certificate of Incorporation, filed November 13, 2009, of Airborne Acquisition, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 5, 2014 (File No. 001-32833)
3.19	Bylaws of Airborne Acquisition, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 5, 2014 (File No. 001-32833)
3.20	Amended and Restated Certificate of Incorporation, filed January 25, 2010, of HDT International Holdings, Inc. (now known as Airborne Global, Inc.)	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 5, 2014 (File No. 001-32833)
3.21	Certificate of Amendment to Certificate of Incorporation, filed February 24, 2010, of HDT International Holdings, Inc. (now known as Airborne Global, Inc.)	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 5, 2014 (File No. 001-32833)
3.22	Certificate of Amendment to Certificate of Incorporation, filed December 10, 2013, of HDT International Holdings, Inc. (now known as Airborne Global, Inc.)	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 5, 2014 (File No. 001-32833)
3.23	Bylaws of HDT International Holdings, Inc. (now known as Airborne Global, Inc.)	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 5, 2014 (File No. 001-32833)
3.24	Certificate of Incorporation, filed November 13, 2009, of Airborne Holdings, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 5, 2014 (File No. 001-32833)
3.25	Bylaws of Airborne Holdings, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 5, 2014 (File No. 001-32833)
3.26	Certificate of Incorporation, filed September 1, 1995, of Wardle Storeys Inc. (now known as Airborne Systems NA Inc.)	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 5, 2014 (File No. 001-32833)
3.27	Certificate of Amendment to Certificate of Incorporation, filed May 28, 2002, of Wardle Storeys Inc. (now known as Airborne Systems NA Inc.)	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 5, 2014 (File No. 001-32833)



<b>Exhibit No.</b>	<b>Description</b>	<b>Filed Herewith or Incorporated by Reference From</b>
3.28	Bylaws of Airborne Systems NA Inc., as amended	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 5, 2014 (File No. 001-32833)
3.29	Certificate of Incorporation, filed April 23, 2007, of Airborne Systems North America Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 5, 2014 (File No. 001-32833)
3.30	Bylaws of Airborne Systems North America Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 5, 2014 (File No. 001-32833)
3.31	Certificate of Incorporation, filed April 25, 1989, of Irvin Industries (Del), Inc. (now known as Airborne Systems North America of CA Inc.)	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 5, 2014 (File No. 001-32833)
3.32	Certificate of Amendment to Certificate of Incorporation, filed June 2, 1989, of Irvin Industries (Del), Inc. (now known as Airborne Systems North America of CA Inc.)	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 5, 2014 (File No. 001-32833)
3.33	Certificate of Amendment to Certificate of Incorporation, filed April 30, 1996, of Irvin Industries, Inc. (now known as Airborne Systems North America of CA Inc.)	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 5, 2014 (File No. 001-32833)
3.34	Certificate of Amendment to Certificate of Incorporation, filed April 23, 1997, of Irvin Aerospace Inc. (now known as Airborne Systems North America of CA Inc.)	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 5, 2014 (File No. 001-32833)
3.35	Bylaws of Airborne Systems North America of CA Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 5, 2014 (File No. 001-32833)
3.36	Certificate of Incorporation, Profit, filed October 28, 1994, of Wardle Storeys (Parachutes) Inc. (now known as Airborne Systems North America of NJ Inc.)	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 5, 2014 (File No. 001-32833)
3.37	Certificate of Merger, filed February 9, 1995, of Para-Flite Inc. with and into Wardle Storeys (Parachutes) Inc. (now known as Airborne Systems North America of NJ Inc.)	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 5, 2014 (File No. 001-32833)
3.38	Certificate of Amendment to Certificate of Incorporation, filed April 23, 1997, of Para-Flite Inc. (now known as Airborne Systems North America of NJ Inc.)	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 5, 2014 (File No. 001-32833)
3.39	Certificate of Correction to Certificate of Incorporation, filed June 27, 2007, of Airborne Systems North America of NJ Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 5, 2014 (File No. 001-32833)
3.40	Bylaws of Airborne Systems North America of NJ Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 5, 2014 (File No. 001-32833)
3.41	Certificate of Incorporation, filed May 8, 1985, of Am-Safe, Inc. (now known as AmSafe, Inc.)	Incorporated by reference to Form TransDigm Group Incorporated's 10-Q filed May 9, 2012 (File No. 001-32833)
3.42	Certificate of Amendment of Certificate of Incorporation, filed May 19, 2005, of Am-Safe, Inc. (now known as AmSafe, Inc.)	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed May 9, 2012 (File No. 001-32833)

<b>Exhibit No.</b>	<b>Description</b>	<b>Filed Herewith or Incorporated by Reference From</b>
3.43	By-Laws of Am-Safe, Inc. (now known as AmSafe, Inc.)	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed May 9, 2012 (File No. 001-32833)
3.44	Certificate of Incorporation, filed October 16, 2007, of AmSafe Global Holdings, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed May 9, 2012 (File No. 001-32833)
3.45	Amended and Restated By-Laws of AmSafe Global Holdings, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed May 9, 2012 (File No. 001-32833)
3.46	Restated Certificate of Incorporation, filed July 10, 1967, of Arkwin Industries, Inc.	Incorporated by reference to Amendment No. 3 to TransDigm Inc. and TransDigm Group Incorporated's Form S-4 filed June 27, 2013 (File No. 333-186494)
3.47	Certificate of Amendment, filed November 4, 1981, of Arkwin Industries, Inc.	Incorporated by reference to Amendment No. 3 to TransDigm Inc. and TransDigm Group Incorporated's Form S-4 filed June 27, 2013 (File No. 333-186494)
3.48	Certificate of Amendment, filed June 11, 1999, of Arkwin Industries, Inc.	Incorporated by reference to Amendment No. 3 to TransDigm Inc. and TransDigm Group Incorporated's Form S-4 filed June 27, 2013 (File No. 333-186494)
3.49	Bylaws of Arkwin Industries, Inc.	Incorporated by reference to Amendment No. 3 to TransDigm Inc. and TransDigm Group Incorporated's Form S-4 filed June 27, 2013 (File No. 333-186494)
3.50	Certificate of Incorporation, filed March 7, 2003, of Wings Holdings, Inc. (now known as Aviation Technologies, Inc.)	Incorporated by reference to TransDigm Inc. and TransDigm Group Incorporated's Form S-4 filed July 6, 2007 (File No. 333-144366)
3.51	Certificate of Amendment of Certificate of Incorporation, filed May 12, 2003, of Wings Holdings, Inc. (now known as Aviation Technologies, Inc.)	Incorporated by reference to TransDigm Inc. and TransDigm Group Incorporated's Form S-4 filed July 6, 2007 (File No. 333-144366)
3.52	Certificate of Amendment of Certificate of Incorporation, filed July 17, 2003, of Wings Holdings, Inc. (now known as Aviation Technologies, Inc.)	Incorporated by reference to TransDigm Inc. and TransDigm Group Incorporated's Form S-4 filed July 6, 2007 (File No. 333-144366)
3.53	Bylaws of Wings Holdings, Inc. (now known as Aviation Technologies, Inc.)	Incorporated by reference to TransDigm Inc. and TransDigm Group Incorporated's Form S-4 filed July 6, 2007 (File No. 333-144366)
3.54	Certificate of Incorporation, filed October 10, 1986, of Avionic Instruments, Inc. (now known as Avionic Instruments LLC)	Incorporated by reference to TransDigm Group Incorporated's Form S-4 filed October 11, 2006 (File No. 001-32833)
3.55	Limited Liability Company Agreement of Avionic Instruments LLC	Incorporated by reference to TransDigm Inc. and TransDigm Group Incorporated's Form S-4 filed July 6, 2007 (File No.333-144366)
3.56	Certificate of Incorporation, filed December 29, 1992, of Avionic Specialties, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 5, 2014 (File No. 001-32833)
3.57	Bylaws of Avionic Specialties, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 5, 2014 (File No. 001-32833)

<b>Exhibit No.</b>	<b>Description</b>	<b>Filed Herewith or Incorporated by Reference From</b>
3.58	Articles of Incorporation, filed October 3, 1963, of Avtech Corporation (now known as AvtechTye, Inc.)	Incorporated by reference to TransDigm Inc. and TransDigm Group Incorporated's Form S-4 filed July 6, 2007 (File No. 333-144366)
3.59	Articles of Amendment of Articles of Incorporation, filed March 30, 1984, of Avtech Corporation (now known as AvtechTye, Inc.)	Incorporated by reference to TransDigm Inc. and TransDigm Group Incorporated's Form S-4 filed July 6, 2007 (File No. 333-144366)
3.60	Articles of Amendment of Articles of Incorporation, filed April 17, 1989, of Avtech Corporation (now known as AvtechTye, Inc.)	Incorporated by reference to TransDigm Inc. and TransDigm Group Incorporated's Form S-4 filed July 6, 2007 (File No. 333-144366)
3.61	Articles of Amendment of Articles of Incorporation, filed July 17, 1998, of Avtech Corporation (now known as AvtechTye, Inc.)	Incorporated by reference to TransDigm Inc. and TransDigm Group Incorporated's Form S-4 filed July 6, 2007 (File No. 333-144366)
3.62	Articles of Amendment of Articles of Incorporation, filed May 20, 2003, of Avtech Corporation (now known as Avtech Tye, Inc.)	Incorporated by reference to TransDigm Inc. and TransDigm Group Incorporated's Form S-4, filed July 6, 2007 (File No. 333-144366)
3.63	Articles of Amendment of Articles of Incorporation, filed May 2, 2012, of AvtechTye, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-K filed November 16, 2012 (File No. 001-32833)
3.64	Bylaws of Avtech Corporation (now known as AvtechTye, Inc.)	Incorporated by reference to TransDigm Inc. and TransDigm Group Incorporated's Form S-4 filed July 6, 2007 (File No. 333-144366)
3.65	Certificate of Incorporation, filed October 24, 1977, of Transformer Technology Corporation (now known as Beta Transformer Technology Corporation)	Filed Herewith
3.66	Certificate of Amendment of Certificate of Incorporation, filed December 1, 1977, of Transformer Technology Corporation (now known as Beta Transformer Technology Corporation)	Filed Herewith
3.67	Bylaws of Transformer Technology Corporation (now known as Beta Transformer Technology Corporation)	Filed Herewith
3.68	Amended and Restated Limited Liability Company Agreement, filed July 7, 2016, of Beta Transformer Technology LLC	Filed Herewith
3.69	Limited Liability Company Certificate of Formation of Breeze-Eastern LLC	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed May 11, 2016 (File No. 001-32833)
3.70	Limited Liability Company Agreement of Breeze-Eastern LLC	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed May 11, 2016 (File No. 001-32833)
3.71	Articles of Incorporation, filed February 6, 1998, of Air Carrier Acquisition Corp. (now known as Bridport-Air Carrier, Inc.)	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed May 9, 2012 (File No. 001-32833)
3.72	Articles of Amendment, filed February 23, 1998, of Air Carrier Acquisition Corp. (now known as Bridport-Air Carrier, Inc.)	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed May 9, 2012 (File No. 001-32833)

<b>Exhibit No.</b>	<b>Description</b>	<b>Filed Herewith or Incorporated by Reference From</b>
3.73	Articles of Amendment, filed December 14, 1999, of Bridport-Air Carrier, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed May 9, 2012 (File No. 001-32833)
3.74	Amended and Restated By-Laws of Bridport-Air Carrier, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed May 9, 2012 (File No. 001-32833)
3.75	Certificate of Incorporation, filed May 9, 2000, of Erie Acquisition Corp. (now known as Bridport Erie Aviation, Inc.)	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed May 9, 2012 (File No. 001-32833)
3.76	Certificate of Amendment of Certificate of Incorporation, filed May 30, 2000, of Erie Acquisition Corp. (now known as Bridport Erie Aviation, Inc.)	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed May 9, 2012 (File No. 001-32833)
3.77	Certificate of Amendment of Certificate of Incorporation, filed June 19, 2000, of Bridport Erie Aviation, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed May 9, 2012 (File No. 001-32833)
3.78	Amended and Restated By-Laws of Erie Acquisition Corp. (now known as Bridport Erie Aviation, Inc.)	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed May 9, 2012 (File No. 001-32833)
3.79	Certificate of Incorporation, filed July 2, 2004, of Bridport Holdings, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed May 9, 2012 (File No. 001-32833)
3.80	Amended and Restated By-Laws of Bridport Holdings, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed May 9, 2012 (File No. 001-32833)
3.81	Certificate of Incorporation filed August 6, 2007, of Bruce Aerospace, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-K filed November 21, 2007 (File No. 001-32833)
3.82	Bylaws of Bruce Aerospace, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-K filed November 21, 2007 (File No. 001-32833)
3.83	Certificate of Conversion, effective June 30, 2007, converting CDA InterCorp into CDA InterCorp LLC	Incorporated by reference to TransDigm Inc. and TransDigm Group Incorporated's Form S-4 filed July 6, 2007 (File No. 333-144366)
3.84	Operating Agreement of CDA InterCorp LLC	Incorporated by reference to TransDigm Inc. and TransDigm Group Incorporated's Form S-4 filed July 6, 2007 (File No. 333-144366)
3.85	Certificate of Formation, filed September 30, 2010, of CEF Industries, LLC	Incorporated by reference to TransDigm Group Incorporated's Form 10-K filed November 24, 2009 (File No. 001-32833)
3.86	Limited Liability Company Agreement of CEF Industries, LLC	Incorporated by reference to TransDigm Group Incorporated's Form 10-K filed November 24, 2009 (File No. 001-32833)
3.87	Certificate of Formation, effective June 30, 2007, of Champion Aerospace LLC	Incorporated by reference to TransDigm Inc. and TransDigm Group Incorporated's Form S-4 filed July 6, 2007 (File No. 333-144366)

<b>Exhibit No.</b>	<b>Description</b>	<b>Filed Herewith or Incorporated by Reference From</b>
3.88	Limited Liability Company Agreement of Champion Aerospace LLC	Incorporated by reference to TransDigm Inc. and TransDigm Group Incorporated's Form S-4 filed July 6, 2007 (File No. 333-144366)
3.89	Certificate of Incorporation, filed October 23, 1970, of ILC Data Devices Corporation (now known as Data Device Corporation)	Filed Herewith
3.90	Certificate of Amendment of Certificate of Incorporation, filed April 23, 1999, of ILC Data Devices Corporation (now known as Data Device Corporation)	Filed Herewith
3.91	Certificate of Amendment of Certificate of Incorporation, filed July 14, 2014, of Data Device Corporation	Filed Herewith
3.92	Bylaws of ILC Data Devices Corporation (now known as Data Device Corporation)	Filed Herewith
3.93	Certificate of Incorporation, filed November 20, 2009, of Dukes Aerospace, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed December 4, 2009 (File No. 001-32833)
3.94	Bylaws of Dukes Aerospace, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed December 4, 2009 (File No. 001-32833)
3.95	Certificate of Formation, filed February 29, 2000, of Western Sky Industries, LLC (now known as Electromech Technologies LLC)	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 8, 2011 (File No. 001-32833)
3.96	Certificate of Amendment, filed December 18, 2013, of Western Sky Industries, LLC (now known as Electromech Technologies LLC)	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 5, 2014
3.97	Second Amended and Restated Limited Liability Agreement of Western Sky Industries, LLC (now known as Electromech Technologies LLC)	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 8, 2011 (File No. 001-32833)
3.98	Certificate of Conversion, effective March 31, 2014, of Harco LLC	Incorporated by reference to TransDigm Inc. and TransDigm Group Incorporated's Form S-4 filed August 7, 2014 (File No. 333-197935)
3.99	Limited Liability Company Agreement of Harco LLC	Incorporated by reference to TransDigm Inc. and TransDigm Group Incorporated's Form S-4 filed August 7, 2014 (File No. 333-197935)
3.100	Articles of Incorporation, filed May 10, 1957, of Hartwell Aviation Supply Company (now known as Hartwell Corporation)	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 8, 2011 (File No. 001-32833)
3.101	Certificate of Amendment, filed June 9, 1960, of Articles of Incorporation of Hartwell Aviation Supply Company (now known as Hartwell Corporation)	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 8, 2011 (File No. 001-32833)
3.102	Certification of Amendment, filed October 23, 1987, of Articles of Incorporation of Hartwell Corporation	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 8, 2011 (File No. 001-32833)

<b>Exhibit No.</b>	<b>Description</b>	<b>Filed Herewith or Incorporated by Reference From</b>
3.103	Certificate of Amendment, filed April 9, 1997, of Articles of Incorporation of Hartwell Corporation	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 8, 2011 (File No. 001-32833)
3.104	Bylaws of Hartwell Corporation	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 8, 2011 (File No. 001-32833)
3.105	Amended and Restated Certificate of Incorporation, filed June 23, 2016, of ILC Holdings, Inc.	Filed Herewith
3.106	Bylaws of ILC Holdings, Inc.	Filed Herewith
3.107	Certificate of Formation, filed August 12, 2008, of New ILC Mergeco, LLC (now known as ILC Industries, LLC)	Filed Herewith
3.108	Certificate of Amendment to Certificate of Formation, filed December 3, 2010, of New ILC Mergeco, LLC (now known as ILC Industries, LLC)	Filed Herewith
3.109	Limited Liability Company Agreement of ILC Industries, LLC	Filed Herewith
3.110	Certificate of Formation, filed January 26, 2007, of Johnson Liverpool LLC	Filed Herewith
3.111	Amended and Restated Limited Liability Company Agreement of Johnson Liverpool LLC	Filed Herewith
3.112	Certificate of Incorporation, filed March 28, 1994, of MPT Acquisition Corp. (now known as MarathonNorco Aerospace, Inc.)	Incorporated by reference to TransDigm Inc. and TransDigm Holding Company's Form S-4 filed January 29, 1999 (File No. 333-71397)
3.113	Certificate of Amendment, filed May 18, 1994, of the Certificate of Incorporation of MPT Acquisition Corp. (now known as MarathonNorco Aerospace, Inc.)	Incorporated by reference to TransDigm Inc. and TransDigm Holding Company's Form S-4 filed January 29, 1999 (File No. 333-71397)
3.114	Certificate of Amendment, filed May 24, 1994, of the Certificate of Incorporation of MPT Acquisition Corp. (now known as MarathonNorco Aerospace, Inc.)	Incorporated by reference to TransDigm Inc. and TransDigm Holding Company's Form S-4 filed January 29, 1999 (File No. 333-71397)
3.115	Certificate of Amendment, filed August 28, 2003, of the Certificate of Incorporation of Marathon Power Technology Company (now known as MarathonNorco Aerospace, Inc.)	Incorporated by reference to TransDigm Group Incorporated's Form 10-K filed November 28, 2006 (File No. 001-32833)
3.116	Bylaws of MPT Acquisition Corp. (now known as MarathonNorco Aerospace, Inc.)	Incorporated by reference to TransDigm Inc. and TransDigm Holding Company's Form S-4 filed January 29, 1999 (File No. 333-71397)
3.117	Certificate of Incorporation, filed April 13, 2007, of McKechnie Aerospace DE, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 8, 2011 (File No. 001-32833)

<b>Exhibit No.</b>	<b>Description</b>	<b>Filed Herewith or Incorporated by Reference From</b>
3.118	Bylaws of McKechnie Aerospace DE, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 8, 2011 (File No. 001-32833)
3.119	Certificate of Incorporation, filed April 25, 2007, of McKechnie Aerospace Holdings, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 8, 2011 (File No. 001-32833)
3.120	Bylaws of McKechnie Aerospace Holdings, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 8, 2011 (File No. 001-32833)
3.121	Certificate of Incorporation, filed December 11, 1998, of McKechnie US Holdings Inc. (now known as McKechnie Aerospace Investments, Inc.)	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 8, 2011 (File No. 001-32833)
3.122	Certificate of Amendment, filed May 11, 2007, to the Certificate of Incorporation of McKechnie Investments, Inc. (now known as McKechnie Aerospace Investments, Inc.)	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 8, 2011 (File No. 001-32833)
3.123	Amended and Restated Bylaws of McKechnie Aerospace Investments, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 8, 2011 (File No. 001-32833)
3.124	Certificate of Formation, filed May 11, 2005, of Melrose US 3 LLC (now known as McKechnie Aerospace US LLC)	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 8, 2011 (File No. 001-32833)
3.125	Certificate of Amendment, filed May 11, 2007, to Certificate of Formation of Melrose US 3 LLC (now known as McKechnie Aerospace US LLC)	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 8, 2011 (File No. 001-32833)
3.126	Limited Liability Company Agreement of McKechnie Aerospace US LLC	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 8, 2011 (File No. 001-32833)
3.127	Certificate of Incorporation, filed April 28, 2015, of PX Acquisition Co. (now known as Pexco Aerospace, Inc.)	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed August 5, 2015 (File No. 001-32833)
3.128	Certificate of Amendment, filed May 14, 2015, of Certificate of Incorporation of PX Acquisition Co. (now known as Pexco Aerospace, Inc.)	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed August 5, 2015 (File No. 001-32833)
3.129	Bylaws of Pexco Aerospace, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed August 5, 2015 (File No. 001-32833)
3.130	Articles of Incorporation, filed October 3, 1956, of Pneudraulics, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-K filed November 13, 2015 (File No. 001-32833)
3.131	Certificate of Amendment, filed December 9, 1970, of Articles of Incorporation of Pneudraulics, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-K filed November 13, 2015 (File No. 001-32833)
3.132	Restated Bylaws of Pneudraulics, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-K filed November 13, 2015 (File No. 001-32833)

<b>Exhibit No.</b>	<b>Description</b>	<b>Filed Herewith or Incorporated by Reference From</b>
3.133	Limited Liability Company Certificate of Formation, filed May 30, 2007, of Schneller LLC	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 8, 2012 (File No. 001-32833)
3.134	Amended and Restated Limited Liability Company Agreement, dated August 31, 2011, of Schneller LLC	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 8, 2012 (File No. 001-32833)
3.135	Certificate of Incorporation of Semco Instruments, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed September 7, 2010 (File No. 001-32833)
3.136	Certificate of Amendment to Certificate of Incorporation, filed October 17, 2012, of Semco Instruments, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-K filed November 16, 2012 (File No. 001-32833)
3.137	Amended and Restated Bylaws of Semco Instruments, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed September 7, 2010 (File No. 001-32833)
3.138	Certificate of Incorporation, filed September 16, 1994, of Am-Safe Commercial Products, Inc. (now known as Shield Restraint Systems, Inc.)	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed May 9, 2012 (File No. 001-32833)
3.139	Certificate of Amendment of Certificate of Incorporation, filed May 19, 2005, of AmSafe Commercial Products, Inc. (now known as Shield Restraint Systems, Inc.)	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed May 9, 2012 (File No. 001-32833)
3.140	Certificate of Amendment of Certificate of Incorporation, filed August 27, 2014 of AmSafe Commercial Products, Inc. (now known as Shield Restraint Systems, Inc.)	Incorporated by reference to TransDigm Group Incorporated's Form 10-K filed November 14, 2014 (File No. 001-32833)
3.141	By Laws of Am-Safe Commercial Products, Inc. (now known as Shield Restraint Systems, Inc.)	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed May 9, 2012 (File No. 001-32833)
3.142	Certificate of Incorporation, filed December 22, 2004, of Skurka Aerospace Inc.	Incorporated by reference to TransDigm Inc. and TransDigm Group Incorporated's Form S-4 filed October 11, 2006 (File No. 333-137937)
3.143	Bylaws of Skurka Aerospace Inc.	Incorporated by reference to TransDigm Inc. and TransDigm Group Incorporated's Form S-4 filed October 11, 2006 (File No. 333-137937)
3.144	Certificate of Incorporation, filed August 22, 1986, of Tactair Fluid Controls, Inc.	Filed Herewith
3.145	Certificate of Amendment of Certificate of Incorporation of Tactair Fluid Controls, Inc.	Filed Herewith
3.146	Bylaws of Tactair Fluid Controls, Inc.	Filed Herewith
3.147	Certificate of Formation, filed March 27, 2015, of Telair International LLC	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed May 5, 2015 (File No. 001-32833)



<b>Exhibit No.</b>	<b>Description</b>	<b>Filed Herewith or Incorporated by Reference From</b>
3.148	Limited Liability Company Agreement of Telair International LLC	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed May 5, 2015 (File No. 001-32833)
3.149	Certificate of Formation, filed February 23, 2015, of Telair US LLC	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed May 5, 2015 (File No. 001-32833)
3.150	Limited Liability Company Agreement of Telair US LLC	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed May 5, 2015 (File No. 001-32833)
3.151	Articles of Incorporation, filed August 6, 1999, of Texas Rotronics, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 8, 2011 (File No. 001-32833)
3.152	Bylaws of Texas Rotronics, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 8, 2011 (File No. 001-32833)
3.153	Certificate of Formation, effective June 30, 2007, of Transicoil LLC	Incorporated by reference to TransDigm Inc. and TransDigm Group Incorporated's Form S-4 filed July 6, 2007 (File No. 333-144366)
3.154	Limited Liability Company Agreement of Transicoil LLC	Incorporated by reference to TransDigm Inc. and TransDigm Group Incorporated's Form S-4 filed July 6, 2007 (File No. 333-144366)
3.155	Certificate of Formation, filed June 13, 2013, of Whippany Actuation Systems, LLC	Incorporated by reference to Amendment No. 3 to TransDigm Inc. and TransDigm Group Incorporated's Form S-4 filed June 27, 2013 (File No. 333-186494)
3.156	Limited Liability Agreement of Whippany Actuation Systems, LLC	Incorporated by reference to Amendment No. 3 to TransDigm Inc. and TransDigm Group Incorporated's Form S-4 filed June 27, 2013 (File No. 333-186494)
3.157	Restated Certificate of Incorporation, filed November 10, 2016, of Young & Franklin, Inc.	Filed Herewith
3.158	Bylaws of Young & Franklin, Inc.	Filed Herewith
3.159	Certificate of Formation, filed May 30, 2013, of Beta Transformer Technology LLC	Filed Herewith
4.1	Form of Stock Certificate	Incorporated by reference to Amendment No. 3 to TransDigm Group Incorporated's Form S-1 filed March 13, 2006 (File No. 333-130483)
4.2	Indenture, dated as of October 15, 2012, among TransDigm Inc., as issuer, TransDigm Group Incorporated, as a guarantor, the subsidiary guarantors party thereto and The Bank of New York Mellon Trust Company, N.A., as trustee, relating to TransDigm Inc.'s 5.5% Senior Subordinated Notes due 2020	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed October 15, 2012 (File No. 001-32833)

<b>Exhibit No.</b>	<b>Description</b>	<b>Filed Herewith or Incorporated by Reference From</b>
4.3	First Supplemental Indenture, dated as of June 5, 2013, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed June 11, 2013 (File No. 001-32833)
4.4	Second Supplemental Indenture, dated as of June 26, 2013, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed July 1, 2013 (File No. 001-32833)
4.5	Third Supplemental Indenture, dated as of December 19, 2013, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 5, 2014 (File No. 001-32833)
4.6	Fourth Supplemental Indenture, dated as of April 9, 2015, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed May 5, 2015 (File No. 001-32833)
4.7	Fifth Supplemental Indenture, dated as of June 12, 2015, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed August 5, 2015 (File No. 001-32833)
4.8	Sixth Supplemental Indenture, dated as of August 28, 2015, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee	Incorporated by reference to TransDigm Group Incorporated's Form 10-K filed November 13, 2015 (File No. 001-32833)
4.9	Seventh Supplemental Indenture, dated as of April 1, 2016, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee	Filed Herewith
4.10	Eighth Supplemental Indenture, dated as of July 8, 2016, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee	Filed Herewith
4.11	Ninth Supplemental Indenture, dated as of October 28, 2016, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee	Filed Herewith
4.12	Indenture, dated as of July 1, 2013, among TransDigm Inc., as issuer, TransDigm Group Incorporated, as a guarantor, the subsidiary guarantors party thereto and The Bank of New York Mellon Trust Company, N.A., as trustee, relating to TransDigm Inc.'s 7.50% Senior Subordinated Notes due 2021	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed July 3, 2013 (File No. 001-32833)

<b>Exhibit No.</b>	<b>Description</b>	<b>Filed Herewith or Incorporated by Reference From</b>
4.13	First Supplemental Indenture, dated as of December 19, 2013, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 5, 2014 (File No. 001-32833)
4.14	Second Supplemental Indenture, dated as of April 9, 2015, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed May 5, 2015 (File No. 001-32833)
4.15	Third Supplemental Indenture, dated as of June 12, 2015, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed August 5, 2015 (File No. 001-32833)
4.16	Fourth Supplemental Indenture, dated as of August 28, 2015, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee	Incorporated by reference to TransDigm Group Incorporated's Form 10-K filed November 13, 2015 (File No. 001-32833)
4.17	Fifth Supplemental Indenture, dated as of April 1, 2016, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee	Filed herewith
4.18	Sixth Supplemental Indenture, dated as of July 8, 2016, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee	Filed herewith
4.19	Seventh Supplemental Indenture, dated as of October 28, 2016, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee	Filed herewith
4.20	Indenture, dated as of June 4, 2014, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee, relating to TransDigm Inc.'s 6.00% Senior Subordinated Notes due 2022	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed June 6, 2014 (File No. 001-32833)
4.21	First Supplemental Indenture, dated as of April 9, 2015, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed May 5, 2015 (File No. 001-32833)
4.22	Second Supplemental Indenture, dated as of June 12, 2015, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed August 5, 2015 (File No. 001-32833)

<b>Exhibit No.</b>	<b>Description</b>	<b>Filed Herewith or Incorporated by Reference From</b>
4.23	Third Supplemental Indenture, dated as of August 28, 2015, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee	Incorporated by reference to TransDigm Group Incorporated's Form 10-K filed November 13, 2015 (File No. 001-32833)
4.24	Fourth Supplemental Indenture, dated as of April 1, 2016, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee	Filed Herewith
4.25	Fifth Supplemental Indenture, dated as of July 8, 2016, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee	Filed Herewith
4.26	Sixth Supplemental Indenture, dated as of October 28, 2016, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee	Filed Herewith
4.27	Indenture, dated as of June 4, 2014, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee, relating to TransDigm Inc.'s 6.50% Senior Subordinated Notes due 2024	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed June 6, 2014 (File No. 001-32833)
4.28	First Supplemental Indenture, dated as of April 9, 2015, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed May 5, 2015 (File No. 001-32833)
4.29	Second Supplemental Indenture, dated as of June 12, 2015, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed August 5, 2015 (File No. 001-32833)
4.30	Third Supplemental Indenture, dated as of August 28, 2015, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee	Incorporated by reference to TransDigm Group Incorporated's Form 10-K filed November 13, 2015 (File No. 001-32833)
4.31	Fourth Supplemental Indenture, dated as of April 1, 2016, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee	Filed Herewith
4.32	Fifth Supplemental Indenture, dated as of July 8, 2016, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee	Filed Herewith

<b>Exhibit No.</b>	<b>Description</b>	<b>Filed Herewith or Incorporated by Reference From</b>
4.33	Sixth Supplemental Indenture, dated as of October 28, 2016, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee	Filed Herewith
4.34	Indenture, dated as of May 14, 2015, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee, relating to TransDigm Inc.'s 6.50% Senior Subordinated Notes due 2025	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed May 19, 2015 (File No. 001-32833)
4.35	First Supplemental Indenture, dated as of June 12, 2015, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed August 5, 2015 (File No. 001-32833)
4.36	Second Supplemental Indenture, dated as of August 28, 2015, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee	Incorporated by reference to TransDigm Group Incorporated's Form 10-K filed November 13, 2015 (File No. 001-32833)
4.37	Third Supplemental Indenture, dated as of April 1, 2016, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee	Filed Herewith
4.38	Fourth Supplemental Indenture, dated as of July 8, 2016, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee	Filed Herewith
4.39	Fifth Supplemental Indenture, dated as of October 28, 2016, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee	Filed Herewith
4.40	Indenture, dated as of June 6, 2016, among TransDigm Inc., Transdigm Group Incorporated, the guarantors party thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee, relating to TransDigm Inc.'s 6.375% Senior Subordinated Notes due 2026	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed June 14, 2016 (File No. 001-32833)
4.41	First Supplemental Indenture, dated as of July 8, 2016, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee	Filed Herewith
4.42	Second Supplemental Indenture, dated as of October 28, 2016, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee	Filed Herewith
4.43	Form of 5.50% Senior Subordinated Notes due 2020	Incorporated by reference to TransDigm Group Incorporated's Form 10-K filed November 16, 2012 (File No. 001-32833)
4.44	Form of 7.50% Senior Subordinated Notes due 2021	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed July 3, 2013 (File No. 001-32833)

<b>Exhibit No.</b>	<b>Description</b>	<b>Filed Herewith or Incorporated by Reference From</b>
4.45	Form of 6.00% Senior Subordinated Notes due 2022	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed June 6, 2014 (File No. 001-32833)
4.46	Form of 6.50% Senior Subordinated Notes due 2024	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed June 6, 2014 (File No. 001-32833)
4.47	Form of 6.50% Senior Subordinated Notes due 2025	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed May 19, 2015
4.48	Form of 6.375% Senior Subordinated Notes due 2026	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed June 14, 2016 (File No. 001-32833)
4.49	Form of Notation of Guarantee of 5.50% Senior Subordinated Notes due 2020	Incorporated by reference to TransDigm Group Incorporated's Form 10-K filed November 16, 2012 (File No. 001-32833)
4.50	Form of Notation of Guarantee of 7.50% Senior Subordinated Notes due 2021	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed July 3, 2013 (File No. 001-32833)
4.51	Form of Notation of Guarantee of 6.00% Senior Subordinated Notes due 2022	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed June 6, 2014 (File No. 001-32833)
4.52	Form of Notation of Guarantee of 6.50% Senior Subordinated Notes due 2024	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed June 6, 2014 (File No. 001-32833)
4.53	Form of Notation of Guarantee of 6.50% Senior Subordinated Notes due 2025	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed May 19, 2015 (File No. 001-32833)
4.54	Form of Notation of Guarantee of 6.375% Senior Subordinated Notes due 2026	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed June 14, 2016 (File No. 001-32833)
4.55	Registration Rights Agreement, dated as of June 9, 2016, among TransDigm Inc., TransDigm Group Incorporated, the subsidiary guarantors party thereto and Citigroup Global Markets Inc. and Credit Suisse Securities (SA) LLC as representatives for the initial purchasers	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed June 14, 2016 (File No. 001-32833)
10.1	Fourth Amended and Restated Employment Agreement, dated December 10, 2015, between TransDigm Group Incorporated and W. Nicholas Howley*	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed December 10, 2015 (File No. 001-32833)
10.2	Employment Agreement, dated April 27, 2015, between TransDigm Group Incorporated and Terrance Paradie	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed April 28, 2-15
10.3	Employment Agreement, dated February 24, 2011, between TransDigm Group Incorporated and Robert Henderson*	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed February 25, 2011 (File No. 001-32833)
10.4	Employment Agreement, dated October 29, 2014, between Kevin Stein and TransDigm Group Incorporated*	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed November 3, 2014 (File No. 001-32833)

<b>Exhibit No.</b>	<b>Description</b>	<b>Filed Herewith or Incorporated by Reference From</b>
10.5	Second Amended and Restated Employment Agreement, dated February 24, 2011, between TransDigm Group Incorporated and Gregory Rufus*	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed February 25, 2011 (File No. 001-32833)
10.6	Employment Agreement, Dated February 24, 2011, between TransDigm Group Incorporated and Bernt Iversen*	Incorporated by reference to Form 8-K filed February 25, 2011 (File No. 001-32833)
10.7	Employment Agreement, dated April 20, 2012, between TransDigm Group Incorporated and James Skulina*	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed April 24, 2012 (File No. 001-32833)
10.8	Employment Agreement, dated April 20, 2012, between TransDigm Group Incorporated and Peter Palmer*	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed April 24, 2012 (File No. 001-32833)
10.11	Employment Agreement, dated July 30, 2012, between TransDigm Group Incorporated and John Leary*	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed July 31, 2012 (File No. 001-32833)
10.12	Employment Agreement, dated October 23, 2013, between TransDigm Group Incorporated and Jorge Valladares*	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed October 29, 2013 (File No. 001-32833)
10.13	Form of Employment Agreement, dated October 2015, between TransDigm Group Incorporated and each of Joel Reiss and Roger Jones*	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed October 27, 2015
10.14	First Amendment to Employment Agreement, dated April 20, 2012, between TransDigm Group Incorporated and Robert Henderson*	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed April 24, 2012 (File No. 001-32833)
10.15	First Amendment to Employment Agreement, dated April 20, 2012, between TransDigm Group Incorporated and Bernt Iversen*	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed April 24, 2012 (File No. 001-32833)
10.16	Form of Amendment to Employment Agreement between TransDigm Group Incorporated and each of Raymond Laubenthal, Gregory Rufus, Robert Henderson, Bernt Iversen, Peter Palmer and James Skulina*	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed October 25, 2012 (File No. 001-32833)
10.17	Form of Amendment to Employment Agreement, dated October 2015, between TransDigm Group Incorporated and each of Terrance Paradie, Robert Henderson, Bernt Iversen, James Skulina, Peter Palmer and Jorge Valladares*	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed October 25, 2012 (File No. 001-32833)
10.18	Amendment to Employment Agreement, dated October 23, 2015, between TransDigm Group Incorporated and Kevin Stein*	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed October 25, 2012 (File No. 001-32833)
10.19	Second Amendment to Employment Agreement, dated October 22, 2015, between TransDigm Group Incorporated and Gregory Rufus*	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed October 25, 2012 (File No. 001-32833)
10.20	Amendment to Employment Agreement, dated October 22, 2015, between TransDigm Group Incorporated and John Leary	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed October 25, 2012 (File No. 001-32833)
10.21	TransDigm Group Incorporated Fourth Amended and Restated 2003 Stock Option Plan*	Incorporated by reference to Amendment No. 1 to TransDigm Inc. and TransDigm Group Incorporated's Form S-4 filed November 7, 2006 (File No. 333-137937)
10.22	Amendment No. 1 to TransDigm Group Incorporated Fourth Amended and Restated 2003 Stock Option Plan*	Incorporated by reference to TransDigm Group Incorporated's Form 10-K filed November 21, 2007 (File No. 001-32833)

<b>Exhibit No.</b>	<b>Description</b>	<b>Filed Herewith or Incorporated by Reference From</b>
10.23	Amendment No. 2 to TransDigm Group Incorporated Fourth Amended and Restated Stock Option Plan*	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed August 7, 2008 (File No. 001-32833)
10.24	Amendment No. 3 to TransDigm Group Incorporated Fourth Amended and Restated Stock Option Plan*	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed April 28, 2009 (File No. 001-32833)
10.25	TransDigm Group Incorporated 2006 Stock Incentive Plan*	Incorporated by reference to Amendment No. 3 to TransDigm Group Incorporated's Form S-1 filed March 13, 2006 (File No. 333-130483)
10.26	Amendment No. 1, dated October 20, 2006, to the TransDigm Group Incorporated 2006 Stock Incentive Plan*	Incorporated by reference to Amendment No. 1 to TransDigm Inc. and TransDigm Group Incorporated's Form S-4 filed November 7, 2006 (File No. 333-137937)
10.27	Second Amendment to TransDigm Group Incorporated 2006 Stock Incentive Plan, dated April 25, 2008*	Incorporated by reference to TransDigm Group Incorporated's Schedule 14A filed June 6, 2008 (File No. 001-32833)
10.28	TransDigm Group Incorporated 2014 Stock Option Plan*	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed October 6, 2014 (File No. 001-32833)
10.29	Director Share Plan*	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 10, 2016 (File No. 001-32833)
10.30	Form of Option Agreements for options granted in fiscal 2013*	Incorporated by reference to TransDigm Group Incorporated's Form 10-K filed November 14, 2014 (File No. 001-32833)
10.31	Form of Option Agreements for options granted in fiscal 2014*	Incorporated by reference to TransDigm Group Incorporated's Form 10-K filed November 14, 2015 (File No. 001-32833)
10.32	Form of Option Agreements for options granted in fiscal 2015*	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed January 30, 2015 (File No. 001-32833)
10.33	Form of Option Agreements for options granted in fiscal 2016*	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 10, 2016 (File No. 001-32833)
10.34	Stock Option Grant Notice and Stock Option Agreement dated November 13, 2014 between TransDigm Group Incorporated and W. Nicholas Howley*	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed January 30, 2015 (File No. 001-32833)
10.35	Restricted Stock Award Agreement, dated October 21, 2014, between TransDigm Group Incorporated and Kevin Stein*	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed January 30, 2015 (File No. 001-32833)
10.36	Fourth Amended and Restated TransDigm Group Incorporated 2003 Stock Option Plan Dividend Equivalent Plan*	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed August 2, 2013 (File No. 001-32833)
10.37	Third Amended and Restated TransDigm Group Incorporated 2006 Stock Incentive Plan Dividend Equivalent Plan*	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed August 2, 2013 (File No. 001-32833)
10.38	TransDigm Group Incorporated 2014 Stock Option Plan Dividend Equivalent Plan*	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed October 28, 2014 (File No. 001-32833)



<b>Exhibit No.</b>	<b>Description</b>	<b>Filed Herewith or Incorporated by Reference From</b>
10.39	Amendment and Restatement Agreement, and Second Amendment and Restated Credit Agreement, dated as of June 4, 2014, among TransDigm Inc., TransDigm Group Incorporated, the subsidiaries of TransDigm Inc. from time to time party thereto, the lenders party thereto, as lenders, and Credit Suisse AG, as administrative agent	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed June 6, 2014 (File No. 001-32833)
10.40	Incremental Assumption and Refinancing Facility Agreement, dated as of May 14, 2015, among TransDigm Inc., TransDigm Group Incorporated, the subsidiary guarantors party thereto, Credit Suisse AG, as administrative agent and collateral agent, and the other agents and lenders named therein	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed May 19, 2015 (File No. 001-32833)
10.41	Loan Modification Agreement, dated as of May 20, 2015, among TransDigm Inc., TransDigm Group Incorporated, the subsidiary guarantors party thereto, Credit Suisse AG, as administrative agent and collateral agent, and the other agents and lenders party thereto	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed May 27, 2015 (File No. 001-32833)
10.42	Incremental Revolving Credit Assumption and Refinancing Facility Agreement, dated as of May 20, 2015, among TransDigm Inc., TransDigm Group Incorporated, the subsidiary guarantors party thereto, Credit Suisse AG, as administrative agent and collateral agent and the other agents and lenders party thereto	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed May 27, 2015 (File No. 001-32833)
10.43	Incremental Term Loan Assumption Agreement dated October 14, 2016 among TransDigm Inc., TransDigm Group Incorporated, the subsidiaries of TransDigm Inc. party thereto, the lenders party thereto and Credit Suisse AG, as administrative and collateral agent	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed October 14, 2016 (File No. 001-32833)
10.44	Guarantee and Collateral Agreement, dated as of June 23, 2006, as amended and restated as of December 6, 2010, as further amended and restated as of February 14, 2011 and February 28, 2013, among TransDigm Inc., TransDigm Group Incorporated, the subsidiaries of TransDigm Inc. named therein and Credit Suisse AG as administrative agent and collateral agent	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed March 6, 2013 (File No. 001-32833)
10.45	Supplement No. 7, dated as of September 2, 2015, between Pneudraulics, Inc. and Credit Suisse	Incorporated by reference to TransDigm Group Incorporated's Form 10-K filed November 13, 2015 (File No. 001-32833)
10.46	Receivables Purchase Agreement, dated October 21, 2013, among TransDigm Receivables LLC, TransDigm Inc., PNC Bank, National Association as a Purchaser and a Purchaser Agent, the various other Purchasers and Purchaser Agents from time to time party thereto, and PNC National Association as Administrator	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q filed February 5, 2014 (File No. 001-32833)
10.47	First Amendment to the Receivables Purchase Agreement, dated March 25, 2014, among TransDigm Receivables LLC, TransDigm Inc., PNC Bank, National Association as a Purchaser, Purchaser Agent for its Purchaser Group and as Administrator	Incorporated by reference to TransDigm Group Incorporated's Form 10-K filed November 13, 2015 (File No. 001-32833)

Exhibit No.	Description	Filed Herewith or Incorporated by Reference From
10.48	Second Amendment to the Receivables Purchase Agreement, dated August 8, 2014, among TransDigm Receivables LLC, TransDigm Inc., PNC Bank, National Association, as a Committed Purchaser, as a Purchaser Agent for its Purchaser Group and Administrator, and Credit Agricole Corporate and Investment Bank, as a Committed Purchaser and as a Purchase Agent for its Purchaser Group	Incorporated by reference to TransDigm Group Incorporated's Form 10-K filed November 13, 2015 (File No. 001-32833)
10.49	Third Amendment to the Receivables Purchase Agreement, dated March 20, 2015, among TransDigm Receivables LLC, TransDigm Inc., PNC Bank, National Association, as a Committed Purchaser, as a Purchaser Agent for its Purchaser Group and Administrator, Atlantic Asset Securitization LLC, as a Conduit Purchaser, and Credit Agricole Corporate and Investment Bank, as a Committed Purchaser and as a Purchase Agent for its and Atlantic's Purchaser Group	Incorporated by reference to TransDigm Group Incorporated's Form 10-K filed November 13, 2015 (File No. 001-32833)
10.50	Fourth Amendment to the Receivables Purchase Agreement dated as of August 4, 2015, among TransDigm Receivables LLC, TransDigm Inc., PNC Bank, National Association, as a Committed Purchase, as a Purchaser Agent for its Purchaser Group and Administrator, Atlantic Asset Securitization LLC, as a Conduit Purchaser, and Credit Agricole Corporate and Investment Bank, as a Committed Purchaser and as a Purchaser Agent for its and Atlantic's Purchaser Group	Incorporated by reference to TransDigm Group Incorporated's Form 8-K filed August 7, 2015 (File No. 001-32833)
12.1	Statement of Computation of Ratio of Earnings to Fixed Charges	Filed herewith
21.1	Subsidiaries of TransDigm Group Incorporated	Filed herewith
23.1	Consent of Independent Registered Public Accounting Firm	Filed herewith
31.1	Certification by Principal Executive Officer of TransDigm Group Incorporated pursuant to Rule 13a-14(a) or 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002	Filed herewith
31.2	Certification by Principal Financial Officer of TransDigm Group Incorporated pursuant to Rule 13a-14(a) or 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002	Filed herewith
32.1	Certification by Principal Executive Officer of TransDigm Group Incorporated pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	Filed herewith
32.2	Certification by Principal Financial Officer of TransDigm Group Incorporated pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	Filed herewith
101	Financial Statements and Notes to Consolidated Financial Statements formatted in XBRL.	Filed herewith

\* Indicates management contract or compensatory plan contract or arrangement.



**SIGNATURES**

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this Report to be signed on its behalf by the undersigned, thereunto duly authorized on November 15, 2016.

**TRANSDIGM GROUP INCORPORATED**

By: \_\_\_\_\_ /s/ Terrance M. Paradie

Name: **Terrance M. Paradie**Title: **Executive Vice President and Chief Financial Officer**

Pursuant to the requirements of the Securities Exchange Act of 1934, this Report has been signed below by the following persons on behalf of the registrant and in the capacities and as of the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
_____ /s/ W. Nicholas Howley <b>W. Nicholas Howley</b>	Chairman of the Board of Directors, President and Chief Executive Officer (Principal Executive Officer)	November 15, 2016
_____ /s/ Terrance M. Paradie <b>Terrance M. Paradie</b>	Executive Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)	November 15, 2016
_____ /s/ William Dries <b>William Dries</b>	Director	November 15, 2016
_____ /s/ Mervin Dunn <b>Mervin Dunn</b>	Director	November 15, 2016
_____ /s/ Michael Graff <b>Michael Graff</b>	Director	November 15, 2016
_____ /s/ Sean P. Hennessy <b>Sean P. Hennessy</b>	Director	November 15, 2016
_____ /s/ Douglas Peacock <b>Douglas Peacock</b>	Director	November 15, 2016
_____ /s/ Robert J. Small <b>Robert J. Small</b>	Director	November 15, 2016
_____ /s/ John Staer <b>John Staer</b>	Director	November 15, 2016
_____ /s/ Raymond F. Laubenthal <b>Raymond F. Laubenthal</b>	Director	November 15, 2016

**TRANSDIGM GROUP INCORPORATED AND SUBSIDIARIES**  
**ANNUAL REPORT ON FORM 10-K:**  
**FISCAL YEAR ENDED SEPTEMBER 30, 2016**  
**ITEM 8 AND ITEM 15(a) (1)**  
**FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA**  
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**Report of Independent Registered Public Accounting Firm**

The Board of Directors and Shareholders of

TransDigm Group Incorporated

We have audited the accompanying consolidated balance sheets of TransDigm Group Incorporated as of September 30, 2016 and 2015, and the related consolidated statements of income, comprehensive income, changes in stockholders' deficit and cash flows for each of the three years in the period ended September 30, 2016. Our audits also included the financial statement schedule listed in the Index at Item 15(a). These financial statements and schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and schedule based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of TransDigm Group Incorporated at September 30, 2016 and 2015, and the consolidated results of its operations and its cash flows for each of the three years in the period ended September 30, 2016, in conformity with U.S. generally accepted accounting principles. Also, in our opinion, the related financial statement schedule, when considered in relation to the basic financial statements taken as a whole, presents fairly in all material respects the information set forth therein.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), TransDigm Group Incorporated's internal control over financial reporting as of September 30, 2016, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated November 15, 2016, expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Cleveland, Ohio  
November 15, 2016

**TRANSDIGM GROUP INCORPORATED**  
**CONSOLIDATED BALANCE SHEETS**  
**AS OF SEPTEMBER 30, 2016 AND 2015**  
(Amounts in thousands, except share amounts)

	2016	2015
<b>ASSETS</b>		
CURRENT ASSETS:		
Cash and cash equivalents	\$ 1,586,994	\$ 714,033
Trade accounts receivable—Net	576,339	444,072
Inventories—Net	724,011	591,401
Prepaid expenses and other	43,353	37,081
Total current assets	2,930,697	1,786,587
PROPERTY, PLANT AND EQUIPMENT—Net	310,580	260,684
GOODWILL	5,679,452	4,686,220
OTHER INTANGIBLE ASSETS—Net	1,764,343	1,539,851
OTHER	41,205	30,593
TOTAL ASSETS	\$ 10,726,277	\$ 8,303,935
<b>LIABILITIES AND STOCKHOLDERS' DEFICIT</b>		
CURRENT LIABILITIES:		
Current portion of long-term debt	\$ 52,645	\$ 43,427
Short-term borrowings—trade receivable securitization facility	199,771	199,792
Accounts payable	156,075	142,822
Accrued liabilities	344,112	271,553
Total current liabilities	752,603	657,594
LONG-TERM DEBT	9,943,191	8,106,383
DEFERRED INCOME TAXES	492,255	404,997
OTHER NON-CURRENT LIABILITIES	189,718	173,267
Total liabilities	11,377,767	9,342,241
STOCKHOLDERS' DEFICIT:		
Common stock—\$.01 par value; authorized 224,400,000 shares; issued 55,767,767 and 55,100,094 shares at September 30, 2016 and 2015, respectively	558	551
Additional paid-in capital	1,028,972	950,324
Accumulated deficit	(1,146,963)	(1,717,232)
Accumulated other comprehensive loss	(149,787)	(96,009)
Treasury stock, at cost; 2,433,035 and 1,415,100 shares at September 30, 2016 and 2015, respectively	(384,270)	(175,940)
Total stockholders' deficit	(651,490)	(1,038,306)
TOTAL LIABILITIES AND STOCKHOLDERS' DEFICIT	\$ 10,726,277	\$ 8,303,935

See Notes to Consolidated Financial Statements

**TRANSDIGM GROUP INCORPORATED**  
**CONSOLIDATED STATEMENTS OF INCOME**  
(Amounts in thousands, except per share amounts)

	Fiscal Years Ended September 30,		
	2016	2015	2014
NET SALES	\$ 3,171,411	\$ 2,707,115	\$ 2,372,906
COST OF SALES	1,443,348	1,257,270	1,105,032
GROSS PROFIT	1,728,063	1,449,845	1,267,874
SELLING AND ADMINISTRATIVE EXPENSES	382,858	321,624	276,446
AMORTIZATION OF INTANGIBLE ASSETS	77,445	54,219	63,608
INCOME FROM OPERATIONS	1,267,760	1,074,002	927,820
INTEREST EXPENSE—Net	483,850	418,785	347,688
REFINANCING COSTS	15,794	18,393	131,622
INCOME BEFORE INCOME TAXES	768,116	636,824	448,510
INCOME TAX PROVISION	181,702	189,612	141,600
NET INCOME	\$ 586,414	\$ 447,212	\$ 306,910
NET INCOME APPLICABLE TO COMMON STOCK	\$ 583,414	\$ 443,847	\$ 180,284
Net earnings per share—see Note 5:			
Basic and diluted	\$ 10.39	\$ 7.84	\$ 3.16
Cash dividends paid per common share	\$ —	\$ —	\$ 25.00
Weighted-average shares outstanding:			
Basic and diluted	56,157	56,606	56,993

See Notes to Consolidated Financial Statements.



**TRANSDIGM GROUP INCORPORATED**  
**CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME**  
**(Amounts in thousands)**

	Fiscal Years Ended September 30,		
	2016	2015	2014
Net income	\$ 586,414	\$ 447,212	\$ 306,910
Other comprehensive loss, net of tax:			
Foreign currency translation adjustments	(31,846)	(29,448)	(7,653)
Interest rate swap and cap agreements	(9,648)	(35,604)	(6,166)
Pension liability adjustments	(12,284)	(5,786)	(4,836)
Other comprehensive loss, net of tax	(53,778)	(70,838)	(18,655)
<b>TOTAL COMPREHENSIVE INCOME</b>	<b>\$ 532,636</b>	<b>\$ 376,374</b>	<b>\$ 288,255</b>

See Notes to Consolidated Financial Statements.

**TRANSDIGM GROUP INCORPORATED**  
**CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' DEFICIT**  
(Amounts in thousands, except share and per share amounts)

	Common Stock		Additional Paid-In Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Treasury Stock		Total
	Number of Shares	Common Stock				Number of Shares	Value	
BALANCE—September 30, 2013	53,172,551	\$ 532	\$ 689,935	\$ (1,004,244)	\$ (6,516)	(505,400)	\$ (16,088)	\$ (336,381)
Dividends paid	—	—	—	(1,435,154)	—	—	—	(1,435,154)
Unvested dividend equivalent payments	—	—	—	(17,805)	—	—	—	(17,805)
Compensation expense recognized for employee stock options	—	—	26,332	—	—	—	—	26,332
Excess tax benefits related to share-based payment arrangements	—	—	51,709	—	—	—	—	51,709
Exercise of employee stock options	659,363	6	26,732	—	—	—	—	26,738
Treasury stock purchased	—	—	—	—	—	(909,700)	(159,852)	(159,852)
Common stock issued	332	—	59	—	—	—	—	59
Net income	—	—	—	306,910	—	—	—	306,910
Interest rate swaps, net of tax	—	—	—	—	(6,166)	—	—	(6,166)
Foreign currency translation adjustments	—	—	—	—	(7,653)	—	—	(7,653)
Pension liability adjustments, net of tax	—	—	—	—	(4,836)	—	—	(4,836)
BALANCE—September 30, 2014	53,832,246	538	794,767	(2,150,293)	(25,171)	(1,415,100)	(175,940)	(1,556,099)
Unvested dividend equivalent payments	—	—	—	(14,151)	—	—	—	(14,151)
Compensation expense recognized for employee stock options and restricted stock	—	—	31,500	—	—	—	—	31,500
Excess tax benefits related to share-based payment arrangements	—	—	61,965	—	—	—	—	61,965
Exercise of employee stock options	1,248,175	13	61,674	—	—	—	—	61,687
Common stock issued	19,673	—	418	—	—	—	—	418
Net income	—	—	—	447,212	—	—	—	447,212
Interest rate swaps, net of tax	—	—	—	—	(35,604)	—	—	(35,604)
Foreign currency translation adjustments	—	—	—	—	(29,448)	—	—	(29,448)
Pension liability adjustments, net of tax	—	—	—	—	(5,786)	—	—	(5,786)
BALANCE—September 30, 2015	55,100,094	551	950,324	(1,717,232)	(96,009)	(1,415,100)	(175,940)	(1,038,306)
Unvested dividend equivalent payments and other	—	—	—	(16,145)	—	—	—	(16,145)
Compensation expense recognized for employee stock options and restricted stock	—	—	48,306	—	—	—	—	48,306
Exercise of employee stock options and restricted stock activity, net	666,709	7	30,112	—	—	(2,548)	(575)	29,544
Treasury stock purchased	—	—	—	—	—	(1,015,387)	(207,755)	(207,755)
Common stock issued	964	—	230	—	—	—	—	230
Net income	—	—	—	586,414	—	—	—	586,414
Interest rate swaps and caps, net of tax	—	—	—	—	(9,648)	—	—	(9,648)
Foreign currency translation adjustments	—	—	—	—	(31,846)	—	—	(31,846)
Pension liability adjustments, net of tax	—	—	—	—	(12,284)	—	—	(12,284)
BALANCE—September 30, 2016	55,767,767	\$ 558	\$ 1,028,972	\$ (1,146,963)	\$ (149,787)	(2,433,035)	\$ (384,270)	\$ (651,490)

See Notes to Consolidated Financial Statements.

**TRANSDIGM GROUP INCORPORATED**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**  
(Amounts in thousands)

	Fiscal Years Ended September 30,		
	2016	2015	2014
<b>OPERATING ACTIVITIES:</b>			
Net income	\$ 586,414	\$ 447,212	\$ 306,910
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation	43,455	35,939	32,543
Amortization of intangible assets and product certification costs	78,215	57,724	63,842
Amortization of debt issuance costs and original issue discount	16,211	15,797	13,935
Refinancing costs	1,426	18,393	131,622
Net gain on sale of real estate	—	—	(804)
Non-cash equity compensation	48,306	31,500	26,332
Excess tax benefits related to share-based payment arrangements	—	(61,965)	(51,709)
Deferred income taxes	5,808	660	(9,416)
Changes in assets/liabilities, net of effects from acquisitions of businesses:			
Trade accounts receivable	(80,114)	(25,418)	(24,309)
Inventories	(2,073)	(25,974)	(8,392)
Income taxes receivable/payable	(12,299)	65,418	56,595
Other assets	(4,919)	(12,392)	(5,703)
Accounts payable	(6,657)	13,480	(2,415)
Accrued interest	17,933	(3,934)	9,451
Accrued and other liabilities	(22,776)	(35,502)	2,740
Net cash provided by operating activities	668,930	520,938	541,222
<b>INVESTING ACTIVITIES:</b>			
Capital expenditures, net of disposals	(43,982)	(54,871)	(34,146)
Acquisition of businesses, net of cash acquired	(1,399,064)	(1,624,278)	(311,872)
Cash proceeds from sale of real estate	—	—	16,380
Net cash used in investing activities	(1,443,046)	(1,679,149)	(329,638)
<b>FINANCING ACTIVITIES:</b>			
Excess tax benefits related to share-based payment arrangements	—	61,965	51,709
Proceeds from exercise of stock options	30,112	61,674	26,738
Dividends paid	(3,000)	(3,365)	(1,451,391)
Treasury stock purchased	(207,755)	—	(159,852)
Proceeds from 2016 Term Loans, net	1,725,883	—	—
Proceeds from term loans, net	—	1,515,954	805,360
Proceeds from Revolving Commitment	—	75,250	—
Repayment on 2016 Term Loans	(4,351)	—	—
Repayment on term loans	(830,058)	(1,025,318)	(33,107)
Repayment on Revolving Commitment	—	(75,250)	—
Proceeds from 2026 Notes, net	939,584	—	—
Proceeds from senior subordinated notes, net	—	445,303	2,326,393
Repurchase of 2018 Notes	—	—	(1,721,014)
Proceeds from trade receivable securitization facility, net	—	—	199,164
Other	(3,580)	(1,266)	(27)
Net cash provided by financing activities	1,646,835	1,054,947	43,973
EFFECT OF EXCHANGE RATE CHANGES ON CASH AND CASH EQUIVALENTS	242	(2,251)	(749)
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	872,961	(105,515)	254,808
CASH AND CASH EQUIVALENTS, BEGINNING OF PERIOD	714,033	819,548	564,740
CASH AND CASH EQUIVALENTS, END OF PERIOD	\$ 1,586,994	\$ 714,033	\$ 819,548
<b>SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION:</b>			
Cash paid during the period for interest	\$ 448,608	\$ 398,939	\$ 319,577
Cash paid during the period for income taxes	\$ 183,291	\$ 127,363	\$ 97,798

See Notes to Consolidated Financial Statements.

**TRANSDIGM GROUP INCORPORATED**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**1. DESCRIPTION OF THE BUSINESS**

**Description of the Business**—TransDigm Group Incorporated (“TD Group”), through its wholly-owned subsidiary, TransDigm Inc., is a leading global designer, producer and supplier of highly engineered aircraft components for use on nearly all commercial and military aircraft in service today. TransDigm Inc. along with TransDigm Inc.’s direct and indirect wholly-owned operating subsidiaries (collectively, with TD Group, the “Company” or “TransDigm”), offers a broad range of proprietary aerospace components. TD Group has no significant assets or operations other than its 100% ownership of TransDigm Inc. TD Group’s common stock is listed on the New York Stock Exchange, or the NYSE, under the trading symbol “TDG.”

Major product offerings, substantially all of which are ultimately provided to end-users in the aerospace industry, include mechanical/electro-mechanical actuators and controls, ignition systems and engine technology, specialized pumps and valves, power conditioning devices, specialized AC/DC electric motors and generators, NiCad batteries and chargers, engineered latching and locking devices, rods and locking devices, engineered connectors and elastomers, databus and power controls, cockpit security components and systems, specialized cockpit displays, aircraft audio systems, specialized lavatory components, seat belts and safety restraints, engineered interior surfaces and related components, lighting and control technology, military personnel parachutes high performance hoists, winches and lifting devices, and cargo loading, handling and delivery systems.

**2. ACQUISITIONS**

During the last three fiscal years, the Company completed the acquisitions of Tactair, DDC, Breeze-Eastern, PneuDraulics, Pexco Aerospace, Adams Rite Aerospace GmbH, Telair Cargo Group, EME and Airborne. The Company accounted for the acquisitions using the acquisition method and included the results of operations of the acquisitions in its consolidated financial statements from the effective date of each acquisition. As of September 30, 2016, the one-year measurement period is open for Tactair, Breeze-Eastern and DDC and therefore the assets acquired and liabilities assumed related to these acquisitions are subject to adjustment. The Company is in the process of obtaining a third-party valuation of certain tangible and intangible assets of Tactair and DDC; therefore, the values attributed to those acquired assets in the consolidated financial statements are subject to adjustment. Pro forma net sales and results of operations for the acquisitions, had they occurred at the beginning of the applicable fiscal year ended September 30, 2016 or 2015, are not significant and, accordingly, are not provided.

The acquisitions strengthen and expand the Company’s position to design, produce and supply highly engineered proprietary aerospace components in niche markets with significant aftermarket content and provide opportunities to create value through the application of our three core value-driven operating strategies (obtaining profitable new business, improving our cost structure and providing highly engineered value-added products to customers). The purchase price paid for each acquisition reflects the current earnings before interest, taxes, depreciation and amortization (EBITDA) and cash flows, as well as, the future EBITDA and cash flows expected to be generated by the business, which are driven in most cases by the recurring aftermarket consumption over the life of a particular aircraft, estimated to be approximately 25 to 30 years.

**Tactair** – On September 23, 2016, the Company acquired all of the outstanding stock of Young & Franklin, Inc., the parent company of Tactair Fluid Controls, Inc., for approximately \$256.1 million in cash, subject to a working capital adjustment. Tactair manufactures proprietary, highly engineered valves and actuators. These products fit well with TransDigm’s overall business direction. Tactair is included in TransDigm’s Power & Control segment. The purchase price includes approximately \$73.2 million of tax benefits being realized by the Company over a 15-year period that will begin in the first quarter of fiscal 2017, and the Company expects that all of the approximately \$132.3 million of goodwill recognized for the acquisition will be deductible for tax purposes.

**Data Device Corporation** – On June 23, 2016, the Company acquired all of the outstanding stock of ILC Holdings, Inc., the parent company of Data Device Corporation, from Behrman Capital for a total purchase price of approximately \$1.0 billion in cash. In October 2016, the Company received a working capital settlement of \$1.4 million. TransDigm financed the acquisition of DDC with cash proceeds from the 2026 Notes and Tranche F Term Loans. DDC is a supplier of databus and power controls and related products that are used primarily in military avionics, commercial aerospace and space applications. These products fit well with TransDigm’s overall business direction. DDC is included in TransDigm’s Power & Control segment.

The total purchase price of DDC was allocated to the underlying assets acquired and liabilities assumed based upon management's estimated fair values at the date of acquisition. To the extent the purchase price exceeded the estimated fair value of the net identifiable tangible and intangible assets acquired, such excess was allocated to goodwill. The following table summarizes the preliminary purchase price allocation of the estimated fair values of the assets acquired and liabilities assumed at the transaction date (in thousands).

Assets acquired:		
Current assets, excluding cash acquired	\$	100,647
Property, plant, and equipment		24,076
Intangible assets		229,300
Goodwill		760,743
Other		2,036
<b>Total assets acquired</b>		<b>1,116,802</b>
Liabilities assumed:		
Current liabilities		16,955
Other noncurrent liabilities		100,787
<b>Total liabilities assumed</b>		<b>117,742</b>
Net assets acquired	\$	999,060

The Company expects that all of the approximately \$760.7 million of goodwill recognized for the acquisition will not be deductible for tax purposes.

**Breeze-Eastern** – On January 4, 2016, the Company completed the tender offer for all of the outstanding stock of Breeze-Eastern for \$19.61 per share in cash. The purchase price was approximately \$205.9 million, of which \$146.4 million (net of cash acquired of \$30.8 million) was paid at closing and \$34.9 million was accrued for payment to dissenting shareholders. Of the accrual, \$28.7 million related to the original merger consideration and \$6.2 million represented the settlement reached with the dissenting shareholders resolving the dispute over the dissenting shareholders' statutory appraisal action. Of the \$6.2 million settlement, \$4.9 million was recorded as selling and administrative expense and \$1.3 million was recorded as interest expense under Delaware General Corporate Law. On October 20, 2016, the Company paid the \$34.9 million settlement to the dissenting shareholders and the dissenting stockholders fully released their claims against the Company. Breeze-Eastern manufactures high performance lifting and pulling devices for military and civilian aircraft, including rescue hoists, winches and cargo hooks, and weapons-lifting systems. These products fit well with TransDigm's overall business direction. Breeze-Eastern is included in TransDigm's Power & Control segment. The Company expects that all of the approximately \$115.4 million of goodwill recognized for the acquisition will not be deductible for tax purposes.

The Breeze-Eastern acquisition includes environmental reserves recorded at a fair value of approximately \$25.8 million. Of the \$25.8 million in environmental reserves, \$3.9 million is included in accrued liabilities and \$21.9 million is included in other non-current liabilities in the consolidated balance sheet. The estimated \$25.8 million fair value of the environmental reserves for Breeze-Eastern is preliminary and recorded at the respective probable and estimable amount. The environmental matters relate to soil and groundwater contamination and other environmental matters at several former facilities unrelated to Breeze-Eastern's current operations.

**PneuDrualics** – On August 19, 2015, the Company acquired all of the outstanding stock of PneuDrualics, Inc. for approximately \$321.5 million in cash, which is net of a working capital settlement received in fiscal 2016 of \$2.0 million. PneuDrualics manufactures proprietary, highly engineered aerospace pneumatic and hydraulic components and subsystems for commercial transport, regional, business jet and military applications. These products fit well with TransDigm's overall business direction. PneuDrualics is included in TransDigm's Power & Control segment. The purchase price includes approximately \$108.1 million of tax benefits being realized by the Company over a 15-year period that began in the fourth quarter of fiscal 2015. All of the approximately \$222.7 million of goodwill recognized for the acquisition is deductible for tax purposes.

**Pexco Aerospace** – On May 14, 2015, the Company acquired the assets of the aerospace business of Pexco LLC ("Pexco Aerospace") for a total purchase price of approximately \$496.4 million in cash. Pexco Aerospace manufactures extruded plastic interior parts for use in the commercial aerospace industry. These products fit well with TransDigm's overall business direction. Pexco Aerospace is included in TransDigm's Airframe segment. The purchase price includes approximately \$166.4 million of tax benefits being realized by TransDigm over a 15-year period that began in the third quarter of fiscal 2015. All of the approximately \$405.7 million of goodwill recognized for the acquisition is deductible for tax purposes.

**Adams Rite Aerospace GmbH** – On March 31, 2015, the Company acquired the aerospace business of Franke Aquarotter GmbH (now known as Adams Rite Aerospace GmbH) for approximately \$75.3 million in cash. Adams Rite Aerospace GmbH manufactures proprietary faucets and related products for use on commercial transports and regional jets. These products fit well with TransDigm’s overall business direction. Adams Rite Aerospace GmbH is included in TransDigm’s Airframe segment. All of the approximately \$63.7 million of goodwill recognized for the acquisition is not deductible for tax purposes.

**Telair Cargo Group** – On March 26, 2015, the Company acquired all of the outstanding stock of Telair International GmbH (“Telair International”), all of the outstanding stock of Nordisk Aviation Products (“Nordisk”) and the assets of the AAR Cargo business (collectively, “Telair Cargo Group”). The total purchase price was approximately \$730.9 million in cash. Telair Cargo Group manufactures aerospace on-board cargo loading and handling, restraint systems and unit load devices for a variety of commercial and military platforms with positions on a wide range of new and existing aircraft. These products fit well with TransDigm’s overall business direction. The business consists of three major operating units: Telair International, Nordisk and Telair US. Telair International and Telair US are included in TransDigm’s Power & Control segment and Nordisk is included in TransDigm’s Airframe segment. Approximately \$33.2 million of goodwill recognized for the acquisition is deductible for tax purposes and approximately \$450.2 million of goodwill recognized for the acquisition is not deductible for tax purposes.

**EME** – On March 6, 2014, TransDigm Germany GmbH, a newly formed subsidiary of TransDigm Inc., acquired EME for approximately \$49.6 million, which comprises \$40.4 million in cash plus the assumption of approximately \$9.2 million of net indebtedness. EME manufactures proprietary, highly engineered aerospace electromechanical actuators, electrical and electromechanical components and assemblies for commercial aircraft, helicopters and other specialty applications. These products fit well with TransDigm’s overall business direction. EME is included in TransDigm’s Airframe segment. Approximately \$20.3 million of goodwill recognized for the acquisition is not deductible for tax purposes.

**Airborne** – On December 19, 2013, TransDigm Inc. acquired all of the outstanding stock of Airborne for approximately \$264.2 million in cash. Airborne manufactures personnel parachutes, cargo aerial delivery systems, emergency escape systems, naval decoys and other related products. These products fit well with TransDigm’s overall business direction. Airborne is included in TransDigm’s Airframe segment. Approximately \$158.2 million of goodwill recognized for the acquisition is not deductible for tax purposes.

### 3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

**Basis of Presentation and Consolidation**—The accompanying consolidated financial statements were prepared in conformity with generally accepted accounting principles in the United States (“GAAP”) and include the accounts of TD Group and subsidiaries. All significant intercompany balances and transactions have been eliminated. Certain reclassifications have been made to the prior year financial statements to conform to the current year adoption of recently released accounting standards. Refer to Note 4, “Recent Accounting Pronouncements” for additional details on the reclassifications.

**Revenue Recognition and Related Allowances**—Revenue is recognized from the sale of products when title and risk of loss passes to the customer, which is generally at the time of shipment. Substantially all product sales are made pursuant to firm, fixed-price purchase orders received from customers. Provisions for estimated returns, uncollectible accounts and the cost of repairs under contract warranty provisions are provided for in the same period as the related revenues are recorded and are principally based on historical results modified, as appropriate, by the most current information available. Due to uncertainties in the estimation process, it is possible that actual results may vary from the estimates.

**Shipping and Handling Costs**—Shipping and handling costs are included in cost of sales in the consolidated statements of income.

**Research and Development Costs**—The Company expenses research and development costs as incurred and classifies such amounts in selling and administrative expenses. The expense recognized for research and development costs for the years ended September 30, 2016, 2015 and 2014 was approximately \$58.6 million, \$48.3 million, and \$42.3 million, respectively.

**Cash Equivalents**—The Company considers all highly liquid investments with a maturity of three months or less when purchased to be cash equivalents.

**Allowance for Uncollectible Accounts**—The Company reserves for amounts determined to be uncollectible based on specific identification of losses and estimated losses based on historical experience. The allowance also incorporates a provision for the estimated impact of disputes with customers. The determination of the amount of the allowance for doubtful accounts is subject to significant levels of judgment and estimation by management. If circumstances change or economic conditions deteriorate or improve, the allowance for doubtful accounts could increase or decrease.

**Inventories**—Inventories are stated at the lower of cost or market. Cost of inventories is generally determined by the average cost and the first-in, first-out (FIFO) methods and includes material, labor and overhead related to the manufacturing process. Provision for potentially obsolete or slow-moving inventory is made based on management’s analysis of inventory

levels and future sales forecasts. In accordance with industry practice, all inventories are classified as current assets even though a portion of the inventories may not be sold within one year.

**Property, Plant and Equipment**—Property, plant and equipment are stated at cost and include improvements which significantly increase capacities or extend the useful lives of existing plant and equipment. Depreciation is computed using the straight-line method over the following estimated useful lives: land improvements from 10 to 20 years, buildings and improvements from 5 to 30 years, machinery and equipment from 2 to 10 years and furniture and fixtures from 3 to 10 years. Net gains or losses related to asset dispositions are recognized in earnings in the period in which dispositions occur. Routine maintenance, repairs and replacements are expensed as incurred.

Property, plant and equipment is assessed for potential impairment whenever indicators of impairment are present by determining whether the carrying value of the property can be recovered through projected, undiscounted cash flows from future operations over the property's remaining estimated useful life. Any impairment recognized is the amount by which the carrying amount exceeds the fair value of the asset. Fair value is measured based on quoted market prices in active markets, if available. If quoted market prices are not available, the estimate of fair value is based on various valuation techniques, including the discounted value of estimated future cash flows.

**Debt Issuance Costs, Premiums and Discounts**—The cost of obtaining financing as well as premiums and discounts are amortized using the effective interest method over the terms of the respective obligations as a component of interest expense within the consolidated statements of income. Refer to Note 4, "Recent Accounting Pronouncements" and Note 11, "Debt," for balance sheet presentation of debt issuance costs, premiums and discounts.

**Intangible Assets**—Intangible assets consist of identifiable intangibles acquired or recognized in accounting for the acquisitions (trademarks, trade names, technology, order backlog and other intangible assets) and goodwill. Goodwill and intangible assets that have indefinite useful lives (i.e., trademarks and trade names) are subject to annual impairment testing. Management determines fair value using a discounted future cash flow analysis or other accepted valuation techniques. The Company performs an annual impairment test for goodwill and other intangible assets as of the first day of the fourth fiscal quarter of each year, or more frequently, if an event occurs or circumstances change that would more likely than not reduce fair value below current value.

A two-step impairment test is used to identify potential goodwill impairment. The first step of the goodwill impairment test, used to identify potential impairment, compares the fair value of a reporting unit (as defined) with its carrying amount, including goodwill. If the fair value of the reporting unit exceeds its carrying amount, goodwill is not considered impaired, and the second step of the goodwill impairment test is unnecessary. The second step measures the amount of impairment, if any, by comparing the carrying value of the goodwill associated with a reporting unit to the implied fair value of the goodwill derived from the estimated overall fair value of the reporting unit and the individual fair values of the other assets and liabilities of the reporting unit.

GAAP requires that the annual, and any interim, impairment assessment be performed at the reporting unit level. The reporting unit level is one level below an operating segment. Substantially all goodwill was determined and recognized for each reporting unit pursuant to the accounting for the merger or acquisition as of the date of each transaction. With respect to acquisitions integrated into an existing reporting unit, any acquired goodwill is combined with the goodwill of the reporting unit.

The impairment test for indefinite lived intangible assets consists of a comparison between their fair values and carrying values. If the carrying amounts of intangible assets that have indefinite useful lives exceed their fair values, an impairment loss will be recognized in an amount equal to the sum of any such excesses.

The Company assesses the recoverability of its amortizable intangible assets only when indicators of impairment are present by determining whether the amortization over their remaining lives can be recovered through projected, undiscounted cash flows from future operations. Amortization of amortizable intangible assets is computed using the straight-line method over the following estimated useful lives: technology from 20 to 22 years, order backlog over one year, and other intangible assets over 20 years.

**Stock-Based Compensation**—The Company records stock-based compensation expense using the fair value method of accounting. Compensation expense is recorded over the vesting periods of the stock options, restricted stock and other stock-based incentives. No expense is recognized for any stock options, restricted stock and other stock-based incentives ultimately forfeited because the recipients fail to meet vesting requirements.

**Income Taxes**—The Company accounts for income taxes using an asset and liability approach. Deferred taxes are recorded for the difference between the book and tax basis of various assets and liabilities. A valuation allowance is provided when it is more likely than not that some or all of a deferred tax asset will not be realized.

**Contingencies**—During the ordinary course of business, the Company is from time to time threatened with, or may become a party to, legal actions and other proceedings. While the Company is currently involved in certain legal proceedings, it believes the results of these proceedings will not have a material adverse effect on its financial condition, results of operations, or cash flows.

**Estimates**—The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

**Comprehensive Income (Loss)**—The term “comprehensive income (loss)” represents the change in stockholders’ equity (deficit) from transactions and other events and circumstances resulting from non-stockholder sources. The Company’s accumulated other comprehensive income or loss, consisting principally of fair value adjustments to its interest rate swap and cap agreements (net of tax), cumulative foreign currency translation adjustments and pension liability adjustments (net of tax), is reported separately in the accompanying consolidated statements of comprehensive income.

**Foreign Currency Translation and Transactions**—The assets and liabilities of subsidiaries located outside the United States are translated into U.S. dollars at the rates of exchange in effect at the balance sheet dates. Revenue and expense items are translated at the average monthly exchange rates prevailing during the period. Gains and losses resulting from foreign currency transactions are recognized currently in income, and those resulting from translation of financial statements are accumulated as a separate component of other comprehensive income (loss) for the period. Foreign currency gains or losses recognized currently in income from changes in exchange rates were immaterial to our results of operations.

**Earnings per Share**—Earnings per share information is determined using the two-class method, which includes the weighted-average number of common shares outstanding during the period and other securities that participate in dividends (“participating securities”). Our vested and unvested stock options are considered “participating securities” because they include non-forfeitable rights to dividends. In applying the two-class method, earnings are allocated to both common stock shares and participating securities based on their respective weighted-average shares outstanding for the period. Diluted earnings per share information may include the additional effect of other securities, if dilutive, in which case the dilutive effect of such securities is calculated using the treasury stock method. Contingently issuable shares are not included in earnings per share until the period in which their issuance becomes probable; therefore, basic and diluted earnings per share are the same.

#### 4. RECENT ACCOUNTING PRONOUNCEMENTS

In May 2014, the Financial Accounting Standards Board (“FASB”) issued ASU 2014-09 which creates a new topic in the Accounting Standards Codification (“ASC”) Topic 606, “*Revenue From Contracts With Customers*.” In addition to superseding and replacing nearly all existing U.S. GAAP revenue recognition guidance, including industry-specific guidance, ASC 606 establishes a new control-based revenue recognition model; changes the basis for deciding when revenue is recognized over time or at a point in time; provides new and more detailed guidance on specific topics; and expands and improves disclosures about revenue. The new revenue standards may be applied retrospectively to each prior period presented or retrospectively with the cumulative effect recognized as of the date of adoption. The guidance is effective for the Company for annual reporting periods, including interim periods therein, beginning October 1, 2018. We have performed a preliminary review of the new guidance as compared to our current accounting policies and a contract review has begun. The Company is currently evaluating the impact that adopting the standard, along with the subsequent updates and clarifications, will have on its consolidated financial statements and disclosures. During fiscal 2017, we plan to finalize our review and determine our date and method of adoption.

In April 2015, the FASB issued ASU 2015-03, “Simplifying the Presentation of Debt Issuance Costs,” which expands upon the guidance on the presentation of debt issuance costs. The guidance requires that debt issuance costs related to a recognized debt liability be presented in the balance sheet as a direct deduction from the carrying amount of the debt liability, consistent with debt discounts. The guidance does not change the current requirements surrounding the recognition and measurement of debt issuance costs, and the amortization of debt issuance costs will continue to be reported as interest expense. The guidance was effective for the Company beginning October 1, 2016. However, as early adoption is permissible, the Company adopted the pronouncement effective October 1, 2015. The adoption of this pronouncement did not have a significant impact on our consolidated financial position and results of operations, although it did change the financial statement classification of debt issuance costs. In connection with adopting the pronouncement beginning October 1, 2015, the Company reclassified \$77.7 million in debt issuance costs as of September 30, 2015, to current portion of long-term debt and long-term debt in the liabilities section of the consolidated balance sheet.

In September 2015, the FASB issued ASU 2015-16, “Simplifying the Accounting for Measurement-Period Adjustments,” a new standard intended to simplify the accounting for measurement period adjustments in a business combination. Measurement period adjustments are changes to provisional amounts recorded when the accounting for a business combination is incomplete as of the end of a reporting period. The measurement period can extend for up to a year following the transaction



date. During the measurement period, companies may make adjustments to provisional amounts when information necessary to complete the measurement is received. The new guidance requires companies to recognize these adjustments, including any related impacts to net income, in the reporting period in which the adjustments are determined. Companies are no longer required to retroactively apply measurement period adjustments to all periods presented. The guidance was effective for the Company on October 1, 2016. However, as early adoption is permissible, the Company adopted the pronouncement beginning October 1, 2015. The adoption of this pronouncement did not have a significant impact on the Company's consolidated financial statements and disclosures.

In November 2015, the FASB issued ASU 2015-17, "Balance Sheet Classification of Deferred Taxes," which requires entities to present deferred tax assets and liabilities as noncurrent in a classified balance sheet. This guidance simplifies the current guidance, which requires entities to separately present deferred tax assets and liabilities as current and non-current in a classified balance sheet. ASU 2015-17 is effective for fiscal years beginning after December 15, 2016, and interim periods within those years, and may be applied either prospectively to all deferred tax assets and liabilities or retrospectively to all periods presented. As early adoption is permissible, the Company adopted this pronouncement beginning October 1, 2015 and applied this pronouncement retrospectively. In connection with adopting the pronouncement beginning October 1, 2015, the Company reclassified \$45.4 million from current deferred income tax assets in the consolidated balance sheet as of September 30, 2015 to non-current deferred income tax liabilities.

In February 2016, the FASB issued ASU 2016-02, "Leases (ASC 842)," which will require that a lessee recognize assets and liabilities on the balance sheet for all leases with a lease term of more than twelve months, with the result being the recognition of a right of use asset and a lease liability. The guidance is effective for the Company for annual reporting periods, including interim periods therein, beginning October 1, 2019, with early adoption permitted. The Company is currently evaluating the impact of adopting this standard on its consolidated financial statements.

In March 2016, the FASB issued ASU 2016-09, "Improvements to Employee Share-Based Payment Accounting." The guidance requires the recognition of the income tax effects of awards in the income statement when the awards vest or are settled, thus eliminating additional paid in capital pools. The guidance also allows for the employer to repurchase more of an employee's shares for tax withholding purposes without triggering liability accounting. In addition, the guidance allows for a policy election to account for forfeitures as they occur rather than on an estimated basis. ASU 2016-09 was effective for the Company for annual reporting periods, including interim periods therein, beginning October 1, 2017, with early adoption permitted. As early adoption is permissible, the Company adopted this standard in the fourth quarter of fiscal 2016. Changes have been applied prospectively in accordance with the standard and prior periods have not been adjusted. In addition, the Company continued to account for forfeitures on an estimated basis. Refer to Note 13, "Income Taxes" for additional information.

In June 2016, the FASB issued ASU 2016-13, "Financial Instruments - Credit Losses: Measurement of Credit Losses on Financial Instruments (ASU 2016-13)," which changes the impairment model for most financial assets. The new model uses a forward-looking expected loss method, which will generally result in earlier recognition of allowances for losses. ASU 2016-13 is effective for annual and interim periods beginning after December 15, 2019 and early adoption is permitted for annual and interim periods beginning after December 15, 2018. The Company is currently evaluating the impact of adopting this standard on its consolidated financial statements.

## 5. EARNINGS PER SHARE (TWO-CLASS METHOD)

The following table sets forth the computation of basic and diluted earnings per share (in thousands, except per share data):

	Fiscal Years Ended September 30,		
	2016	2015	2014
<b>Numerator for earnings per share:</b>			
Net income	\$ 586,414	\$ 447,212	\$ 306,910
Less dividends paid on participating securities	(3,000)	(3,365)	(126,626)
Net income applicable to common stock—basic and diluted	\$ 583,414	\$ 443,847	\$ 180,284
<b>Denominator for basic and diluted earnings per share under the two-class method:</b>			
Weighted average common shares outstanding	53,326	53,112	52,748
Vested options deemed participating securities	2,831	3,494	4,245
Total shares for basic and diluted earnings per share	56,157	56,606	56,993
<b>Net earnings per share—basic and diluted</b>	<b>\$ 10.39</b>	<b>\$ 7.84</b>	<b>\$ 3.16</b>

## 6. SALES AND TRADE ACCOUNTS RECEIVABLE

**Sales**—The Company’s sales and receivables are concentrated in the aerospace industry. TransDigm’s customers include: distributors of aerospace components; commercial airlines, large commercial transport and regional and business aircraft OEMs; various armed forces of the United States and friendly foreign governments; defense OEMs; system suppliers; and various other industrial customers.

Two customers accounted for approximately 13%, 11% and 8% and 12%, 12% and 12% of the Company’s net sales for fiscal years ended 2016, 2015 and 2014, respectively. Sales to these customers were split approximately evenly between the Power & Control and Airframe segments. Sales to foreign customers, primarily in Western Europe, Canada and Asia, were \$1,169.5 million, \$881.1 million and \$735.9 million during fiscal years ended 2016, 2015 and 2014.

**Trade Accounts Receivable**—Trade accounts receivable consist of the following at September 30 (in thousands):

	2016	2015
Trade accounts receivable—gross	\$ 580,753	\$ 447,873
Allowance for uncollectible accounts	(4,414)	(3,801)
Trade accounts receivable—net	<u>\$ 576,339</u>	<u>\$ 444,072</u>

At September 30, 2016, approximately 13% of the Company’s trade accounts receivable was due from one customer. In addition, approximately 43% of the Company’s trade accounts receivable was due from entities that principally operate outside of the United States. Credit is extended based on an evaluation of each customer’s financial condition and collateral is generally not required.

## 7. INVENTORIES

Inventories consist of the following at September 30 (in thousands):

	2016	2015
Raw materials and purchased component parts	\$ 464,410	\$ 371,073
Work-in-progress	188,417	164,793
Finished Goods	153,253	122,956
Total	806,080	658,822
Reserves for excess and obsolete inventory	(82,069)	(67,421)
Inventories—net	<u>\$ 724,011</u>	<u>\$ 591,401</u>

## 8. PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment consist of the following at September 30 (in thousands):

	2016	2015
Land and improvements	\$ 57,510	\$ 42,235
Buildings and improvements	153,691	133,290
Machinery, equipment and other	338,527	283,670
Construction in progress	15,958	20,867
Total	565,686	480,062
Accumulated depreciation	(255,106)	(219,378)
Property, plant and equipment—net	<u>\$ 310,580</u>	<u>\$ 260,684</u>

**9. INTANGIBLE ASSETS**

Other intangible assets - net in the consolidated balance sheets consist of the following at September 30 (in thousands):

	2016			2015		
	Gross Carrying Amount	Accumulated Amortization	Net	Gross Carrying Amount	Accumulated Amortization	Net
Trademarks and trade names	\$ 720,263	\$ —	\$ 720,263	\$ 634,504	\$ —	\$ 634,504
Technology	1,279,335	288,429	990,906	1,100,317	233,434	866,883
Order backlog	55,341	29,641	25,700	19,501	10,709	8,792
Other	43,331	15,857	27,474	43,229	13,557	29,672
Total	\$ 2,098,270	\$ 333,927	\$ 1,764,343	\$ 1,797,551	\$ 257,700	\$ 1,539,851

Information regarding the amortization expense of amortizable intangible assets is detailed below (in thousands):

**Aggregate Amortization Expense:**

Years ended September 30,

2016	\$ 77,445
2015	54,219
2014	63,608

**Estimated Amortization Expense:**

Years ending September 30,

2017	\$ 92,411
2018	66,711
2019	66,711
2020	66,711
2021	66,711

Intangible assets acquired during the year ended September 30, 2016 were as follows (in thousands):

	Gross Amount	Amortization Period
Intangible assets not subject to amortization:		
Goodwill	\$ 1,008,510	
Trademarks and trade names	101,500	
	1,110,010	
Intangible assets subject to amortization:		
Technology	206,700	20 years
Order backlog	36,600	1 year
	243,300	17.1 years
Total	\$ 1,353,310	

The changes in the carrying amount of goodwill by segment for the fiscal years ended September 30, 2015 and 2016 were as follows (in thousands):

	Power & Control	Airframe	Non-aviation	Total
Balance at September 30, 2014	\$ 1,563,447	\$ 1,906,261	\$ 55,369	\$ 3,525,077
Goodwill acquired during the year (Note 2)	674,123	504,141	—	1,178,264
Purchase price allocation adjustments	—	(4,541)	—	(4,541)
Currency translation adjustment	873	(13,453)	—	(12,580)
Balance at September 30, 2015	2,238,443	2,392,408	55,369	4,686,220
Goodwill acquired during the year (Note 2)	1,008,510	—	—	1,008,510
Purchase price allocation adjustments	505	(792)	—	(287)
Currency translation adjustment	32	(15,023)	—	(14,991)
Balance at September 30, 2016	\$ 3,247,490	\$ 2,376,593	\$ 55,369	\$ 5,679,452

#### 10. ACCRUED LIABILITIES

Accrued liabilities consist of the following at September 30 (in thousands):

	2016	2015
Compensation and related benefits	\$ 88,826	\$ 68,034
Interest	83,180	65,247
Breeze-Eastern dissenting shares (see Note 2)	33,644	—
Interest rate swap agreements	29,191	24,770
Product warranties	24,334	20,592
Other	84,937	92,910
Total	\$ 344,112	\$ 271,553

#### 11. DEBT

The Company's debt consists of the following at September 30 (in thousands):

	2016			
	Gross Amount	Debt Issuance Costs	Original Issue Discount	Net Amount
Short-term borrowings—trade receivable securitization facility	\$ 200,000	\$ (229)	\$ —	\$ 199,771
Term loans	\$ 5,288,708	\$ (42,662)	\$ (11,439)	\$ 5,234,607
2020 Notes	550,000	(4,299)	—	545,701
2021 Notes	500,000	(3,141)	—	496,859
2022 Notes	1,150,000	(8,381)	—	1,141,619
2024 Notes	1,200,000	(9,218)	—	1,190,782
2025 Notes	450,000	(4,144)	—	445,856
2026 Notes	950,000	(9,588)	—	940,412
	10,088,708	(81,433)	(11,439)	9,995,836
Less current portion	53,074	(429)	—	52,645
Long-term debt	\$ 10,035,634	\$ (81,004)	\$ (11,439)	\$ 9,943,191

	2015			
	Gross Amount	Debt Issuance Costs	Original Issue Discount	Net Amount
Short-term borrowings—trade receivable securitization facility	\$ 200,000	\$ (208)	\$ —	\$ 199,792
Term loans	\$ 4,382,813	\$ (43,660)	\$ (5,471)	\$ 4,333,682
2020 Notes	550,000	(5,355)	—	544,645
2021 Notes	500,000	(3,789)	—	496,211
2022 Notes	1,150,000	(9,821)	—	1,140,179
2024 Notes	1,200,000	(10,394)	—	1,189,606
2025 Notes	450,000	(4,513)	—	445,487
	8,232,813	(77,532)	(5,471)	8,149,810
Less current portion	43,840	(413)	—	43,427
Long-term debt	\$ 8,188,973	\$ (77,119)	\$ (5,471)	\$ 8,106,383

**Trade Receivable Securitization Facility**

During fiscal 2014, the Company established a trade receivable securitization facility (the “Securitization Facility”). The Securitization Facility effectively increases the Company’s borrowing capacity depending on the amount of trade accounts receivable. The Securitization Facility includes the right for the Company to exercise annual one year extensions as long as there have been no termination events as defined by the agreement. The Company uses the proceeds from the Securitization Facility as an alternative to other forms of debt, effectively reducing borrowing costs. In August 2016, the Company amended the Securitization Facility to extend the maturity date to August 1, 2017. The borrowing capacity remains at \$250 million and as of September 30, 2016, the Company has borrowed \$200 million under the Securitization Facility. The Securitization Facility is collateralized by substantially all of the Company’s domestic operations’ trade accounts receivable.

**Term Loans**

As of September 30, 2016 and 2015, TransDigm had \$5,288.7 million and \$4,382.8 million in fully drawn term loans and \$600.0 million in revolving commitments. The term loans consist of four tranches as follows (in millions):

Term Loan Facility	Maturity Date	Interest Rate	Aggregate Principal as of September 30,	
			2016	2015
Tranche C	February 28, 2020	LIBO rate <sup>(1)</sup> + 3.00%	\$ 1,228.3	\$ 2,035.4
Tranche D	June 4, 2021	LIBO rate <sup>(1)</sup> + 3.00%	806.4	814.7
Tranche E	May 14, 2022	LIBO rate <sup>(1)</sup> + 3.00%	1,518.0	1,532.7
Tranche F	June 9, 2023	LIBO rate <sup>(1)</sup> + 3.00%	1,736.0	—

The interest rates per annum applicable to all of the existing tranches of term loans are, at TransDigm’s option, equal to either an alternate base rate or an adjusted LIBO rate for one, two, three or six-month (or to the extent agreed to by each relevant lender, nine or twelve-month) interest periods chosen by TransDigm, in each case plus an applicable margin percentage. The adjusted LIBO rate is subject to a floor of 0.75%. At September 30, 2016 and 2015, the applicable interest rates were as follows:

Term Loan Facility	Interest Rate as of September 30,	
	2016	2015
Tranche C	3.75%	3.75%
Tranche D	3.75%	3.75%
Tranche E	3.75%	3.50%
Tranche F	3.75%	—%

**Second Amended and Restated Credit Agreement**

On June 4, 2014, TransDigm Inc. amended and restated its existing credit agreement by entering into a Second Amended and Restated Credit Agreement (the “Credit Agreement”). The term loans under the Credit Agreement (the “2014 Term Loans”) consisted of three tranches of term loans, all of which were fully drawn—Tranche B Term Loans (\$500 million), Tranche C Term Loans (\$2,600 million) and the Tranche D Term Loans (\$825 million). The revolving credit facility consisted of one

tranche—Revolving B Commitments (capacity up to \$420 million, of which \$100 million were multi-currency revolving commitments). The Tranche B Term Loans and Revolving B Commitments were refinanced in May 2015. The May 2015 financing is detailed in the “2015 Incremental Assumption and Refinancing Facility Agreement” section below. Approximately \$790 million of existing Tranche C term loans were refinanced in June 2016 in connection with the incurrence of Tranche F Term Loans. The June 2016 financing is detailed in the “2016 Amendment to the Credit Agreement” section below. Pursuant to the June 2016 financing, aggregate quarterly principal payments of \$13.3 million on the term loans are required, which began on June 30, 2016. Prior to the June 2016 financing, commencing on June 30, 2015, aggregate quarterly principal payments of \$7.3 million were required.

Under the terms of the Credit Agreement, TransDigm is entitled on one or more occasions, subject to the satisfaction of certain conditions, to request additional commitments under the revolving credit facility or additional term loans in the aggregate principal amount of up to \$1,000 million to the extent that existing or new lenders agree to provide such additional term loans.

#### *2015 Incremental Assumption and Refinancing Facility Agreement*

On May 14, 2015, TransDigm Inc., TD Group and certain subsidiaries of TransDigm entered into an Incremental Assumption and Refinancing Facility Agreement with Credit Suisse AG, as administrative agent and collateral agent, and the other agents and lenders named therein. Pursuant to the Incremental Assumption and Refinancing Facility Agreement, TransDigm, among other things, incurred new tranche E term loans under the Credit Agreement in an aggregate principal amount equal to \$1,000 million and refinanced the existing Tranche B Term Loans in an aggregate principal amount equal to \$498 million into additional Tranche E Term Loans (collectively, the “Tranche E Term Loans”). The terms and conditions (other than maturity date) that apply to the Tranche E Term Loans, including pricing, are substantially the same as the terms and conditions that apply to the Tranche B Term Loans immediately prior to the Incremental Assumption and Refinancing Facility Agreement. At September 30, 2016 and 2015, the unamortized original issue discount on the Tranche E Term Loans was \$4.7 million and \$5.4 million.

#### *2016 Amendment to the Credit Agreement*

On June 9, 2016, TransDigm Inc., TD Group and certain subsidiaries of TransDigm entered into Amendment No. 1 to the Credit Agreement (“Amendment to the Credit Agreement”) with Credit Suisse AG, as administrative agent and collateral agent, and the other agents and lenders named therein. Pursuant to the Amendment to the Credit Agreement, TransDigm, among other things, incurred new tranche F term loans (the “New Tranche F Term Loans”) in an aggregate principal amount equal to \$500 million, received commitments in respect of delayed draw tranche F term loans (the “Delayed Draw Tranche F Term Loans”) in an aggregate amount equal to \$450 million, converted approximately \$790 million of existing Tranche C Term Loans into additional tranche F term loans (the “Converted Tranche F Term Loans”) and together with the New Tranche F Term Loans and the Delayed Draw Tranche F Term Loans, the “Tranche F Term Loans”) and increased the margin applicable to the existing Tranche E Term Loans to LIBO rate plus 3.0% per annum. The New Tranche F Term Loans and the Converted Tranche F Term Loans were fully drawn on June 9, 2016. Borrowing under the Delayed Draw Tranche F Term Loans was contingent upon the completion of the acquisition of Data Device Corporation, which was completed on June 23, 2016, and the Delayed Draw Tranche F Term Loans were fully drawn thereafter. The Tranche F Term Loans mature on June 9, 2023. The terms and conditions (other than maturity date) that apply to the Tranche F Term Loans, including pricing, are substantially the same as the terms and conditions that apply to the Tranche C Term Loans immediately prior to the Amendment to the Credit Agreement. The Tranche F Term Loans require quarterly principal payments of \$4.4 million, which began on September 30, 2016. At September 30, 2016, the unamortized original issue discount on the Tranche F Term Loans was \$6.8 million.

Under the terms of the Amendment to the Credit Agreement, certain existing revolving lenders increased the revolving commitments in an aggregate principal amount of \$50 million (the “Extended Revolving Commitments”). The terms and conditions that apply to the Extended Revolving Commitments are the same as those of the existing US Dollar revolving credit commitments under the Credit Agreement. The Extended Revolving Commitments and existing revolving commitments consist of two tranches, of which approximately \$53 million matures on February 28, 2018 and approximately \$547 million matures on February 28, 2020. At September 30, 2016, the Company had \$17 million letters of credit outstanding and \$583 million of borrowings available in the aggregate under revolving commitments pursuant to the Credit Agreement, as amended.

Pursuant to the Amendment to the Credit Agreement and subject to certain conditions, TransDigm may make certain additional restricted payments, including to declare or pay dividends or repurchase stock, in an aggregate amount not to exceed \$1,500 million on or prior to December 31, 2016. Subsequent to December 31, 2016, the aggregate amount of restricted payments remaining, not to exceed \$500 million, may be made solely to the extent that the proceeds are used to repurchase stock.

On October 14, 2016, the Company announced that TD Group’s Board of Directors authorized and declared a special cash dividend of \$24.00 on each outstanding share of common stock and cash dividend equivalent payments on options granted under its stock option plans. The record date for the special dividend was October 24, 2016, and the payment date for the

dividend was November 1, 2016. The total cash payment related to the special dividend and dividend equivalent payments in the first quarter of fiscal 2017 will be approximately \$1,400 million. Refer to Note 23, "Subsequent Events," for further details.

All of the indebtedness outstanding under the Credit Agreement is guaranteed by TD Group and all of TransDigm's current and future domestic restricted subsidiaries (other than immaterial subsidiaries). In addition, the obligations of TransDigm and the guarantors under the Credit Agreement, as amended, are secured ratably in accordance with each lender's respective revolving and term loan commitments by a first priority security interest in substantially all of the existing and future property and assets, including inventory, equipment, general intangibles, intellectual property, investment property and other personal property (but excluding leasehold interests and certain other assets) of TransDigm and its existing and future domestic restricted subsidiaries (other than immaterial subsidiaries), and a first priority pledge of the capital stock of TransDigm and its subsidiaries (other than foreign subsidiaries and certain domestic subsidiaries, of which 65% of the voting capital stock is pledged).

The term loans require mandatory prepayments of principal based on certain percentages of Excess Cash Flow (as defined in the Credit Agreement), commencing 90 days after the end of each fiscal year, subject to certain exceptions. In addition, subject to certain exceptions (including, with respect to asset sales, the reinvestment in productive assets), TransDigm will be required to prepay the loans outstanding under the term loan facility at 100% of the principal amount thereof, plus accrued and unpaid interest, with the net cash proceeds of certain asset sales and issuance or incurrence of certain indebtedness. No prepayments were required during fiscal 2016.

The Credit Agreement contains certain covenants that limit the ability of TD Group, TransDigm and TransDigm's restricted subsidiaries to, among other things: (i) incur or guarantee additional indebtedness or issue preferred stock; (ii) pay distributions on, redeem or repurchase capital stock or redeem or repurchase subordinated debt; (iii) make investments; (iv) sell assets; (v) enter into agreements that restrict distributions or other payments from restricted subsidiaries to TransDigm; (vi) incur or suffer to exist liens securing indebtedness; (vii) consolidate, merge or transfer all or substantially all of their assets; and (viii) engage in transactions with affiliates.

In addition, under the Credit Agreement, if the usage of the revolving credit facility exceeds 25% of the total revolving commitments, the Company will be required to maintain a maximum consolidated net leverage ratio of net debt, as defined, to trailing four-quarter EBITDA As Defined. A breach of any of the covenants or an inability to comply with the required leverage ratio could result in a default under the Credit Agreement or the Company's Indentures for its senior subordinated notes.

If any such default occurs, the lenders under the Credit Agreement and the holders of the senior subordinated notes may elect to declare all outstanding borrowings, together with accrued interest and other amounts payable thereunder, to be immediately due and payable. The lenders under the Credit Agreement also have the right in these circumstances to terminate any commitments they have to provide further borrowings. In addition, following an event of default under the Credit Agreement, the lenders thereunder will have the right to proceed against the collateral granted to them to secure the debt, which includes our available cash, and they will also have the right to prevent us from making debt service payments on the senior subordinated notes.

Under the terms of the Credit Agreement, TransDigm is entitled, on one or more occasions, to request additional revolving commitments, additional term loans or a combination thereof, to the extent that the existing or new lenders agree to provide such additional commitments provided that, among other conditions, our consolidated net leverage ratio would be no greater than 7.25 to 1.00 and the consolidated secured net debt ratio would be no greater than 4.25 to 1.00, in each case, after giving effect to such additional revolving commitments or additional term loans.

#### ***Debt Issuance Costs, Premiums and Discounts***

During the year ended September 30, 2016, the Company recorded refinancing costs of \$15.8 million representing debt issuance costs expensed in conjunction with the refinancing of the Tranche C Term Loans. During the year ended September 30, 2015 the Company recorded refinancing costs of \$18.4 million representing debt issuance costs expensed in conjunction with the refinancing of the Tranche B Term Loans and Revolving B Commitments. During the year ended September 30, 2014 the Company recorded refinancing costs of \$131.6 million representing debt issuance costs expensed in conjunction with the repurchase of the 7.75% Senior Subordinated Notes issued December 2010 (the "2018 Notes"). The charge consisted of the premium of \$121.1 million paid to redeem the 2018 Notes and the write-off of debt issuance costs of \$10.5 million.

#### ***Interest Rate Swap and Cap Agreements***

See Note 20, "Derivatives and Hedging Instruments" for information about how our interest rate swap and cap agreements are used to manage interest rate risk associated with floating-rate borrowings under our credit facilities.

**Senior Subordinated Notes**

On October 15, 2012, TransDigm Inc. issued \$550 million in aggregate principal amount of its 2020 Notes at an issue price of 100% of the principal amount. The 2020 Notes bear interest at the rate of 5.50% per annum, which accrues from October 15, 2012 and is payable semiannually on April 15 and October 15 of each year. The 2020 Notes mature on October 15, 2020, unless earlier redeemed or repurchased, and are subject to the terms and conditions as defined in the indenture governing the 2020 Notes.

On July 1, 2013, TransDigm issued \$500 million in aggregate principal amount of its 2021 Notes at an issue price of 100% of the principal amount. The 2021 Notes bear interest at the rate of 7.50% per annum, which accrues from July 1, 2013 and is payable semiannually on January 15 and July 15 of each year, commencing on January 15, 2014. The 2021 Notes mature on July 15, 2021, unless earlier redeemed or repurchased, and are subject to the terms and conditions as defined in the indenture governing the 2021 Notes. On October 13, 2016, the Company announced the commencement of a cash tender offer for any and all of its outstanding 2021 Notes. Refer to Note 23, "Subsequent Events," for further details.

On June 4, 2014, TransDigm Inc. issued \$2,350 million in aggregate principal amount of Senior Subordinated Notes, consisting of \$1,150 million aggregate principal amount of the 2022 Notes and \$1,200 million aggregate principal amount of the 2024 Notes at an issue price of 100% of the principal amount for both notes. The 2022 Notes bear interest at the rate of 6.00% per annum, which accrues from June 4, 2014 and is payable semiannually in arrears on January 15 and July 15 of each year, commencing on January 15, 2015. The 2022 Notes mature on July 15, 2022, unless earlier redeemed or repurchased, and are subject to the terms and conditions set forth in the indenture governing the 2022 Notes. The 2024 Notes bear interest at the rate of 6.50% per annum, which accrues from June 4, 2014 and is payable semiannually in arrears on January 15 and July 15 of each year, commencing on January 15, 2015. The 2024 Notes mature on July 15, 2024, unless earlier redeemed or repurchased, and are subject to the terms and conditions set forth in the indenture governing the 2024 Notes.

On May 14, 2015, TransDigm Inc. issued \$450 million in aggregate principal amount of its 2025 Notes at an issue price of 100% of the principal amount. The 2025 Notes bear interest at the rate of 6.50% per annum, which accrues from May 14, 2015 and is payable semiannually in arrears on May 15 and November 15 of each year, commencing on November 15, 2015. The 2025 Notes mature on May 15, 2025, unless earlier redeemed or repurchased, and are subject to the terms and conditions set forth in the indenture governing the 2025 Notes.

On June 9, 2016, TransDigm Inc. issued \$950 million in aggregate principal amount of its 2026 Notes at an issue price of 100% of the principal amount. The 2026 Notes bear interest at the rate of 6.375% per annum, which accrues from June 9, 2016 and is payable semiannually in arrears on June 15 and December 15 of each year, commencing on December 15, 2016. The 2026 Notes mature on June 15, 2026, unless earlier redeemed or repurchased, and are subject to the terms and conditions set forth in the indentures governing the 2026 Notes.

The Notes are subordinated to all of TransDigm's existing and future senior debt, rank equally with all of its existing and future senior subordinated debt and rank senior to all of its future debt that is expressly subordinated to the Notes. The Notes are guaranteed on a senior subordinated unsecured basis by TD Group and its 100%-owned domestic subsidiaries named in the indentures. The guarantees of the Notes are subordinated to all of the guarantors' existing and future senior debt, rank equally with all of their existing and future senior subordinated debt and rank senior to all of their future debt that is expressly subordinated to the guarantees of the Notes. The Notes are structurally subordinated to all of the liabilities of TD Group's non-guarantor subsidiaries. The Notes contain many of the restrictive covenants included in the 2014 Term Loans. TransDigm is in compliance with all the covenants contained in the Notes.

At September 30, 2016, future maturities of long-term debt are as follows (in thousands):

Years ended September 30,	
2017	\$ 53,074
2018	53,074
2019	53,074
2020	1,230,345
2021 <sup>(1)</sup>	1,855,498
Thereafter	6,843,641
	\$ 10,088,706

(1) On October 14, 2016, the Company entered into an Incremental Term Loan Assumption Agreement in which part of the proceeds will be used to repurchase its 2021 Notes in the first quarter of fiscal 2017. Refer to Note 23, "Subsequent Events" to our consolidated financial statements included herein for further details.



## 12. RETIREMENT PLANS

**Defined Contribution Plans**—The Company sponsors certain defined contribution employee savings plans that cover substantially all of the Company’s non-union employees. Under certain plans, the Company contributes a percentage of employee compensation and matches a portion of employee contributions. The cost recognized for such contributions for the years ended September 30, 2016, 2015 and 2014 was approximately \$12.7 million, \$9.9 million and \$8.7 million, respectively.

**Defined Benefit Pension Plans**—The Company maintains certain non-contributory defined benefit pension plans. The Company’s funding policy is to contribute actuarially determined amounts allowable under tax and statutory regulations for the qualified plans. The Company uses a September 30th measurement date for its defined benefit pension plans.

The Company maintains certain qualified, non-contributory defined benefit pension plans, which together cover certain union employees. The plans provide benefits of stated amounts for each year of service. The plan assets as of September 30, 2016 and 2015 were approximately \$67.0 million and \$65.5 million, respectively. The Company’s projected benefit obligation for these defined benefit pension plans at September 30, 2016 and 2015 was \$100.6 million and \$81.5 million, respectively. The total liability recognized at September 30, 2016 and 2015 was \$33.6 million and \$16.0 million, respectively. The increase in the total liability at September 30, 2016 compared to September 30, 2015 is primarily attributable to the change in pension assumptions, particularly a lower discount rate and expected rate of return on assets, for the AmSafe Bridport Limited pension plan.

The net periodic pension cost recognized in the consolidated statements of income for the years ended September 30, 2016, 2015, and 2014 was \$1.0 million, \$0.6 million, and \$0.5 million, respectively.

The Company has a non-qualified, non-contributory defined benefit pension plan, which covers certain retired employees. The plan is unfunded and provides defined benefits based on the final average salary of the employees as defined in the plan. The projected benefit obligation for this defined benefit pension plan and the total liability recognized in the Consolidated Balance Sheet at September 30, 2016 and 2015 was approximately \$8.6 million and \$8.4 million, respectively. The net periodic pension cost recognized in the consolidated statements of income for each of the years ended September 30, 2016, 2015 and 2014 was \$0.4 million.

## 13. INCOME TAXES

The Company’s income tax provision on income before income taxes consists of the following for the periods shown below (in thousands):

	Fiscal Years Ended September 30,		
	2016	2015	2014
Current			
Federal	\$ 153,957	\$ 163,182	\$ 138,596
State	9,234	7,823	7,807
Foreign	12,703	17,947	4,613
	<u>175,894</u>	<u>188,952</u>	<u>151,016</u>
Deferred	5,808	660	(9,416)
	<u>\$ 181,702</u>	<u>\$ 189,612</u>	<u>\$ 141,600</u>

The differences between the income tax provision on income before income taxes at the federal statutory income tax rate and the tax provision shown in the accompanying consolidated statements of income for the periods shown below are as follows (in thousands):

	Fiscal Years Ended September 30,		
	2016	2015	2014
Tax at statutory rate of 35%	\$ 268,841	\$ 222,888	\$ 156,979
State and local income taxes, net of federal benefit	2,677	4,931	5,658
Stock compensation	(43,565)	—	—
Foreign rate differential	(30,079)	(14,332)	(4,034)
Domestic manufacturing deduction	(16,902)	(17,834)	(13,980)
Other—net	730	(6,041)	(3,023)
Income tax provision	<u>\$ 181,702</u>	<u>\$ 189,612</u>	<u>\$ 141,600</u>

The components of the deferred taxes consist of the following at September 30 (in thousands):

	2016	2015
<b>Deferred tax liabilities:</b>		
Intangible assets	\$ 627,633	\$ 508,485
Property, plant and equipment	31,438	21,083
Unremitted foreign earnings	9,434	7,178
Employee benefits, compensation and other accrued obligations	(86,229)	(65,245)
Interest rate swaps and caps	(36,478)	(29,811)
Net operating losses	(29,266)	(15,945)
Inventory	(22,382)	(22,047)
Environmental	(16,958)	(7,897)
Product warranties	(9,007)	(6,247)
Other	(3,216)	(2,202)
Total	464,969	387,352
Add: Valuation allowance	27,286	17,645
Total net deferred tax liabilities	\$ 492,255	\$ 404,997

At September 30, 2016, the Company has United Kingdom net operating loss carryforwards of approximately \$22.9 million and state net operating loss carryforwards of approximately \$630.2 million that expire in various years from 2016 to 2033. A valuation allowance has been established equal to the amount of the net operating losses that the Company believes will not be utilized. The Company had state tax credit carryforwards of \$2.6 million that expire from 2023 to 2029.

The Company and its subsidiaries file income tax returns in the U.S. federal jurisdiction and various state and local jurisdictions, as well as foreign jurisdictions located in Belgium, Canada, China, France, Germany, Hong Kong, Hungary, Malaysia, Mexico, Norway, Singapore, Sri Lanka, Sweden and the United Kingdom. The Company is no longer subject to U.S. federal examinations for years before fiscal 2013. The Company is currently under examination in the U.S. for its fiscal 2014 federal taxes and in Belgium for its fiscal 2013 and 2014 years. The Company expects the examinations to be completed during fiscal 2017. In addition, the Company is subject to state income tax examinations for fiscal years 2009 and later.

The cumulative amount of the Company's foreign undistributed net earnings for which no deferred taxes have been provided is approximately \$79.1 million at September 30, 2016. The Company has no plans to repatriate such earnings in the foreseeable future.

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows (in thousands):

	2016	2015
Balance at beginning of period	\$ 6,859	\$ 13,951
Additions based on tax positions related to the prior year	2,014	1,304
Additions based on tax positions related to the current year	913	—
Reductions based on tax positions related to the prior year	(801)	(2,099)
Settlement with tax authorities	—	(957)
Lapse in statute of limitations	(1,483)	(3,645)
Acquisitions	1,204	(1,695)
Balance at end of period	\$ 8,706	\$ 6,859

Unrecognized tax benefits at September 30, 2016 and 2015, the recognition of which would have an effect on the effective tax rate for each fiscal year, amounted to \$8.5 million and \$6.5 million, respectively. The Company classifies all income tax related interest and penalties as income tax expense, which were not significant for the years ended September 30, 2016, 2015 and 2014. As of September 30, 2016 and 2015, the Company accrued \$1.1 million and \$1.4 million, respectively, for the potential payment of interest and penalties. The Company anticipates no significant changes to its total unrecognized tax benefits through fiscal 2016.

As disclosed in Note 4, “Recent Accounting Pronouncements,” during the fourth quarter of 2016, the Company adopted ASU No. 2016-09 “Improvements to Employee Share-Based Payment Accounting.” Therefore, effective October 1, 2015, excess tax benefits for share-based payments are recognized in the income tax provision rather than in additional paid-in capital. The impact on the Company’s financial statements for the fiscal year ended September 30, 2016 is summarized below:

	Fiscal Year Ended
	September 30, 2016
Decrease in Additional paid-in capital	43,565
Decrease in Income tax provision and increase in Net income	43,565
Increase in basic and diluted earnings per common share	0.78

#### 14. ENVIRONMENTAL LIABILITIES

Our operations and facilities are subject to a number of federal, state, local and foreign environmental laws and regulations that govern, among other things, discharges of pollutants into the air and water, the generation, handling, storage and disposal of hazardous materials and wastes, the remediation of contamination and the health and safety of our employees. Environmental laws and regulations may require that the Company investigate and remediate the effects of the release or disposal of materials at sites associated with past and present operations. Certain facilities and third-party sites utilized by the Company have been identified as potentially responsible parties under the federal superfund laws and comparable state laws. The Company is currently involved in the investigation and remediation of a number of sites under applicable laws.

Estimates of the Company’s environmental liabilities are based on current facts, laws, regulations and technology. These estimates take into consideration the Company’s prior experience and professional judgment of the Company’s environmental advisors. Estimates of the Company’s environmental liabilities are further subject to uncertainties regarding the nature and extent of site contamination, the range of remediation alternatives available, evolving remediation standards, imprecise engineering evaluations and cost estimates, the extent of corrective actions that may be required and the number and financial condition of other potentially responsible parties, as well as the extent of their responsibility for the remediation.

Accordingly, as investigation and remediation proceed, it is likely that adjustments in the Company’s accruals will be necessary to reflect new information. The amounts of any such adjustments could have a material adverse effect on the Company’s results of operations or cash flows in a given period. Based on currently available information, however, the Company does not believe that future environmental costs in excess of those accrued with respect to sites for which the Company has been identified as a potentially responsible party are likely to have a material adverse effect on the Company’s financial condition.

Environmental liabilities are recorded when the liability is probable and the costs are reasonably estimable, which generally is not later than at completion of a feasibility study or when the Company has recommended a remedy or has committed to an appropriate plan of action. The Company also takes into consideration the estimated period of time in which payments will be required. The liabilities are reviewed periodically and, as investigation and remediation proceed, adjustments are made as necessary. Liabilities for losses from environmental remediation obligations do not consider the effects of inflation and anticipated expenditures are not discounted to their present value. The liabilities are not reduced by possible recoveries from insurance carriers or other third parties, but do reflect anticipated allocations among potentially responsible parties at federal superfund sites or similar state-managed sites, third party indemnity obligations, and an assessment of the likelihood that such parties will fulfill their obligations at such sites.

The Company’s consolidated balance sheet includes environmental remediation obligations at September 30, 2016 and 2015 of \$46.1 million and \$21.9 million, respectively. The increase in the environmental remediation obligations compared to September 30, 2015 is attributable to the environmental obligations assumed in the Breeze-Eastern acquisition as disclosed in Note 2, “Acquisitions.”

#### 15. CAPITAL STOCK

Authorized capital stock of TD Group consists of 224,400,000 shares of \$.01 par value common stock and 149,600,000 shares of \$.01 par value preferred stock. The total number of shares of common stock issued at September 30, 2016 and 2015 was 55,767,767 and 55,100,094, respectively. The total number of shares held in treasury at September 30, 2016 and 2015 were 2,433,035 and 1,415,100, respectively. There were no shares of preferred stock outstanding at September 30, 2016 and 2015. The terms of the preferred stock have not been established.

On October 22, 2014, our Board of Directors authorized a stock repurchase program permitting us to repurchase a portion of our outstanding shares not to exceed \$300 million in the aggregate. During fiscal 2016, until the \$300 million program was replaced on January 21, 2016, the Company had repurchased 452,187 shares of its common stock at a gross cost of approximately \$98.7 million at the weighted-average price per share of \$218.23.

On January 21, 2016, our Board of Directors authorized a stock repurchase program replacing the \$300 million program with a repurchase program permitting us to repurchase a portion of our outstanding shares not to exceed \$450 million in the aggregate. For the fiscal year ended September 30, 2016, the Company had repurchased 563,200 shares of its common stock at a gross cost of approximately \$109.1 million at the weighted-average price per share of \$193.67 under the \$450 million stock repurchase program.

## 16. SEGMENTS

The Company's businesses are organized and managed in three reporting segments: Power & Control, Airframe and Non-aviation.

The Power & Control segment includes operations that primarily develop, produce and market systems and components that predominately provide power to or control power of the aircraft utilizing electronic, fluid, power and mechanical motion control technologies. Major product offerings include mechanical/electro-mechanical actuators and controls, ignition systems and engine technology, specialized pumps and valves, power conditioning devices, specialized AC/DC electric motors and generators, databus and power controls, high performance hoists, winches and lifting devices and cargo loading and handling systems. Primary customers of this segment are engine and power system and subsystem suppliers, airlines, third party maintenance suppliers, military buying agencies and repair depots. Products are sold in the original equipment and aftermarket market channels.

The Airframe segment includes operations that primarily develop, produce and market systems and components that are used in non-power airframe applications utilizing airframe and cabin structure technologies. Major product offerings include engineered latching and locking devices, rods and locking devices, engineered connectors and elastomers, cockpit security components and systems, aircraft audio systems, specialized lavatory components, seat belts and safety restraints, engineered interior surfaces and related components, lighting and control technology, military personnel parachutes and cargo delivery systems. Primary customers of this segment are airframe manufacturers and cabin system suppliers and subsystem suppliers, airlines, third party maintenance suppliers, military buying agencies and repair depots. Products are sold in the original equipment and aftermarket market channels.

The Non-aviation segment includes operations that primarily develop, produce and market products for non-aviation markets. Major product offerings include seat belts and safety restraints for ground transportation applications, mechanical/electro-mechanical actuators and controls for space applications, and refueling systems for heavy equipment used in mining, construction and other industries. Primary customers of this segment are off-road vehicle suppliers and subsystem suppliers, child restraint system suppliers, satellite and space system suppliers and manufacturers of heavy equipment used in mining, construction and other industries.

The primary measurement used by management to review and assess the operating performance of each segment is EBITDA As Defined. The Company defines EBITDA As Defined as earnings before interest, taxes, depreciation and amortization plus certain non-operating items recorded as corporate expenses including refinancing costs, acquisition-related costs, transaction-related costs and non-cash compensation charges incurred in connection with the Company's stock option plans. Acquisition-related costs represent accounting adjustments to inventory associated with acquisitions of businesses and product lines that were charged to cost of sales when the inventory was sold; costs incurred to integrate acquired businesses and product lines into the Company's operations, facility relocation costs and other acquisition-related costs; transaction related costs comprising deal fees; legal, financial and tax diligence expenses and valuation costs that are required to be expensed as incurred and other acquisition accounting adjustments.

EBITDA As Defined is not a measurement of financial performance under GAAP. Although the Company uses EBITDA As Defined to assess the performance of its business and for various other purposes, the use of this non-GAAP financial measure as an analytical tool has limitations, and it should not be considered in isolation or as a substitute for analysis of the Company's results of operations as reported in accordance with GAAP.

The Company's segments are reported on the same basis used internally for evaluating performance and for allocating resources. The accounting policies for each segment are the same as those described in the summary of significant accounting policies in the Company's consolidated financial statements. Intersegment sales and transfers are recorded at values based on market prices, which creates intercompany profit on intersegment sales or transfers that is eliminated in consolidation. Intersegment sales were insignificant for the periods presented below. Certain corporate-level expenses are allocated to the operating segments.

The following table presents net sales by reportable segment (in thousands):

	Fiscal Years Ended September 30,		
	2016	2015	2014
<b>Net sales to external customers</b>			
Power & Control	\$ 1,621,741	\$ 1,330,135	\$ 1,161,808
Airframe	1,447,894	1,280,706	1,115,594
Non-aviation	101,776	96,274	95,504
	<u>\$ 3,171,411</u>	<u>\$ 2,707,115</u>	<u>\$ 2,372,906</u>

The following table reconciles EBITDA As Defined by segment to consolidated income before income taxes (in thousands):

	Fiscal Years Ended September 30,		
	2016	2015	2014
<b>EBITDA As Defined</b>			
Power & Control	\$ 787,418	\$ 653,050	\$ 585,671
Airframe	709,858	585,472	494,076
Non-aviation	28,228	22,406	18,479
<b>Total segment EBITDA As Defined</b>	<u>1,525,504</u>	<u>1,260,928</u>	<u>1,098,226</u>
Unallocated corporate expenses	30,308	27,274	25,019
<b>Total Company EBITDA As Defined</b>	<u>1,495,196</u>	<u>1,233,654</u>	<u>1,073,207</u>
Depreciation and amortization	121,670	93,663	96,385
Interest expense, net	483,850	418,785	347,688
Acquisition-related costs	57,699	36,205	21,160
Stock compensation expense	48,306	31,500	26,332
Refinancing costs	15,794	18,393	131,622
Other, net	(239)	(1,716)	1,510
<b>Income before income taxes</b>	<u>\$ 768,116</u>	<u>\$ 636,824</u>	<u>\$ 448,510</u>

The following table presents capital expenditures and depreciation and amortization by segment (in thousands):

	Fiscal Years Ended September 30,		
	2016	2015	2014
<b>Capital expenditures</b>			
Power & Control	\$ 25,120	\$ 24,664	\$ 13,882
Airframe	16,498	28,086	17,096
Non-aviation	2,169	1,889	3,097
Corporate	195	232	71
	<u>\$ 43,982</u>	<u>\$ 54,871</u>	<u>\$ 34,146</u>
<b>Depreciation and amortization</b>			
Power & Control	\$ 65,488	\$ 39,336	\$ 40,401
Airframe	52,198	50,355	50,311
Non-aviation	2,860	2,846	4,579
Corporate	1,124	1,126	1,094
	<u>\$ 121,670</u>	<u>\$ 93,663</u>	<u>\$ 96,385</u>

The following table presents total assets by segment (in thousands):

	September 30, 2016	September 30, 2015
<b>Total assets</b>		
Power & Control	\$ 5,184,303	\$ 3,550,866
Airframe	3,922,532	3,922,439
Non-aviation	131,319	129,935
Corporate	1,488,123	700,695
	<u>\$ 10,726,277</u>	<u>\$ 8,303,935</u>

The Company's sales principally originate from the United States, and the Company's long-lived assets are principally located in the United States.

## 17. STOCK-BASED COMPENSATION

The Company's stock compensation plans are designed to assist the Company in attracting, retaining, motivating and rewarding key employees, directors or consultants, and promoting the creation of long-term value for stockholders by closely aligning the interests of these individuals with those of the Company's stockholders. The Company's stock compensation plans provide for the granting of stock options, restricted stock and other stock-based incentives.

Non-cash stock compensation expense recognized by the Company during the years ended September 30, 2016, 2015 and 2014 was \$48.3 million, \$31.5 million and \$26.3 million, respectively.

During the year ended September 30, 2014, the Company recorded additional stock compensation expense of \$6.4 million representing costs that would have been recognized over the remaining requisite service period of the award for options granted in fiscal 2012 that became fully vested under the market sweep provision, as discussed further below.

The weighted-average grant date fair value of options granted during the fiscal years ended September 30, 2016, 2015 and 2014 was \$57.47, \$65.57 and \$57.53, respectively.

Compensation expense is recognized based upon probability assessments of awards that are expected to vest in future periods. Such probability assessments are subject to revision and, therefore, unrecognized compensation expense is subject to future changes in estimate. As of September 30, 2016, there was approximately \$52.2 million of total unrecognized compensation expense related to non-vested awards expected to vest, which is expected to be recognized over a weighted-average period of 2.6 years.

The fair value of the Company's employee stock options was estimated at the date of grant using a Black-Scholes-Merton option-pricing model with the following weighted average assumptions for all options granted during the fiscal years ended:

	Fiscal Years Ended September 30,		
	2016	2015	2014
Risk-free interest rate	1.33% to 1.73%	1.33% to 1.64%	1.71% to 2.03%
Expected life of options	5 years	5 years	6 years
Expected dividend yield of stock	—	—	—
Expected volatility of stock	25%	35%	35%

The risk-free interest rate is based upon the Treasury bond rates as of the grant date. The average expected life of stock-based awards is based on the Company's actual historical exercise experience. Expected volatility of stock was calculated using a rate based upon the historical volatility of both TransDigm's common stock and the stock of publicly traded companies in the Company's peer group in the aerospace industry. Notwithstanding the special cash dividends declared and paid in June 2014 and November 2016, the Company historically has not declared and paid regular cash dividends and does not anticipate declaring and paying regular cash dividends in future periods; thus, no dividend rate assumption is used.

The total fair value of options vested during fiscal years ended September 30, 2016, 2015 and 2014 was \$36.6 million, \$14.9 million and \$23.6 million, respectively.

### 2014 Stock Option Plan

In July 2014, the Board of Directors of TD Group adopted a new stock option plan, which was subsequently approved by stockholders on October 2, 2014. The 2014 stock option plan permits TD Group to award our key employees, directors or consultants stock options. The total number of shares of TD Group common stock reserved for issuance or delivery under the

2014 stock option plan is 5,000,000, subject to adjustment in the event of any stock dividend or split, reorganization, recapitalization, merger, share exchange or any other similar corporate transaction or event.

**Performance Vested Stock Options**—All of the options granted through September 30, 2016 under the 2014 stock option plan have been pursuant to an equity incentive program adopted by the Company in 2008. Under the 2008 equity incentive program, all of the options granted will vest based on the Company’s achievement of established operating performance goals. The following table summarizes the activity, pricing and other information for the Company’s performance vested stock-based award activity during the fiscal year ended September 30, 2016:

	Number of Options	Weighted-Average Exercise Price Per Option	Weighted-Average Remaining Contractual Term	Aggregate Intrinsic Value
Outstanding at September 30, 2015	—	\$ —		
Granted	147,935	228.73		
Exercised	—	—		
Forfeited	—	—		
Expired	—	—		
Outstanding at September 30, 2016	147,935	\$ 228.73	9.3 years	\$ 8,933,125
Expected to vest	72,636	\$ 229.19	9.3 years	\$ 4,352,809
Exercisable at September 30, 2016	32,195	\$ 229.79	9.3 years	\$ 1,910,135

At September 30, 2016, there were 4,852,065 remaining shares available for award under TD Group’s 2014 stock option plan.

#### 2006 Stock Incentive Plan

In conjunction with the consummation of the Company’s initial public offering, a 2006 stock incentive plan was adopted by TD Group. In July 2008 and March 2011, the plan was amended to increase the number of shares available for issuance thereunder. TD Group has reserved 8,119,668 shares of its common stock for issuance to key employees, directors or consultants under the plan. Awards under the plan may be in the form of options, restricted stock or other stock-based awards. Options granted under the plan will expire no later than the tenth anniversary of the applicable date of grant of the options, and will have an exercise price of not less than the fair market value of our common stock on the date of grant. Restricted stock granted under the plan vests over three years.

In connection with the \$12.85 per share special cash dividend paid in November 2012, in order to take into account the earlier return of capital, the TD Group compensation committee adjusted the market-based vesting features in outstanding options pursuant to the authority granted to the committee under the TD Group stock incentive plan. Under this “market sweep” provision, unvested options granted prior to October 1, 2011 would accelerate and become fully vested if the closing price of the Company’s common stock exceeded \$147.15 per share (originally \$160 per share) on any 60 trading days during any consecutive 12-month period commencing March 1, 2013.

In addition, in connection with the \$12.85 per share special cash dividend paid in November 2012 and the \$22.00 per share special cash dividend paid in July 2013, in order to take into account the earlier return of capital, the TD Group compensation committee adjusted the market-based vesting features in outstanding options pursuant to the authority granted to the committee under the TD Group stock incentive plan. Under this “market sweep” provision, unvested options granted in fiscal 2012 would accelerate and become fully vested if the closing price of the Company’s common stock exceeded \$135.15 per share (originally \$170 per share) on any 60 trading days during any consecutive 12-month period commencing two years from the date of grant. Options granted since fiscal 2012 do not contain such accelerated vesting provision.

The Company also granted 17,700 restricted stock units with a weighted-average grant date fair value of \$189.97 during the fiscal year ended September 30, 2015. During the fiscal year ended September 30, 2016, 5,900 restricted stock units vested, and 11,800 restricted stock units were outstanding at September 30, 2016.

**Performance Vested Stock Options**—All of the options granted through September 30, 2016 under the 2006 stock incentive plan have been pursuant to an equity incentive program adopted by the Company in 2008. Under the 2008 equity incentive program, all of the options granted will vest based on the Company’s achievement of established operating performance goals. The following table summarizes the activity, pricing and other information for the Company’s performance vested stock-based award activity during the fiscal year ended September 30, 2016:

	Number of Options	Weighted-Average Exercise Price Per Option	Weighted-Average Remaining Contractual Term	Aggregate Intrinsic Value
Outstanding at September 30, 2015	5,265,543	\$ 110.82		
Granted	745,844	225.66		
Exercised	(634,536)	46.06		
Forfeited	(136,980)	179.82		
Expired	—	—		
Outstanding at September 30, 2016	5,239,871	\$ 133.20	6.1 years	\$ 816,998,251
Expected to vest	1,479,304	\$ 170.03	7.6 years	\$ 176,171,905
Exercisable at September 30, 2016	3,110,037	\$ 95.45	4.8 years	\$ 602,359,974

The 2006 stock incentive plan expired on March 14, 2016 and no further shares were granted under the plan thereafter.

### 2003 Stock Option Plan

Certain executives and key employees of the Company were granted stock options under TD Group's 2003 stock option plan. Upon the closing of the acquisition of the Company by Warburg Pincus in 2003, certain employees rolled over certain then-existing options to purchase shares of common stock of TransDigm Holdings. These employees were granted rollover options to purchase an aggregate of 3,870,152 shares of common stock of TD Group (after giving effect to the 149.60 for 1.00 stock split effected on March 14, 2006). All rollover options granted were fully vested on the date of grant. In addition to shares of common stock reserved for issuance upon the exercise of rollover options, an aggregate of 5,469,301 shares of TD Group's common stock were reserved for issuance upon the exercise of new management options. In general, approximately 20% of all new management options vested based on employment service or a change in control. These time vested options had a graded vesting schedule of up to four years. Approximately 80% of all new management options vested (i) based upon the satisfaction of specified performance criteria, which is annual and cumulative EBITDA As Defined targets through 2008, or (ii) upon the occurrence of a change in control if the Investor Group (defined as Warburg Pincus and the other initial investors in TD Group) received a minimum specified rate of return. Unless terminated earlier, the options expire ten years from the date of grant.

TD Group reserved a total of 9,339,453 shares of its common stock for issuance to the Company's employees under the plan, which had all been issued as of September 30, 2013.

**Time Vested Stock Options**—During the fiscal year ended September 30, 2016, 5,486 of the Company's time vested stock-based options, with a weighted-average exercise price per option of \$39.88, were exercised. There are no remaining options outstanding as of September 30, 2016.

**Performance Vested Stock Options**—The following table summarizes the activity, pricing and other information for the Company's performance vested stock-based award activity during the fiscal year ended September 30, 2016:

	Number of Options	Weighted-Average Exercise Price Per Option	Weighted-Average Remaining Contractual Term	Aggregate Intrinsic Value
Outstanding at September 30, 2015	113,016	\$ 98.11		
Granted	—	—		
Exercised	(26,687)	24.99		
Outstanding at September 30, 2016	86,329	\$ 120.72	5.6 years	\$ 14,538,166
Exercisable at September 30, 2016	47,414	\$ 113.02	5.1 years	\$ 8,349,513

The total intrinsic value of time, performance and rollover options exercised during the fiscal years ended September 30, 2016, 2015 and 2014 was \$133.2 million, \$206.9 million and \$88.7 million, respectively.

In addition to shares issued pursuant to options exercised, during the fiscal year ended September 30, 2016, 964 shares of common stock were issued with a weighted-average grant date fair value of \$247.51 as payment to directors in lieu of cash.

### Dividend Equivalent Plans

Pursuant to the Third Amended and Restated TransDigm Group Incorporated 2003 Stock Option Plan Dividend Equivalent Plan, the Second Amended and Restated TransDigm Group Incorporated 2006 Stock Incentive Plan Dividend Equivalent Plan and the 2014 Stock Option Plan Dividend Equivalent Plan, all of the options granted under the 2003 stock option plan, the 2006 stock incentive plan and the 2014 stock option plan are entitled to certain dividend equivalent payments in the event of the declaration of a dividend by the Company.



Dividend equivalent payments on vested options (including those options that became fully vested under market sweep provisions thereof) were \$3.0 million, \$3.4 million and \$126.6 million during the years ended September 30, 2016, 2015 and 2014, respectively. In connection with the special dividend declared in October 2016, we will pay approximately \$100 million in dividend equivalent payments in the first quarter of fiscal 2017.

## 18. LEASES

TransDigm leases certain manufacturing facilities, offices, equipment and vehicles. Such leases, some of which are noncancelable and, in many cases, include renewals, expire at various dates. Rental expense during the years ended September 30, 2016, 2015 and 2014 was \$18.3 million, \$14.0 million and \$12.1 million, respectively.

Future minimum rental commitments at September 30, 2016 under operating leases having initial or remaining non-cancelable lease terms exceeding one year are \$14.5 million in fiscal 2017, \$14.0 million in fiscal 2018, \$11.6 million in fiscal 2019, \$9.9 million in fiscal 2020, \$10.8 million in fiscal 2021, and \$30.2 million thereafter.

## 19. FAIR VALUE MEASUREMENTS

The following tables present our assets and liabilities that are measured at fair value on a recurring basis and are categorized using the fair value hierarchy. The fair value hierarchy has three levels based on the reliability of the inputs used to determine fair value. Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities. Level 2 inputs are quoted prices for similar assets and liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active, and inputs (other than quoted prices) that are observable for the asset or liability, either directly or indirectly. Level 3 inputs are unobservable inputs for the asset or liability. A financial asset or liability's classification within the hierarchy is determined based on the lowest level input that is significant to the fair value measurement.

The following summarizes the carrying amounts and fair values of financial instruments (in thousands):

	Level	September 30, 2016		September 30, 2015	
		Carrying Amount	Fair Value	Carrying Amount	Fair Value
<b>Assets:</b>					
Cash and cash equivalents	1	\$ 1,586,994	\$ 1,586,994	\$ 714,033	\$ 714,033
Interest rate cap agreements <sup>(1)</sup>	2	4,232	4,232	8,180	8,180
<b>Liabilities:</b>					
Interest rate swap agreements <sup>(2)</sup>	2	29,191	29,191	24,770	24,770
Interest rate swap agreements <sup>(3)</sup>	2	53,824	53,824	49,730	49,730
Short-term borrowings - trade receivable securitization facility <sup>(4)</sup>	1	199,771	199,771	199,792	199,792
<i>Long-term debt, including current portion:</i>					
Term loans <sup>(4)</sup>	2	5,234,607	5,284,037	4,333,682	4,344,000
2020 Notes <sup>(4)</sup>	1	545,701	566,500	544,645	520,000
2021 Notes <sup>(4)</sup>	1	496,859	530,000	496,211	524,000
2022 Notes <sup>(4)</sup>	1	1,141,619	1,214,688	1,140,179	1,081,000
2024 Notes <sup>(4)</sup>	1	1,190,782	1,266,000	1,189,606	1,119,000
2025 Notes <sup>(4)</sup>	1	445,856	469,125	445,487	417,000
2026 Notes <sup>(4)</sup>	1	940,412	985,625	—	—

(1) Included in other non-current assets on the consolidated balance sheet.

(2) Included in accrued liabilities on the consolidated balance sheet.

(3) Included in other non-current liabilities on the consolidated balance sheet.

(4) The carrying amount of the debt instrument is presented net of the debt issuance costs in connection with the Company's adoption of ASU 2015-03. Refer to Note 11, "Debt," for gross carrying amounts.

The Company values its financial instruments using an industry standard market approach, in which prices and other relevant information is generated by market transactions involving identical or comparable assets or liabilities. No financial instruments were recognized using unobservable inputs.

Interest rate swaps were measured at fair value using quoted market prices for the swap interest rate indexes over the term of the swap discounted to present value versus the fixed rate of the contract. The interest rate caps were measured at fair value using implied volatility rates of each individual caplet and the yield curve for the related periods. The estimated fair value of the Company's term loans was based on information provided by the agent under the Company's senior secured credit facility. The estimated fair values of the Company's notes were based upon quoted market prices. There has not been any impact to the fair value of derivative liabilities due to the Company's own credit risk. Similarly, there has not been any impact to the fair value of derivative assets based on the Company's evaluation of counterparties' credit risks.

The fair value of cash and cash equivalents, trade accounts receivable-net and accounts payable approximated book value due to the short-term nature of these instruments at September 30, 2016 and 2015.

## 20. DERIVATIVES AND HEDGING ACTIVITIES

The Company is exposed to, among other things, the impact of changes in interest rates in the normal course of business. The Company's risk management program is designed to manage the exposure and volatility arising from these risks, and utilizes derivative financial instruments to offset a portion of these risks. The Company uses derivative financial instruments only to the extent necessary to hedge identified business risks and does not enter into such transactions for trading purposes. The Company generally does not require collateral or other security with counterparties to these financial instruments and is therefore subject to credit risk in the event of nonperformance; however, the Company monitors credit risk and currently does not anticipate nonperformance by other parties. The Company has agreements with each of its swap and cap counterparties that contain a provision whereby if the Company defaults on the credit facility the Company could also be declared in default on its swaps and caps, resulting in an acceleration of payment under the swaps and caps.

Interest rate swap and cap agreements are used to manage interest rate risk associated with floating-rate borrowings under our credit facilities. The interest rate swap and cap agreements utilized by the Company effectively modify the Company's exposure to interest rate risk by converting a portion of the Company's floating-rate debt to a fixed rate basis through the expiration date of the interest rate swap and cap agreements, thereby reducing the impact of interest rate changes on future interest expense. These agreements involve the receipt of floating rate amounts in exchange for fixed rate interest payments over the term of the agreements without an exchange of the underlying principal amount. These derivative instruments that qualify as effective cash flow hedges under GAAP. For these cash flow hedges, the effective portion of the gain or loss from the financial instruments was initially reported as a component of accumulated other comprehensive income (loss) in stockholders' deficit and subsequently reclassified into earnings in the same line as the hedged item in the same period or periods during which the hedged item affected earnings.

The following table summarizes the Company's interest rate swap agreements:

Aggregate Notional Amount (in millions)	Start Date	End Date	Related Debt	Conversion of Related Variable Rate Debt to Fixed Rate of:
\$1,000	6/28/2019	6/30/2021	Tranche F Term Loans	4.8% (1.8% plus the 3% margin percentage)
\$750	3/31/2016	6/30/2020	Tranche D Term Loans	5.8% (2.8% plus the 3% margin percentage)
\$1,000	9/30/2014	6/30/2019	Tranche C Term Loans	5.4% (2.4% plus the 3% margin percentage)

The following table summarizes the Company's interest rate cap agreements:

Aggregate Notional Amount (in millions)	Start Date	End Date	Related Debt	Offsets Variable Rate Debt Attributable to Fluctuations Above:
\$400	6/30/2016	6/30/2021	Tranche F Term Loans	Three month LIBO rate of 2.0%
\$750	9/30/2015	6/30/2020	Tranche E Term Loans	Three month LIBO rate of 2.5%

In connection with the refinancing of the 2011 Term Loans, the Company no longer designated the interest rate swap agreements relating to the \$353 million aggregate notional amount as cash flow hedges for accounting purposes. Accordingly, amounts previously recorded as a component of accumulated other comprehensive loss in stockholder's deficit amortized into earnings totaled \$3.2 million and \$4.2 million for the fiscal years ended September 30, 2015 and 2014. There was no remaining amortization for these dedesignated swap agreements as of September 30, 2015.

Based on the fair value amounts of the interest rate swap and cap agreements determined as of September 30, 2016, the estimated net amount of existing gains and losses and caplet amortization expected to be reclassified into interest expense within the next twelve months is approximately \$33.9 million.

Effective September 30, 2016, the Company redesignated the existing interest rate cap agreements based on the expected probable cash flows associated with the 2016 Term Loans and 2015 Term Loans in consideration of the Company's ability to select one month, two month, three month, or six month LIBO rate set forth in the Credit Agreement. Accordingly, the amount recorded as a component of accumulated other comprehensive loss in stockholders' deficit related to these redesignated interest rate cap hedges of approximately \$14.6 million as of September 30, 2016 will be amortized into earnings based on the remaining term of the related interest rate cap agreements.

## 21. ACCUMULATED OTHER COMPREHENSIVE LOSS

The following table presents the components of "Accumulated other comprehensive loss" ("AOCI") in the consolidated balance sheet, net of taxes, for the years ended September 30, 2016, 2015 and 2014 (in thousands):

	Unrealized (loss) gain on derivatives designated and qualifying as cash flow hedges (2)	Defined benefit pension plan activity (3)	Currency translation adjustment	Total
Balance at September 30, 2014	\$ (15,888)	\$ (6,227)	\$ (3,056)	\$ (25,171)
Other comprehensive loss before reclassification	(38,754)	(5,786)	(29,448)	(73,988)
Amounts reclassified from AOCI related to interest rate swap agreements (1)	3,150	—	—	3,150
Net current-period other comprehensive loss	\$ (35,604)	\$ (5,786)	\$ (29,448)	\$ (70,838)
Balance at September 30, 2015	\$ (51,492)	\$ (12,013)	\$ (32,504)	\$ (96,009)
Other comprehensive loss before reclassification	(9,664)	(12,284)	(31,846)	(53,794)
Amounts reclassified from AOCI related to interest rate swap agreements (1)	16	—	—	16
Net current-period other comprehensive loss	\$ (9,648)	\$ (12,284)	\$ (31,846)	\$ (53,778)
Balance at September 30, 2016	\$ (61,140)	\$ (24,297)	\$ (64,350)	\$ (149,787)

(1) This component of AOCI is included in interest expense (see Note 20, "Derivatives and Hedging Activities," for additional details).

(2) Unrealized loss represents interest rate swap and cap agreements, net of taxes of \$6,868, \$20,716 and \$3,704 for the years ended September 30, 2016, 2015 and 2014, respectively.

(3) Defined benefit pension plan activity represent pension liability adjustments, net of tax of \$6,017, \$3,299 and \$2,818, respectively.

## 22. QUARTERLY FINANCIAL DATA (UNAUDITED)

	First Quarter Ended January 2, 2016	Second Quarter Ended April 2, 2016	Third Quarter Ended July 2, 2016	Fourth Quarter Ended September 30, 2016
(in thousands, except per share amounts)				
<b>Year Ended September 30, 2016</b>				
Net sales <sup>(2)</sup>	\$ 701,695	\$ 796,801	\$ 797,692	\$ 875,223
Gross profit <sup>(2)</sup>	374,567	425,662	443,515	484,319
Net income <sup>(2)(3)</sup>	129,441	141,683	160,622	154,668
Net earnings per share—basic and diluted <sup>(1)(3)</sup>	\$ 2.23	\$ 2.52	\$ 2.88	\$ 2.77

	First Quarter Ended December 27, 2014	Second Quarter Ended March 28, 2015	Third Quarter Ended June 27, 2015	Fourth Quarter Ended September 30, 2015
(in thousands, except per share amounts)				
<b>Year Ended September 30, 2015</b>				
Net sales <sup>(2)</sup>	\$ 586,898	\$ 619,030	\$ 691,395	\$ 809,792
Gross profit <sup>(2)</sup>	321,173	341,617	359,455	427,600
Net income <sup>(2)</sup>	95,533	110,894	99,112	141,673
Net earnings (loss) per share—basic and diluted <sup>(1)</sup>	\$ 1.63	\$ 1.96	\$ 1.75	\$ 2.50

(1) The sum of the earnings per share for the four quarters in a year does not necessarily equal the total year earnings per share.

(2) The Company’s operating results include the results of operations of acquisitions from the effective date of each acquisition. See Note 2 “Acquisitions,” for additional details.

(3) The Company adopted ASU 2016-09, “Improvements to Employee Share-Based Payment Accounting,” in the fourth quarter of fiscal 2016. Therefore, effective October 1, 2015, quarterly net income and net earnings per share - basic and diluted were adjusted in accordance with ASU 2016-09 and prior periods have not been adjusted. Refer to Note 4, “Recent Accounting Pronouncements,” and Note 13, “Income Taxes” for additional information.

### 23. SUBSEQUENT EVENTS

On October 14, 2016, the Company entered into an Incremental Term Loan Assumption Agreement (the “Assumption Agreement”) with Credit Suisse AG, as administrative agent and collateral agent, and as a lender, in connection with the 2016 Term Loans. The Assumption Agreement, among other things, provides for (i) additional tranche F term loans in an aggregate principal amount equal to \$650 million, which were fully drawn on October 14, 2016 (the “Initial Additional Tranche F Term Loans”), and (ii) additional delayed draw tranche F term loans in an aggregate principal amount not to exceed \$500 million, which were fully drawn on October 27, 2016 (the “Delayed Draw Additional Tranche F Term Loans”, and together with the Initial Additional Tranche F Term Loans, the “Additional Tranche F Term Loans”), the proceeds of which will be used to repurchase its 2021 Notes in the first quarter of fiscal 2017. The terms and conditions that apply to the Additional Tranche F Term Loans are substantially the same as the terms and conditions that apply to the Tranche F Term Loans under the 2016 Term Loans immediately prior to the Assumption Agreement.

On October 14, 2016, the Company announced that TD Group’s Board of Directors authorized and declared a special cash dividend of \$24.00 on each outstanding share of common stock and cash dividend equivalent payments on options granted under its stock option plans. The record date for the special dividend was October 24, 2016, and the payment date for the dividend was November 1, 2016. The total cash payment related to the special dividend and dividend equivalent payments in the first quarter of fiscal 2017 will be approximately \$1,400 million.

### 24. SUPPLEMENTAL GUARANTOR INFORMATION

TransDigm’s 2020 Notes, 2021 Notes, 2022 Notes, 2024 Notes, 2025 Notes and 2026 Notes are jointly and severally guaranteed, on a senior subordinated basis, by TD Group and TransDigm Inc.’s 100% Domestic Restricted Subsidiaries, as defined in the Indentures. The following supplemental condensed consolidating financial information presents, in separate columns, the balance sheets of the Company as of September 30, 2016 and September 30, 2015 and its statements of income and cash flows for the fiscal years ended September 30, 2016, 2015 and 2014 for (i) TransDigm Group on a parent only basis with its investment in subsidiaries recorded under the equity method, (ii) TransDigm Inc. including its directly owned operations and non-operating entities, (iii) the Subsidiary Guarantors on a combined basis, (iv) Non-Guarantor Subsidiaries and (v) the Company on a consolidated basis.

Separate financial statements of TransDigm Inc. are not presented because TransDigm Inc.’s 2020 Notes, 2021 Notes, 2022 Notes, 2024 Notes, 2025 Notes and 2026 Notes are fully and unconditionally guaranteed on a senior subordinated basis by TD Group and all existing 100% owned domestic subsidiaries of TransDigm Inc. and because TD Group has no significant operations or assets separate from its investment in TransDigm Inc.

**TRANSDIGM GROUP INCORPORATED**  
**CONDENSED CONSOLIDATING BALANCE SHEET**  
**AS OF SEPTEMBER 30, 2016**  
**(Amounts in Thousands)**

	TransDigm Group	TransDigm Inc.	Subsidiary Guarantors	Non-Guarantor Subsidiaries	Eliminations	Total Consolidated
<b>ASSETS</b>						
<b>CURRENT ASSETS:</b>						
Cash and cash equivalents	\$ 13,560	\$ 1,421,251	\$ 8,808	\$ 143,375	\$ —	\$ 1,586,994
Trade accounts receivable—Net	—	—	26,210	561,124	(10,995)	576,339
Inventories—Net	—	42,309	586,648	96,229	(1,175)	724,011
Prepaid expenses and other	—	8,209	27,381	7,763	—	43,353
Total current assets	13,560	1,471,769	649,047	808,491	(12,170)	2,930,697
INVESTMENT IN SUBSIDIARIES AND INTERCOMPANY BALANCES	(665,050)	9,671,019	6,182,809	861,647	(16,050,425)	—
PROPERTY, PLANT AND EQUIPMENT—Net	—	15,991	250,544	44,045	—	310,580
GOODWILL	—	68,593	4,952,950	657,909	—	5,679,452
OTHER INTANGIBLE ASSETS—Net	—	24,801	1,483,285	256,257	—	1,764,343
OTHER	—	10,319	24,063	6,823	—	41,205
<b>TOTAL ASSETS</b>	<b>\$ (651,490)</b>	<b>\$ 11,262,492</b>	<b>\$ 13,542,698</b>	<b>\$ 2,635,172</b>	<b>\$ (16,062,595)</b>	<b>\$ 10,726,277</b>
<b>LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)</b>						
<b>CURRENT LIABILITIES:</b>						
Current portion of long-term debt	\$ —	\$ 52,645	\$ —	\$ —	\$ —	\$ 52,645
Short-term borrowings—trade receivable securitization facility	—	—	—	199,771	—	199,771
Accounts payable	—	15,347	120,455	31,560	(11,287)	156,075
Accrued liabilities	—	159,909	123,646	60,557	—	344,112
Total current liabilities	—	227,901	244,101	291,888	(11,287)	752,603
LONG-TERM DEBT	—	9,943,191	—	—	—	9,943,191
DEFERRED INCOME TAXES	—	434,013	(544)	58,786	—	492,255
OTHER NON-CURRENT LIABILITIES	—	82,677	70,124	36,917	—	189,718
Total liabilities	—	10,687,782	313,681	387,591	(11,287)	11,377,767
STOCKHOLDERS' (DEFICIT) EQUITY	(651,490)	574,710	13,229,017	2,247,581	(16,051,308)	(651,490)
<b>TOTAL LIABILITIES AND STOCKHOLDERS' (DEFICIT) EQUITY</b>	<b>\$ (651,490)</b>	<b>\$ 11,262,492</b>	<b>\$ 13,542,698</b>	<b>\$ 2,635,172</b>	<b>\$ (16,062,595)</b>	<b>\$ 10,726,277</b>

**TRANSDIGM GROUP INCORPORATED**  
**CONDENSED CONSOLIDATING BALANCE SHEET**  
**AS OF SEPTEMBER 30, 2015**  
(Amounts in Thousands)

	TransDigm Group	TransDigm Inc.	Subsidiary Guarantors	Non-Guarantor Subsidiaries	Eliminations	Total Consolidated
<b>ASSETS</b>						
<b>CURRENT ASSETS:</b>						
Cash and cash equivalents	\$ 1,500	\$ 659,365	\$ 7,911	\$ 45,257	\$ —	\$ 714,033
Trade accounts receivable—Net	—	—	48,369	413,380	(17,677)	444,072
Inventories—Net	—	34,457	461,103	96,541	(700)	591,401
Prepaid expenses and other	—	2,804	15,096	19,181	—	37,081
Total current assets	1,500	696,626	532,479	574,359	(18,377)	1,786,587
INVESTMENT IN SUBSIDIARIES AND INTERCOMPANY BALANCES	(1,039,806)	6,963,034	4,501,501	(33,208)	(10,391,521)	—
PROPERTY, PLANT AND EQUIPMENT—Net	—	16,565	201,499	42,620	—	260,684
GOODWILL	—	65,886	3,984,199	636,135	—	4,686,220
OTHER INTANGIBLE ASSETS—Net	—	38,621	1,236,376	266,315	(1,461)	1,539,851
OTHER	—	13,712	14,528	2,353	—	30,593
<b>TOTAL ASSETS</b>	<b>\$ (1,038,306)</b>	<b>\$ 7,794,444</b>	<b>\$ 10,470,582</b>	<b>\$ 1,488,574</b>	<b>\$ (10,411,359)</b>	<b>\$ 8,303,935</b>
<b>LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)</b>						
<b>CURRENT LIABILITIES:</b>						
Current portion of long-term debt	\$ —	\$ 43,427	\$ —	\$ —	\$ —	\$ 43,427
Short-term borrowings—trade receivable securitization facility	—	—	—	199,792	—	199,792
Accounts payable	—	16,826	102,968	37,556	(14,528)	142,822
Accrued liabilities	—	97,045	117,243	57,265	—	271,553
Total current liabilities	—	157,298	220,211	294,613	(14,528)	657,594
LONG-TERM DEBT	—	8,106,383	—	—	—	8,106,383
DEFERRED INCOME TAXES	—	334,848	2,410	67,739	—	404,997
OTHER NON-CURRENT LIABILITIES	—	99,743	35,222	38,302	—	173,267
Total liabilities	—	8,698,272	257,843	400,654	(14,528)	9,342,241
STOCKHOLDERS' (DEFICIT) EQUITY	(1,038,306)	(903,828)	10,212,739	1,087,920	(10,396,831)	(1,038,306)
<b>TOTAL LIABILITIES AND STOCKHOLDERS' (DEFICIT) EQUITY</b>	<b>\$ (1,038,306)</b>	<b>\$ 7,794,444</b>	<b>\$ 10,470,582</b>	<b>\$ 1,488,574</b>	<b>\$ (10,411,359)</b>	<b>\$ 8,303,935</b>

**TRANSDIGM GROUP INCORPORATED**  
**CONDENSED CONSOLIDATING STATEMENT OF INCOME AND COMPREHENSIVE INCOME**  
**FOR THE YEAR ENDED SEPTEMBER 30, 2016**  
(Amounts in thousands)

	TransDigm Group	TransDigm Inc.	Subsidiary Guarantors	Non-Guarantor Subsidiaries	Eliminations	Total Consolidated
NET SALES	\$ —	\$ 132,407	\$ 2,580,091	\$ 486,198	\$ (27,285)	\$ 3,171,411
COST OF SALES	—	75,521	1,105,893	289,219	(27,285)	1,443,348
GROSS PROFIT	—	56,886	1,474,198	196,979	—	1,728,063
SELLING AND ADMINISTRATIVE EXPENSES	—	114,546	210,209	58,103	—	382,858
AMORTIZATION OF INTANGIBLE ASSETS	—	684	65,299	11,462	—	77,445
(LOSS) INCOME FROM OPERATIONS	—	(58,344)	1,198,690	127,414	—	1,267,760
INTEREST EXPENSE (INCOME)—Net	—	490,974	259	(7,383)	—	483,850
REFINANCING COSTS	—	15,794	—	—	—	15,794
EQUITY IN INCOME OF SUBSIDIARIES	(586,414)	(1,044,371)	—	—	1,630,785	—
INCOME BEFORE INCOME TAXES	586,414	479,259	1,198,431	134,797	(1,630,785)	768,116
INCOME TAX (BENEFIT) PROVISION	—	(107,155)	285,887	2,970	—	181,702
NET INCOME	\$ 586,414	\$ 586,414	\$ 912,544	\$ 131,827	\$ (1,630,785)	\$ 586,414
OTHER COMPREHENSIVE (LOSS) INCOME, NET OF TAX	(53,778)	6,381	(9,598)	(39,461)	42,678	(53,778)
TOTAL COMPREHENSIVE INCOME	\$ 532,636	\$ 592,795	\$ 902,946	\$ 92,366	\$ (1,588,107)	\$ 532,636

**TRANSDIGM GROUP INCORPORATED**  
**CONDENSED CONSOLIDATING STATEMENT OF INCOME AND COMPREHENSIVE INCOME**  
**FOR THE YEAR ENDED SEPTEMBER 30, 2015**  
(Amounts in Thousands)

	TransDigm Group	TransDigm Inc.	Subsidiary Guarantors	Non-Guarantor Subsidiaries	Eliminations	Total Consolidated
NET SALES	\$ —	\$ 131,378	\$ 2,262,842	\$ 324,675	\$ (11,780)	\$ 2,707,115
COST OF SALES	—	79,174	973,908	215,968	(11,780)	1,257,270
GROSS PROFIT	—	52,204	1,288,934	108,707	—	1,449,845
SELLING AND ADMINISTRATIVE EXPENSES	—	72,792	197,914	50,918	—	321,624
AMORTIZATION OF INTANGIBLE ASSETS	—	1,392	45,337	7,490	—	54,219
(LOSS) INCOME FROM OPERATIONS	—	(21,980)	1,045,683	50,299	—	1,074,002
INTEREST EXPENSE (INCOME)—Net	—	430,224	(487)	(10,952)	—	418,785
REFINANCING COSTS	—	18,393	—	—	—	18,393
EQUITY IN INCOME OF SUBSIDIARIES	(447,212)	(773,510)	—	—	1,220,722	—
INCOME BEFORE INCOME TAXES	447,212	302,913	1,046,170	61,251	(1,220,722)	636,824
INCOME TAX (BENEFIT) PROVISION	—	(144,299)	315,017	18,894	—	189,612
NET INCOME	\$ 447,212	\$ 447,212	\$ 731,153	\$ 42,357	\$ (1,220,722)	\$ 447,212
OTHER COMPREHENSIVE (LOSS) INCOME, NET OF TAX	(70,838)	(55,338)	770	(29,147)	83,715	(70,838)
TOTAL COMPREHENSIVE INCOME	\$ 376,374	\$ 391,874	\$ 731,923	\$ 13,210	\$ (1,137,007)	\$ 376,374



**TRANSDIGM GROUP INCORPORATED**  
**CONDENSED CONSOLIDATING STATEMENT OF INCOME AND COMPREHENSIVE INCOME**  
**FOR THE YEAR ENDED SEPTEMBER 30, 2014**  
(Amounts in Thousands)

	TransDigm Group	TransDigm Inc.	Subsidiary Guarantors	Non-Guarantor Subsidiaries	Eliminations	Total Consolidated
NET SALES	\$ —	\$ 125,389	\$ 2,051,541	\$ 206,952	\$ (10,976)	\$ 2,372,906
COST OF SALES	—	74,312	895,041	146,878	(11,199)	1,105,032
GROSS PROFIT	—	51,077	1,156,500	60,074	223	1,267,874
SELLING AND ADMINISTRATIVE EXPENSES	—	65,272	176,516	34,658	—	276,446
AMORTIZATION OF INTANGIBLE ASSETS	—	1,388	55,730	6,490	—	63,608
(LOSS) INCOME FROM OPERATIONS	—	(15,583)	924,254	18,926	223	927,820
INTEREST EXPENSE (INCOME)—Net	—	349,289	(36)	(1,565)	—	347,688
REFINANCING COSTS	—	131,622	—	—	—	131,622
EQUITY IN INCOME OF SUBSIDIARIES	(306,910)	(639,539)	—	—	946,449	—
INCOME BEFORE INCOME TAXES	306,910	143,045	924,290	20,491	(946,226)	448,510
INCOME TAX (BENEFIT) PROVISION	—	(163,865)	293,961	11,504	—	141,600
NET INCOME	\$ 306,910	\$ 306,910	\$ 630,329	\$ 8,987	\$ (946,226)	\$ 306,910
OTHER COMPREHENSIVE LOSS, NET OF TAX	(18,655)	(3,951)	(1,520)	(13,184)	18,655	(18,655)
TOTAL COMPREHENSIVE INCOME (LOSS)	\$ 288,255	\$ 302,959	\$ 628,809	\$ (4,197)	\$ (927,571)	\$ 288,255

**TRANSDIGM GROUP INCORPORATED**  
**CONDENSED CONSOLIDATING STATEMENT OF CASH FLOWS**  
**FOR THE YEAR ENDED SEPTEMBER 30, 2016**  
(Amounts in thousands)

	TransDigm Group	TransDigm Inc.	Subsidiary Guarantors	Non-Guarantor Subsidiaries	Eliminations	Total Consolidated
NET CASH (USED IN) PROVIDED BY OPERATING ACTIVITIES	\$ —	\$ (245,299)	\$ 944,152	\$ (25,496)	\$ (4,427)	\$ 668,930
INVESTING ACTIVITIES:						
Capital expenditures	—	(1,716)	(32,608)	(9,658)	—	(43,982)
Acquisition of business, net of cash acquired	—	(1,399,064)	—	—	—	(1,399,064)
Net cash used in investing activities	—	(1,400,780)	(32,608)	(9,658)	—	(1,443,046)
FINANCING ACTIVITIES:						
Intercompany activities	192,703	580,487	(910,647)	133,030	4,427	—
Proceeds from exercise of stock options	30,112	—	—	—	—	30,112
Dividends paid	(3,000)	—	—	—	—	(3,000)
Treasury stock purchased	(207,755)	—	—	—	—	(207,755)
Proceeds from 2016 Term Loans, net	—	1,725,883	—	—	—	1,725,883
Repayment on 2016 Term Loans	—	(4,351)	—	—	—	(4,351)
Repayment on term loans	—	(830,058)	—	—	—	(830,058)
Proceeds from 2026 Notes, net	—	939,584	—	—	—	939,584
Other	—	(3,580)	—	—	—	(3,580)
Net cash provided by (used in) financing activities	12,060	2,407,965	(910,647)	133,030	4,427	1,646,835
EFFECT OF EXCHANGE RATE CHANGES ON CASH AND CASH EQUIVALENTS	—	—	—	242	—	242
NET INCREASE IN CASH AND CASH EQUIVALENTS	12,060	761,886	897	98,118	—	872,961
CASH AND CASH EQUIVALENTS, BEGINNING OF PERIOD	1,500	659,365	7,911	45,257	—	714,033
CASH AND CASH EQUIVALENTS, END OF PERIOD	\$ 13,560	\$ 1,421,251	\$ 8,808	\$ 143,375	\$ —	\$ 1,586,994

**TRANSDIGM GROUP INCORPORATED**  
**CONDENSED CONSOLIDATING STATEMENT OF CASH FLOWS**  
**FOR THE YEAR ENDED SEPTEMBER 30, 2015**  
(Amounts in Thousands)

	TransDigm Group	TransDigm Inc.	Subsidiary Guarantors	Non-Guarantor Subsidiaries	Eliminations	Total Consolidated
NET CASH (USED IN) PROVIDED BY OPERATING ACTIVITIES	\$ —	\$ (298,797)	\$ 734,130	\$ 82,451	\$ 3,154	\$ 520,938
INVESTING ACTIVITIES:						
Capital expenditures	—	(2,871)	(44,564)	(7,436)	—	(54,871)
Acquisition of business, net of cash acquired	—	(1,624,278)	—	—	—	(1,624,278)
Net cash used in investing activities	—	(1,627,149)	(44,564)	(7,436)	—	(1,679,149)
FINANCING ACTIVITIES:						
Intercompany activities	(120,862)	867,990	(685,448)	(58,526)	(3,154)	—
Excess tax benefits related to share-based payment arrangements	61,965	—	—	—	—	61,965
Proceeds from exercise of stock options	61,674	—	—	—	—	61,674
Dividends paid	(3,365)	—	—	—	—	(3,365)
Proceeds from term loans, net	—	1,515,954	—	—	—	1,515,954
Proceeds from Revolving Commitment	—	75,250	—	—	—	75,250
Repayment on term loans	—	(1,025,318)	—	—	—	(1,025,318)
Repayment on Revolving Commitment	—	(75,250)	—	—	—	(75,250)
Proceeds from senior subordinated notes, net	—	445,303	—	—	—	445,303
Other	—	(1,266)	—	—	—	(1,266)
Net cash (used in) provided by financing activities	(588)	1,802,663	(685,448)	(58,526)	(3,154)	1,054,947
EFFECT OF EXCHANGE RATE CHANGES ON CASH AND CASH EQUIVALENTS	—	—	—	(2,251)	—	(2,251)
NET (DECREASE) INCREASE IN CASH AND CASH EQUIVALENTS	(588)	(123,283)	4,118	14,238	—	(105,515)
CASH AND CASH EQUIVALENTS, BEGINNING OF PERIOD	2,088	782,648	3,793	31,019	—	819,548
CASH AND CASH EQUIVALENTS, END OF PERIOD	\$ 1,500	\$ 659,365	\$ 7,911	\$ 45,257	\$ —	\$ 714,033

**TRANSDIGM GROUP INCORPORATED**  
**CONDENSED CONSOLIDATING STATEMENT OF CASH FLOWS**  
**FOR THE YEAR ENDED SEPTEMBER 30, 2014**  
(Amounts in Thousands)

	TransDigm Group	TransDigm Inc.	Subsidiary Guarantors	Non-Guarantor Subsidiaries	Eliminations	Total Consolidated
NET CASH (USED IN) PROVIDED BY OPERATING ACTIVITIES	\$ —	\$ (123,074)	\$ 952,855	\$ (303,763)	\$ 15,204	\$ 541,222
INVESTING ACTIVITIES:						
Capital expenditures	—	(2,666)	(28,927)	(2,553)	—	(34,146)
Acquisition of businesses, net of cash acquired	—	(311,872)	—	—	—	(311,872)
Cash proceeds from sale of investment	—	—	16,380	—	—	16,380
Net cash used in investing activities	—	(314,538)	(12,547)	(2,553)	—	(329,638)
FINANCING ACTIVITIES:						
Intercompany activities	1,533,571	(694,208)	(944,415)	120,256	(15,204)	—
Excess tax benefits related to share-based payment arrangements	51,709	—	—	—	—	51,709
Proceeds from exercise of stock options	26,738	—	—	—	—	26,738
Dividends paid	(1,451,391)	—	—	—	—	(1,451,391)
Treasury stock purchased	(159,852)	—	—	—	—	(159,852)
Proceeds from term loans, net	—	805,360	—	—	—	805,360
Repayment on term loans	—	(33,107)	—	—	—	(33,107)
Proceeds from senior subordinated notes, net	—	2,326,393	—	—	—	2,326,393
Repurchase of 2018 Notes	—	(1,721,014)	—	—	—	(1,721,014)
Proceeds from trade receivable securitization facility, net	—	—	—	199,164	—	199,164
Other	—	(27)	—	—	—	(27)
Net cash provided by (used in) financing activities	775	683,397	(944,415)	319,420	(15,204)	43,973
EFFECT OF EXCHANGE RATE CHANGES ON CASH AND CASH EQUIVALENTS	—	—	—	(749)	—	(749)
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	775	245,785	(4,107)	12,355	—	254,808
CASH AND CASH EQUIVALENTS, BEGINNING OF PERIOD	1,313	536,863	7,900	18,664	—	564,740
CASH AND CASH EQUIVALENTS, END OF PERIOD	\$ 2,088	\$ 782,648	\$ 3,793	\$ 31,019	\$ —	\$ 819,548

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**TRANSDIGM GROUP INCORPORATED**  
**VALUATION AND QUALIFYING ACCOUNTS**  
**FOR THE YEARS ENDED SEPTEMBER 30, 2016, 2015, AND 2014**  
**(Amounts in Thousands)**

Column A	Column B	Column C		Column D	Column E
Description	Balance at Beginning of Period	Additions		Deductions from Reserve <sup>(1)</sup>	Balance at End of Period
		Charged to Costs and Expenses	Acquisitions		
<b>Year Ended September 30, 2016</b>					
Allowance for doubtful accounts	\$ 3,801	\$ 1,043	\$ 724	\$ (1,154)	\$ 4,414
Reserve for excess and obsolete inventory	64,158	26,407	—	(10,526)	80,039
Valuation allowance for deferred tax assets	17,645	9,641	—	—	27,286
<b>Year Ended September 30, 2015</b>					
Allowance for doubtful accounts	\$ 4,091	\$ (376)	\$ 271	\$ (185)	\$ 3,801
Reserve for excess and obsolete inventory	55,586	15,554	—	(6,982)	64,158
Valuation allowance for deferred tax assets	24,267	(6,622)	—	—	17,645
<b>Year Ended September 30, 2014</b>					
Allowance for doubtful accounts	\$ 5,485	\$ 682	\$ 81	\$ (2,157)	\$ 4,091
Reserve for excess and obsolete inventory	45,369	16,027	—	(5,810)	55,586
Valuation allowance for deferred tax assets	26,125	(4,494)	2,636	—	24,267

(1) The amounts in this column represent charge-offs net of recoveries and the impact of foreign currency translation adjustments.

**EXHIBIT INDEX**  
**TO FORM 10-K FOR THE YEAR ENDED SEPTEMBER 30, 2016**

<b>EXHIBIT NO.</b>	<b>DESCRIPTION</b>
3.65	Certificate of Incorporation, filed October 24, 1977, of Transformer Technology Corporation (now known as Beta Transformer Technology Corporation)
3.66	Certificate of Amendment of Certificate of Incorporation, filed December 1, 1977, of Transformer Technology Corporation (now known as Beta Transformer Technology Corporation)
3.67	Bylaws of Transformer Technology Corporation (now known as Beta Transformer Technology Corporation)
3.68	Amended and Restated Limited Liability Company Agreement, filed July 7, 2016, of Beta Transformer Technology LLC
3.89	Certificate of Incorporation, filed October 23, 1970, of ILC Data Devices Corporation (now known as Data Device Corporation)
3.90	Certificate of Amendment of Certificate of Incorporation, filed April 23, 1999, of ILC Data Devices Corporation (now known as Data Device Corporation)
3.91	Certificate of Amendment of Certificate of Incorporation, filed July 14, 2014, of Data Device Corporation
3.92	Bylaws of ILC Data Devices Corporation, (now known as Data Device Corporation)
3.105	Amended and Restated Certificate of Incorporation, filed June 23, 2016, of ILC Holdings, Inc.
3.106	Bylaws of ILC Holdings, Inc.
3.107	Certificate of Formation, filed August 12, 2008, of New ILC Mergeco, LLC (now known as ILC Industries, LLC)
3.108	Certificate of Amendment to Certificate of Formation, filed December 3, 2010, of New ILC Mergeco, LLC (now known as ILC Industries, LLC)
3.109	Limited Liability Company Agreement of ILC Industries, LLC
3.110	Certificate of Formation, filed January 26, 2007, of Johnson Liverpool LLC
3.111	Amended and Restated Limited Liability Company Agreement of Johnson Liverpool LLC
3.144	Certificate of Incorporation, filed August 22, 1986, of Tactair Fluid Controls, Inc.
3.145	Certificate of Amendment of Certificate of Incorporation of Tactair Fluid Controls, Inc.
3.146	Bylaws of Tactair Fluid Controls, Inc.
3.157	Restated Certificate of Incorporation, filed November 10, 2016, of Young & Franklin, Inc.
3.158	Bylaws of Young & Franklin, Inc.
3.159	Certificate of Formation, filed May 30, 2013, of Beta Transformer Technology LLC
4.9	Seventh Supplemental Indenture, dated as of April 1, 2016, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee
4.10	Eight Supplemental Indenture, dated as of July 8, 2016, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee
4.11	Ninth Supplemental Indenture, dated as of October 28, 2016, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee
4.17	Fifth Supplemental Indenture, dated as of April 1, 2016, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee
4.18	Sixth Supplemental Indenture, dated as of July 8, 2016, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee
4.19	Seventh Supplemental Indenture, dated as of October 28, 2016, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee

<b>EXHIBIT NO.</b>	<b>DESCRIPTION</b>
4.24	Fourth Supplemental Indenture, dated as of April 1, 2016, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee
4.25	Fifth Supplemental Indenture, dated as of July 8, 2016, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee
4.26	Sixth Supplemental Indenture, dated as of October 28, 2016, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee
4.31	Fourth Supplemental Indenture, dated as of April 1, 2016, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee
4.32	Fifth Supplemental Indenture, dated as of July 8, 2016, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee
4.33	Sixth Supplemental Indenture, dated as of October 28, 2016, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee
4.37	Third Supplemental Indenture, dated as of April 1, 2016, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee
4.38	Fourth Supplemental Indenture, dated as of July 8, 2016, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee
4.39	Fifth Supplemental Indenture, dated as of October 28, 2016, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee
4.41	First Supplemental Indenture, dated as of July 8, 2016, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee
4.42	Second Supplemental Indenture, dated as of October 28, 2016, among TransDigm Inc., TransDigm Group Incorporated, the guarantors listed on the signature pages thereto and The Bank of New York Mellon Trust Company, N.A., as Trustee
12.1	Statement of Computation of Ratio of Earnings to Fixed Charges
21.1	Subsidiaries of TransDigm Group Incorporated
23.1	Consent of Independent Registered Public Accounting Firm
31.1	Certification by Principal Executive Officer of TransDigm Group Incorporated pursuant to Rule 13a-14(a) or 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification by Principal Financial Officer of TransDigm Group Incorporated pursuant to Rule 13a-14(a) or 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification by Principal Executive Officer of TransDigm Group Incorporated pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2	Certification by Principal Financial Officer of TransDigm Group Incorporated pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101	Financial Statements and Notes to Consolidated Financial Statements formatted in XBRL.

## CERTIFICATE OF INCORPORATION

OF

## TRANSFORMER TECHNOLOGY CORPORATION

Under Section 402 of the Business Corporation Law

The undersigned, being a natural person of at least 18 years of age and acting as the incorporator of the corporation hereby being formed under the Business Corporation Law, certifies that:

FIRST: The name of the corporation is TRANSFORMER TECHNOLOGY CORPORATION.

SECOND: The corporation is formed for the following purpose or purposes:

To manufacture, purchase, assemble, import, sell, lease, install, service, export and otherwise deal in transformers, transducers and other electrical equipment, machinery and components, and

(a) To carry on a general mercantile, industrial, investing, and trading business in all its branches; to devise, invent, manufacture, fabricate, assemble, install, service, maintain, alter, buy, sell, import, license as licensor or licensee, lease as lessor or lessee, distribute, job, enter into, negotiate, execute, acquire, and assign contracts in respect of, acquire, receive, grant, and assign license arrangements, options, franchises and other rights in respect of, and generally deal in and with, at wholesale and retail, as principal, and as sales, business, special, or general agent, representative, broker, factor, merchant, distributor, jobber, advisor, and in any other lawful capacity, goods, wares, merchandise, commodities, and unimproved, improved, finished, processed, and other real, personal, and mixed property of any and all kinds, together with the components, resultants, and by-product thereof; to acquire by purchase or otherwise own, hold, lease, mortgage, sell, or otherwise dispose of, erect, construct, make, alter, enlarge, improve, and to aid or subscribe toward the construction, acquisition or improvement of any factories, shops, storehouses, buildings, and commercial and retail establishments of every character, including all equipment, fixtures, machinery, implements and supplies necessary, or incidental to, or connected with, any of the purposes or business of the corporation; and generally to perform any and all acts connected therewith or arising therefrom or incidental thereto, and all acts proper or necessary for the purpose of the business.

(b) To engage generally in the real estate business as principal, agent, broker, and in any lawful capacity, and generally to take, lease, purchase, or otherwise acquire, and to own, use, hold, sell, convey, exchange, lease, mortgage, work, clear, improve, develop, divide, and otherwise handle, manage, operate, deal in and dispose of



real estate, real property, lands, multiple-dwelling structures, houses, buildings and other works and any interest or right therein; to take, lease, purchase or otherwise acquire, and to own, use, hold, sell, convey, exchange, hire, lease, pledge, mortgage, and otherwise handle, and deal in and dispose of, as principal, agent, broker, and in any lawful capacity, such personal property, chattels, chattels real, rights, easements, privileges, choses in action, notes, bonds, mortgages and securities as may lawfully be acquired, held, or disposed of; and to acquire, purchase, sell, assign, transfer, dispose of, and generally deal in and with, as principal, agent, broker, and in any lawful capacity, mortgages and other interests in real, personal, and mixed properties; to carry on a general construction, contracting, building, and realty management business as principal, agent, representative, contractor, subcontractor, and in any other lawful capacity.

(c) To apply for, register, obtain, purchase, lease, take licenses in respect of or otherwise acquire, and to hold, own, use, operate, develop, enjoy, turn to account, grant licenses and immunities in respect of, manufacture under and to introduce, sell, assign, mortgage, pledge or otherwise dispose of, and, in any manner deal with and contract with reference to:

(i) inventions, devices, formulae, processes and any improvements and modifications thereof;

(ii) letters patent, patent rights, patented processes, copyrights, designs, and similar rights, trademarks, trade symbols and other indications of origin and ownership granted by or recognized under the laws of the United States of America or of any state or subdivision thereof, or of any foreign country or subdivision thereof, and all rights connected therewith or appertaining thereunto;

(iii) franchises, licenses, grants and concessions.

(d) To have, in furtherance of the corporate purposes, all of the powers conferred upon corporations organized under the Business Corporation Law subject to any limitations thereof contained in this certificate of incorporation or in the laws of the State of New York.

THIRD: The office of the corporation is to be located in the Town of Brookhaven, county of Suffolk, State of New York.

FOURTH: The aggregate number of shares which the corporation shall have authority to issue is five hundred (500), all of which are of a par value of one dollar (\$1.00) each, and all of which are of the same class.

FIFTH: The Secretary of State is designated as the agent of the corporation upon whom process against the corporation may be served. The post office address within the State of New York to which the Secretary of State shall mail a copy of any process against the corporation served upon him is c/o The Prentice-Hall Corporation System, Inc., 521 Fifth Avenue, New York, New York 10017.

SIXTH: The duration of the corporation is to be perpetual.

SEVENTH: Any action required or permitted to be taken by the Board of Directors of the corporation or of any committee thereof may be taken without a meeting if all members of the Board of Directors or of any committee thereof consent in writing to the adoption of a resolution authorizing the action.

Any one or more members of the Board of Directors of the corporation or of any committee thereof may participate in a meeting of said Board or of any such committee by means of a conference telephone or similar communications equipment allowing all persons participating in the meeting to hear each other at the same time.

EIGHTH: Except as may otherwise be specifically provided in this certificate of incorporation, no provision of this certificate of incorporation is intended by the corporation to be construed as limiting, prohibiting, denying, or abrogating any of the general or specific powers or rights conferred under the Business Corporation Law upon the corporation, upon its shareholders, bondholders, and security holders, and upon its directors, officers, and other corporate personnel, including, in particular, the power of the corporation to furnish indemnification to directors and officers in the capacities defined and prescribed by the Business corporation Law and the defined and prescribed rights of said persons to indemnification as the same are conferred by the Business corporation Law.

NINTH: The accounting period which the corporation intends to establish as its first calendar or fiscal year for reporting the Franchise Tax on business corporations imposed by Article 9-A of the Tax Law of the State of New York is from the date of its incorporation through December 31, 1977.

Subscribed and affirmed by me as true under the penalties of perjury on October 13, 1977.

/s/ Frances A. Wrigley

Frances A. Wrigley, Incorporator

521 Fifth Avenue

New York, New York 10017

CERTIFICATE OF AMENDMENT OF CERTIFICATE OF INCORPORATION  
OF  
TRANSFORMER TECHNOLOGY CORPORATION

UNDER SECTION 805 OF THE BUSINESS CORPORATION LAW

We the undersigned, the Vice President and the Secretary of Transformer Technology Corporation, hereby certify:

FIRST: The name of the corporation is TRANSFORMER TECHNOLOGY CORPORATION.

SECOND: The certificate of incorporation of the corporation was filed by the Department of State, Albany 11 New York on October 24, 1977.

THIRD: Paragraph FIRST of the Certificate of Incorporation which sets forth the corporate name is amended to read as follows:

"FIRST: The name of the corporation is BETA TRANSFORMER TECHNOLOGY CORPORATION."

FOURTH: The foregoing amendment of the Certificate of Incorporation of the corporation was authorized by the unanimous written consent of the holders of all the outstanding shares of the corporation entitled to vote thereon.

IN WITNESS WHEREOF, the underside have signed this certificate the 18th day of November 1977.

/s/ Elanor Hesler      Elanor Hesler      Vice President  
Signature              Name

/s/ Doris B. Carlisle      Doris B. Carlisle      Secretary  
Signature              Name

CERTIFICATE OF AMENDMENT OF CERTIFICATE OF INCORPORATION  
OF  
TRANSFORMER TECHNOLOGY CORPORATION  
UNDER SECTION 805 OF THE BUSINESS CORPORATION LAW

We the undersigned, the Vice President and the  
Secretary of Transformer Technology Corporation, hereby  
certify:

FIRST: The name of the corporation is TRANSFORMER  
TECHNOLOGY CORPORATION.

SECOND: The certificate of incorporation of the  
corporation was filed by the Department of State, Albany,  
New York on October 24, 1977.

THIRD: Paragraph FIRST of the certificate of  
incorporation which sets forth the corporate name is amended  
to read as follows:

"FIRST: The name of the corporation is BETA  
TRANSFORMER TECHNOLOGY CORPORATION."

FOURTH: The foregoing amendment of the Certificate of Incorporation  
of the corporation was authorized by the unanimous written consent of the holders  
of all the outstanding shares of the corporation entitled to vote thereon.

IN WITNESS WHEREOF, the undersigned have signed this certificate  
the 18th day of November 1977.

*Eleanor Hesler*  
Signature

Eleanor Hesler  
Name Vice President

*Doris B. Carlisle*  
Signature

Doris Carlisle  
Name Secretary



BY-LAWS

OF

TRANSFORMER TECHNOLOGY CORPORATION

ARTICLE I - OFFICES

The office of the Corporation shall be located in the City, County and State designated in the Certificate of Incorporation. The Corporation may also maintain offices at such other places within or without the United States as the Board of Directors may, from time to time, determine.

ARTICLE II - MEETING OF SHAREHOLDERS

Section 1 - Annual Meetings:

The annual meeting of the shareholders of the Corporation shall be held within five months after the close of the fiscal year of the Corporation, for the purpose of electing directors, and transacting such other business as may properly come before the meeting.

Section 2- Special Meetings:

Special meetings of the shareholders may be called at any time by the Board of Directors or by the President, and shall be called by the President or the Secretary at the written request of the holders of ten per cent (10%) of the shares then outstanding and entitled to vote thereat, or as otherwise required under the provisions of the Business Corporation Law.

Section 3 - Place of Meetings:

All meetings of shareholders shall be held at the principal office of the Corporation, or at such other places within or without the State of New York as shall be designated in the notices or waivers of notice of such meetings.

Section 4 - Notice of Meetings:

(a) Written notice of each meeting of shareholders, whether annual

or special, stating the time when and place where it is to be held, shall be served either personally or by mail, not less than ten or more than fifty days before the meeting, upon each shareholder of record entitled to vote at such meeting, and to any other shareholder to whom the giving of notice may be required by law. Notice of a special meeting shall also state the purpose or purposes for which the meeting is called, and shall indicate that it is being issued by, or at the direction of, the person or persons calling the meeting. If, at any meeting, action is proposed to be taken that would, if taken, entitle shareholders to receive payment for their shares pursuant to the Business Corporation Law, the notice of such meeting shall include a statement of that purpose and to that effect. If mailed, such notice shall be directed to each such shareholder at his address, as it appears on the records of the shareholders of the Corporation, unless he shall have previously filed with the Secretary of the Corporation a written request that notices intended for him be mailed to some other address, in which case, it shall be mailed to the address designated in such request.

(b) Notice of any meeting need not be given to any person who may become a shareholder of record after the mailing of such notice and prior to the meeting, or to any shareholder who attends such meeting, in person or by proxy, or to any shareholder who, in person or by proxy, submits a signed waiver of notice either before or after such meeting. Notice of any adjourned meeting of shareholders need not be given, unless otherwise required by statute.

Section 5 - Quorum:

(a) Except as otherwise provided herein, or by statute, or in the Certificate of Incorporation (such Certificate and any amendments thereof being hereinafter collectively referred to as the "Certificate of Incorporation"), at all meetings of shareholders of the Corporation, the presence at the commencement of such meetings in person or by proxy of shareholders holding of record a majority of the total number of shares of the Corporation then issued and outstanding and entitled to vote, shall be necessary and sufficient to constitute a quorum for the transaction of any business. The withdrawal of any shareholder after the commencement of a meeting shall have no effect on the existence of a quorum, after a quorum has been established at such meeting.

(b) Despite the absence of a quorum at any annual or special meeting of shareholders, the shareholders, by a majority of the votes cast by the holders of shares entitled to vote thereon, may adjourn the meeting. At any such adjourned meeting at which a quorum is

present, any business may be transacted which might have been transacted at the meeting as originally called if a quorum had been present.

Section 6 - Voting:

(a) Except as otherwise provided by statute or by the Certificate of Incorporation, any corporate action, other than the election of directors to be taken by vote of the shareholders, shall be authorized by a majority of votes cast at a meeting of shareholders by the holders of shares entitled to vote thereon.

(b) Except as otherwise provided by statute or by the Certificate of Incorporation, at each meeting of shareholders, each holder of record of stock of the Corporation entitled to vote thereat, shall be entitled to one vote for each share of stock registered in his name on the books of the Corporation.

(c) Each shareholder entitled to vote or to express consent or dissent without a meeting, may do so by proxy; provided, however, that the instrument authorizing such proxy to act shall have been executed in writing by the shareholder himself, or by his attorney-in-fact thereunto duly authorized in writing. No proxy shall be valid after the expiration of eleven months from the date of its execution, unless the persons executing it shall have specified therein the length of time it is to continue in force. Such instrument shall be exhibited to the Secretary at the meeting and shall be filed with the records of the Corporation.

(d) Any resolution in writing, signed by all of the shareholders entitled to vote thereon, shall be and constitute action by such shareholders to the effect therein expressed, with the same force and effect as if the same had been duly passed by unanimous vote at a duly called meeting of shareholders and such resolution so signed shall be inserted in the Minute Book of the Corporation under its proper date.

ARTICLE III - BOARD OF DIRECTORS

Section 1 - Number, Election and Term of Office:

(a) The number of the directors of the Corporation shall be three (3), unless and until otherwise determined by vote of a majority of the entire Board of Directors. The number of Directors shall not be less than three, unless all of the outstanding shares are owned beneficially and of record by less than three shareholders, in which event the number of directors shall not be less than the number of shareholders.



(b) Except as may otherwise be provided herein or in the Certificate of Incorporation, the members of the Board of Directors of the Corporation, who need not be shareholders, shall be elected by a majority of the votes cast at a meeting of shareholders, by the holders of shares entitled to vote in the election.

(c) Each director shall hold office until the annual meeting of the shareholders next succeeding his election, and until his successor is elected and qualified, or until his prior death, resignation or removal.

Section 2 - Duties and Powers:

The Board of Directors shall be responsible for the control and management of the affairs, property and interests of the Corporation, and may exercise all powers of the Corporation, except as are in the Certificate of Incorporation or by statute expressly conferred upon or reserved to the shareholders.

Section 3 - Annual and Regular Meetings; Notice:

(a) A regular annual meeting of the Board of Directors shall be held immediately following the annual meeting of the shareholders, at the place of such annual meeting of shareholders.

(b) The Board of Directors, from time to time, may provide by resolution for the holding of other regular meetings of the Board of Directors, and may fix the time and place thereof.

(c) Notice of any regular meeting of the Board of Directors shall not be required to be given and, if given, need not specify the purpose of the meeting; provided, however, that in case the Board of Directors shall fix or change the time or place of any regular meeting, notice of such action shall be given to each director who shall not have been present at the meeting at which such action was taken within the time limited, and in the manner set forth in paragraph (b) of Section 4 of this Article III, with respect to special meetings, unless such notice shall be waived in the manner set forth in paragraph (c) of such Section 4.

Section 4 - Special Meetings; Notice:

(a) Special meetings of the Board of Directors shall be held whenever called by the President or by one of the directors, at such time and place as may be specified in the respective notices or waivers of notice thereof.

(b) Notice of special meetings shall be mailed directly to each director, addressed to him at his residence or usual place of business, at least two (2) days before the day on which the meeting is to be held, or shall be sent to him at such place by telegram, radio or cable, or shall be delivered to him personally or given to him orally, not later than the day before the day on which the meeting is to be held. A notice, or waiver of notice, except as required by Section 8 of this Article III, need not specify the purpose of the meeting.

(c) Notice of any special meeting shall not be required to be given to any director who shall attend such meeting without protesting prior thereto or at its commencement, the lack of notice to him, or who submits a signed waiver of notice, whether before or after the meeting. Notice of any adjourned meeting shall not be required to be given.

Section 5- Chairman:

At all meetings of the Board of Directors, the Chairman of the Board, if any and if present, shall preside. If there shall be no Chairman, or he shall be absent, then the President shall preside, and in his absence, a Chairman chosen by the Directors shall preside.

Section 6 - Quorum and Adjournments:

(a) At all meetings of the Board of Directors, the presence of a majority of the entire Board shall be necessary and sufficient to constitute a quorum for the transaction of business, except as otherwise provided by law, by the Certificate of Incorporation, or by these By-Laws. Participation of any one or more members of the Board by means of a conference telephone or similar communications equipment, allowing all persons participating in the meeting to hear each other at the same time, shall constitute presence in person at any such meeting.

(b) A majority of the directors present at the time and place of any regular or special meeting, although less than a quorum, may adjourn the same from time to time without notice, until a quorum shall be present.

Section 7 - Manner of Acting:

(a) At all meetings of the Board of Directors, each director present shall have one vote, irrespective of the number of shares of stock, if any, which he may hold.

(b) Except as otherwise provided by statute, by the Certificate of Incorporation, or these By-Laws, the action of a majority of the directors present at any meeting at which a quorum is present shall be the act of the Board of Directors. Any action authorized, in writing, by all of the directors entitled to vote thereon and filed with the minutes of the Corporation shall be the act of the Board of Directors with the same force and effect as if the same had been passed by unanimous vote at a duly called meeting of the Board.

Section 8 - Vacancies:

Any vacancy in the Board of Directors occurring by reason of an increase in the number of directors, or by reason of the death, resignation, disqualification, removal ( unless a vacancy created by the removal of a director by the shareholders shall be filled by the shareholders at the meeting at which the removal was effected) or inability to act of any director, or otherwise, shall be filled for the unexpired portion of the term by a majority vote of the remaining directors, though less than a quorum, at any regular meeting or special meeting of the Board of Directors called for that purpose.

Section 9 - Resignation:

Any director may resign at any time by giving written notice to the Board of Directors, the President or the Secretary of the Corporation. Unless otherwise specified in such written notice, such resignation shall take effect upon receipt thereof by the Board of Directors or such officer, and the acceptance of such resignation shall not be necessary to make it effective.

Section 10 - Removal:

Any director may be removed with or without cause at any time by the shareholders, at a special meeting of the shareholders called for that purpose, and may be removed for cause by action of the Board.

Section 11 - Salary:

No stated salary shall be paid to directors, as such, for their services, but by resolution of the Board of Directors a fixed sum and expenses of attendance, if any, may be allowed for attendance at each regular or special meeting of the Board; provided, however, that nothing herein contained shall be construed to preclude any director from serving the Corporation in any other capacity and receiving compensation therefor.

Section 12 - Contracts:

(a) No contract or other transaction between this Corporation and any other Corporation shall be impaired, affected or invalidated nor shall any director be liable in any way by reason of the fact that any one or more of the directors of this Corporation is or are interested in, or is a director or officer, or are directors or officers of such other Corporation, provided that such facts are disclosed or made known to the Board of Directors.

(b) Any director, personally and individually, may be a party to or may be interested in any contract or transaction of this Corporation, and no director shall be liable in any way by reason of such interest, provided that the fact of such interest be disclosed or made known to the Board of Directors, and provided that the Board of Directors shall authorize, approve or ratify such contract or transaction by the vote (not counting the vote of any such director) of a majority of a quorum, notwithstanding the presence of any such director at the meeting at which such action is taken. Such director or directors may be counted in determining the presence of a quorum at such meeting. This Section shall not be construed to impair or invalidate or in any way affect any contract or other transaction which would otherwise be valid under the law (common, statutory or otherwise) applicable thereto.

Section 13 - Committees:

The Board of Directors, by resolution adopted by a majority of the entire Board, may from time to time designate from among its members an executive committee and such other committees, and alternate members thereof, as they deem desirable, each consisting of three or more members, with such powers and authority ( to the extent permitted by law) as may be provided in such resolution. Each such committee shall serve at the pleasure of the Board. At all meetings of a committee, the presence of all members of the committee shall be necessary to constitute a quorum for the transaction of business, except as otherwise provided by said resolution or by these By-laws. Participation of any one or more members of the committee by means of a conference telephone or similar communications equipment allowing all persons participating in the meeting to hear each other at the same time, shall constitute presence in person at any such meeting. Any action authorized in writing by all of the members of a committee entitled to vote thereon and filed with the minutes of the Committee shall be the act of the committee with the same force and effect as if the same had been passed by unanimous vote at a duly called meeting of the committee.

ARTICLE IV - OFFICERS

Section 1 - Number, Qualifications, Election  
a.1 Term of Office:

(a) The officers of the Corporation shall consist of a President, a Secretary, a Treasurer, and such other officers, including a Chairman of the Board of Directors, and one or more Vice Presidents, as the Board of Directors may from time to time

deem advisable. Any officer other than the Chairman of the Board of Directors may be, but is not required to be, a director of the Corporation. Any two or more offices may be held by the same person.

(b) The officers of the Corporation shall be elected by the Board of Directors at the regular annual meeting of the Board following the annual meeting of shareholders.

(c) Each officer shall hold office until the annual meeting of the Board of Directors next succeeding his election, and until his successor shall have been elected and qualified, or until his death, resignation or removal.

Section 2 - Resignation:

Any officer may resign at any time by giving written notice of such resignation to the Board of Directors, or to the President or the Secretary of the Corporation. Unless otherwise specified in such written notice, such resignation shall take effect upon receipt thereof by the Board of Directors or by such officer, and the acceptance of such resignation shall not be necessary to make it effective.

Section 3 - Removal:

Any officer may be removed, either with or without cause, and a successor elected by the Board at any time.

Section 4 - Vacancies:

A vacancy in any office by reason of death, resignation, inability to act, disqualification, or any other cause, may at any time be filled for the unexpired portion of the term by the Board of Directors.

Section 5 - Duties of Officers:

Officers of the Corporation shall, unless otherwise provided by the Board of Directors, each have such powers and duties as generally pertain to their respective offices as well as such powers and duties as may be set forth in these by-laws, or may from time to time be specifically conferred or imposed by the Board of Directors. The President shall be the chief executive officer of the Corporation.

Section 6 - Sureties and Bonds:

In case the Board of Directors shall so require, any officer, employee or agent of the Corporation shall execute to the Corporation a bond in such sum, and with such surety or sureties as the Board of Directors may direct, conditioned upon the faithful performance of his duties to the Corporation, including responsibility for negligence and for the accounting for all property, funds or securities of the Corporation which may come into his hands.

Section 7 - Shares of Other Corporations:

Whenever the Corporation is the holder of shares of any other corporation, any right or power of the Corporation as such shareholder (including the attendance, acting and voting at shareholders' meetings and execution of waivers, consents, proxies or other instruments) may be exercised on behalf of the Corporation by the President, any Vice President, or such other person as the Board of Directors may authorize.

ARTICLE V - SHARES OF STOCK

Section 1 - Certificate of Stock:

(a) The certificates representing shares of the Corporation shall be in such form as shall be adopted by the Board of Directors, and shall be numbered and registered in the order issued. They shall bear the holder's name and the number of shares, and shall be signed by (i) the Chairman of the Board or the President or a Vice President, and (ii) the Secretary or Treasurer, or any Assistant Secretary or Assistant Treasurer, and may bear the corporate seal.

(b) No certificate representing shares shall be issued until the full amount of consideration therefor has been paid, except as otherwise permitted by law.

(c) The Board of Directors may authorize the issuance of certificates for fractions of a share which shall entitle the holder to exercise voting rights, receive dividends and participate in liquidating distributions, in proportion to the fractional holdings; or it may authorize the payment in

cash of the fair value of fractions of a share as of the time when those entitled to receive such fractions are determined; or it may authorize the issuance, subject to such conditions as may be permitted by law, of scrip in registered or bearer form over the signature of an officer or agent of the Corporation, exchangeable as therein provided for full shares, but such scrip shall not entitle the holder to any rights of a shareholder, except as therein provided.

Section 2 - Lost or Destroyed Certificates:

The holder of any certificate representing shares of the Corporation shall immediately notify the Corporation of any loss or destruction of the certificate representing the same. The Corporation may issue a new certificate in the place of any certificate theretofore issued by it, alleged to have been lost or destroyed. On production of such evidence of loss or destruction as the Board of Directors in its discretion may require, the Board of Directors may, in its discretion, require the owner of the lost or destroyed certificate, or his legal representatives, to give the Corporation a bond in such sum as the Board may direct, and with such surety or sureties as may be satisfactory to the Board, to indemnify the Corporation against any claims, loss, liability or damage it may suffer on account of the issuance of the new certificate. A new certificate may be issued without requiring any such evidence or bond when, in the judgment of the Board of Directors, it is proper so to do.

Section 3 - Transfers of Shares:

(a) Transfers of shares of the Corporation shall be made on the share records of the Corporation only by the holder of record thereof, in person or by his duly authorized attorney, upon surrender for cancellation of the certificate or certificates representing such shares, with an assignment or power of transfer endorsed thereon or delivered therewith, duly executed, with such proof of the authenticity of the signature and of authority to transfer and of payment of transfer taxes as the Corporation or its agents may require.

(b) The Corporation shall be entitled to treat the holder of record of any share or shares as the absolute owner thereof for



all purposes and, accordingly, shall not be bound to recognize any legal, equitable or other claim to, or interest in, such share or shares on the part of any other person, whether or not it shall have express or other notice thereof, except as otherwise expressly provided by law.

Section 4 - Record Date:

In lieu of closing the share records of the Corporation, the Board of Directors may fix, in advance, a date not exceeding fifty days, nor less than ten days, as the record date for the determination of shareholders entitled to receive notice of, or to vote at, any meeting of shareholders, or to consent to any proposal without a meeting, or for the purpose of determining shareholders entitled to receive payment of any dividends, or allotment of any rights, or for the purpose of any other action. If no record date is fixed, the record date for the determination of shareholders entitled to notice of or to vote at a meeting of shareholders shall be at the close of business on the day next preceding the day on which notice is given, or, if no notice is given, the day on which the meeting is held; the record date for determining shareholders for any other purpose shall be at the close of business on the day on which the resolution of the directors relating thereto is adopted. When a determination of shareholders of record entitled to notice of or to vote at any meeting of shareholders has been made as provided for herein, such determination shall apply to any adjournment thereof, unless the directors fix a new record date for the adjourned meeting.

ARTICLE VI - DIVIDENDS

Subject to applicable law, dividends may be declared and paid out of any funds available therefor, as often, in such amounts, and at such time or times as the Board of Directors may determine.

ARTICLE VII - FISCAL YEAR

The fiscal year of the Corporation shall be fixed by the Board of Directors from time to time, subject to applicable law.

ARTICLE VIII - CORPORATE SEAL

The corporate seal, if any, shall be in such form as shall be

approved from time to time by the Board of Directors.

ARTICLE IX - AMENDMENTS

Section 1 - By Shareholders:

All by-laws of the Corporation shall be subject to alteration or repeal, and new by-laws may be made, by a majority vote of the shareholders at the time entitled to vote in the election of directors.

Section 2 - By Directors:

The Board of Directors shall have power to make, adopt, alter, amend and repeal, from time to time, by-laws of the Corporation; provided, however, that the shareholders entitled to vote with respect thereto as in this Article IX above-provided may alter, amend or repeal by-laws made by the Board of Directors, except that the Board of Directors shall have no power to change the quorum for meetings of shareholders or of the Board of Directors, or to change any provisions of the by-laws with respect to the removal of directors or the filling of vacancies in the Board resulting from the removal by the shareholders. If any by-law regulating an impending election of directors is adopted, amended or repealed by the Board of Directors, there shall be set forth in the notice of the next meeting of shareholders for the election of directors, the by-law so adopted, amended or repealed, together with a concise statement of the changes made.

The undersigned Incorporator certifies that he has adopted the foregoing by-laws as the first by-laws of the Corporation, in accordance with the requirements of the Business Corporation Law.



**AMENDED AND RESTATED**  
**LIMITED LIABILITY COMPANY AGREEMENT**  
**OF**  
**BETA TRANSFORMER TECHNOLOGY LLC**

The undersigned, being the sole member of Beta Transformer Technology LLC, a Delaware limited liability company (the "Company"), does hereby execute this Amended and Restated Limited Liability Company Agreement of the Company (this "Limited Liability Company Agreement") effective as of this 7th day of July, 2016. The Company was formed as a Delaware limited liability company on the 30th day of May, 2013, upon the filing of its Certificate of Formation with the Secretary of State of the State of Delaware.

**ARTICLE I**

**MEMBER**

Beta Transformer Technology Corporation is the sole member of the Company (the "Member").

**ARTICLE II**

**OFFICE**

The principal office of the Company shall be located at 105 Wilbur Place, Bohemia, NY 11716 (the "Principal Office"). The Company may have such other offices as the Member may designate or as the business of the Company may require.

**ARTICLE III**

**PURPOSE**

The sole purpose for which the Company is organized is to conduct any lawful business purpose as defined in the Delaware Limited Liability Company Act. The Company shall have all of the powers granted to a limited liability company under the laws of the State of Delaware.

**ARTICLE IV**

**DURATION OF THE COMPANY**

The Company shall continue in perpetuity unless terminated sooner by operation of law or by decision of the Member.

**ARTICLE V**

**CAPITAL CONTRIBUTIONS**

The Member may in the future contribute any additional capital deemed necessary by the Member for the operation of the Company.

**ARTICLE VI**

**OWNERSHIP OF MEMBERSHIP INTERESTS**

The Member shall own all of the membership interests in the Company and the Member shall have a 100% distributive share of the Company's profits, losses and cash flow.

**ARTICLE VII**

**MANAGEMENT**

The Member will manage the affairs of the Company, but shall be entitled to appoint or authorize representatives, including, but not limited to, such officers as the Member may deem necessary, to act on behalf of the Company and to delegate the authority otherwise reserved to the Member to such representatives. The signature of the Member of the Company shall be sufficient to bind the Company with respect to any matter on which the Member shall be required or entitled to act. The Member has the power, on behalf of the Company, to do all things necessary or convenient to carry out the business and affairs of the Company. A copy of this Limited Liability Company Agreement may be shown to third parties (and all third parties may rely hereupon) in order to confirm the identity and authorization of the Member.

**ARTICLE VIII**

**BOOKS AND RECORDS**

The Company books shall be maintained at the Principal Office. The fiscal year of the Company shall end on such date in each year as shall be designated from time to time by the Member. The Member shall cause all known business transactions pertaining to the purpose of the Company to be entered properly and completely into said books. The Member will prepare and file on behalf of the Company all tax returns in a timely manner.

## **ARTICLE IX**

### **AMENDMENTS**

This Limited Liability Company Agreement may be amended by a written instrument adopted by the Member and executed by the Member at any time, for any purpose, at the sole discretion of the Member.

## **ARTICLE IX**

### **INDEMNIFICATION**

To the fullest extent permitted by law, the Company shall defend, indemnify, and save harmless the Member and any officers of the Company (each an "Indemnified Person") for all loss, liability, damage, cost, or expense (including reasonable attorneys' fees) incurred by reason of any demands, claims, suits, actions, or proceedings arising out of (a) the Indemnified Person's relationship to the Company or (b) such Indemnified Person's capacity as an officer, except for such loss, liability, damage, cost, or expense as arises out of the theft, fraud, willful misconduct, or gross negligence by such Indemnified Person. To the fullest extent permitted by law, expenses incurred in defending a civil or criminal action, suit or proceeding shall be paid by the Company in advance of the final disposition of such action, suit or proceeding, and not less often than monthly upon receipt of an undertaking by and on behalf of the Indemnified Person to repay such amount if it shall be ultimately determined that he or she is not entitled to be indemnified by the Company. The indemnification and advancement of expenses authorized in or ordered by a court pursuant to this Article X shall continue for a person who has ceased to be an officer and inures to the benefit of the heirs, executors and administrators of such a person.

The Company may obtain, at the expense of the Company, directors and officers insurance coverage in an amount and on such terms as determined by the Member.

## **ARTICLE XI**

### **BANKING**

All funds of the Company shall be deposited in one or more Company checking accounts as shall be designated by the Member, and the Member is authorized to sign any such checks or withdrawal forms.

## **ARTICLE XII**

### **APPLICABILITY OF UCC ARTICLE 8**

The Company hereby irrevocably elects that all membership interests in the Company shall be securities governed by Article 8 of the Uniform Commercial Code. Each certificate evidencing membership interests in the Company shall bear the following legend:

"This certificate evidences an interest in Beta Transformer Technology LLC and shall be a security for purposes of Article 8 of the Uniform Commercial Code."

No change to this provision shall be effective until all outstanding certificates have been surrendered for cancellation and any new certificates thereafter issued shall not bear the foregoing legend.

## **ARTICLE XIII**

### **MISCELLANEOUS**

This Limited Liability Company Agreement is made by the Member for the exclusive benefit of the Company, its Member, and his, her or its successors and assignees. This Limited Liability Company Agreement is expressly not intended for the benefit of any creditor of the Company or any other person or entity. Except and only to the extent provided by applicable statute or otherwise in this Limited Liability Company Agreement, no such creditor or third party shall have any rights under this Limited Liability Company Agreement or any agreement between the Company and the Member with respect to any capital contribution or otherwise.

[Signature Page Follows]

IN WITNESS WHEREOF, the Member has hereunto set its hand effective the day and year first written above.

Beta Transformer Technology Corporation,  
its sole member

By:  /s/ Terrance Paradie  
Name: Terrance Paradie  
Its: Chief Executive Officer

BOOK 7 VOL 41 PAGE 332CERTIFICATE OF INCORPORATION

OF

ILC DATA DEVICES CORPORATION

The undersigned, a natural person, for the purpose of organizing a corporation for conducting the business and promoting the purposes hereinafter stated, under the provisions and subject to the requirements of the laws of the State of Delaware (particularly Chapter 1, Title 8 of the Delaware Code and the acts amendatory thereof and supplemental thereto, and known, identified and referred to as the "General Corporation Law of the State of Delaware"), hereby certifies that:

FIRST: The name of the corporation (hereinafter called the "corporation") is ILC Data Devices Corporation.

SECOND: The address, including street, number, city, and county, of the registered office of the corporation in the State of Delaware is 229 South State Street, City of Dover, County of Kent; and the name of the registered agent of the corporation in the State of Delaware at such address is The Prentice-Hall Corporation System, Inc.

THIRD: The nature of the business and of the purposes to be conducted and promoted by the corporation is to be engaged in any lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware including, without limitation, to develop, manufacture, assemble, fabricate, import, lease, purchase, or otherwise acquire, invest in, hold, use, license the use of, install, handle, maintain, service or repair, sell, pledge, mortgage, exchange, export, distribute, lease, assign, and otherwise dispose of, and generally to trade and deal in and with, as principal or agent, at wholesale, retail, on commission, or otherwise, electronic systems, equipment and components, and electrical, mechanical, and electro-mechanical apparatus and equipment of every kind and description, electronic, telecommunication, communication, transmitting, receiving, recording, reproducing, and similar equipment of every description, microwave devices and equipment, radio, sonar, radar, television, and related devices and equipment, and similar goods, wares, merchandise, commodities, articles of commerce, and property of every kind and description, and any and all products, machinery, equipment, and supplies used or useful in connection therewith.

FOURTH: The total number of shares of stock which the corporation shall have authority to issue is five hundred shares. The par value of each of such shares is One Dollar. All such shares are of one class and are shares of Common Stock.

FIFTH: The name and the mailing address of the incorporator are as follows:

NAME  
Lawrence E. Levine

MAILING ADDRESS  
Seventeenth Floor  
1740 Broadway  
New York, New York 10019

SIXTH: The corporation is to have perpetual existence.

SEVENTH: Whenever a compromise or arrangement is proposed between this corporation and its creditors or any class of them and/or between this corporation and its stockholders or any class of them, any court of equitable jurisdiction within the State of Delaware may, on the application in a summary way of this corporation or of any creditor or stockholder thereof or on the application of any receiver or receivers appointed for this corporation under the provisions of section 291 of Title 8 of the Delaware Code or on the application of trustees in dissolution or of any receiver or receivers appointed for this corporation under the provisions of section 279 of Title 8 of the Delaware Code order a meeting of the creditors or class of creditors, and/or of the stockholders or class of stockholders of this corporation, as the case may be, to be summoned in such manner as the said court directs. If a majority in number representing three-fourths in value of the creditors or class of creditors, and/or of the stockholders or class of stockholders of this corporation, as the case may be, agree to any compromise or arrangement and to any reorganization of this corporation as consequence of such compromise or arrangement, the said compromise or arrangement and the said reorganization shall, if sanctioned by the court to which the said application has been made, be binding on all the creditors or class of creditors, and/or on all the stockholders or class of stockholders, of this corporation, as the case may be, and also on this corporation.

EIGHTH: For the management of the business and for the conduct of the affairs of the corporation, and in further definition, limitation and regulation of the powers of the corporation and of its directors and of its stockholders or any class thereof, as the case may be, it is further provided:

1. The management of the business and the conduct of the affairs of the corporation, including the election of the Chairman of the Board of Directors, if any, the President, the Treasurer, the Secretary, and other principal officers of the corporation, shall be vested in its Board of Directors. The number of directors which shall constitute the whole Board of Directors shall be fixed by, or in the manner provided in, the By-Laws. The phrase "whole Board" and the phrase "total number of directors" shall be deemed to have the same meaning, to wit, the total number of directors which the corporation would have if there were no vacancies. No election of directors need be by written ballot.
2. The original By-Laws of the corporation shall be adopted by the incorporator. Thereafter, the power to make, alter, or repeal the By-Laws, and to adopt any new By-Law, except a By-Law classifying directors for election for staggered terms, shall be vested in the Board of Directors.



3. Whenever the corporation shall be authorized to issue only one class of stock, each outstanding share shall entitle the holder thereof to notice of, and the right to vote at, any meeting of stockholders. Whenever the corporation shall be authorized to issue more than one class of stock, no outstanding share of any class of stock which is denied voting power under the provisions of the certificate of incorporation shall entitle the holder thereof to the right to vote at any meeting of stockholders except as the provisions of paragraph (c)(2) of section 242 of the General Corporation Law shall otherwise require; provided, that no share of any such class which is otherwise denied voting power shall entitle the holder thereof to vote upon the increase or decrease in the number of authorized shares of said class.

NINTH: The Corporation shall, to the fullest extent permitted by Section 145 of the General Corporation Law of Delaware, as the same may be amended and supplemented, indemnify any and all persons whom it shall have power to indemnify under said section from and against any and all of the expenses, liabilities or other matters referred to in or covered by said section, and the indemnification provided for herein shall not be deemed exclusive of any other rights to which those indemnified may be entitled under any By-Law, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in his official capacity and as to action in another capacity while holding such office, and shall continue as to a person who has ceased to be a director, officer, employee or agent and shall inure to the benefit of the heirs, executors and administrators of such a person.

TENTH: From time to time any of the provisions of this certificate of incorporation may be amended, altered or repealed, and other provisions authorized by the laws of the State of Delaware at the time in force may be added or inserted in the manner and at the time prescribed by said laws, and all rights at any time conferred upon the stockholders of the corporation by this certificate of incorporation are granted subject to the provisions of this Article TENTH.

Executed at New York , New York , on October 21 , 1970:

Lawrence L. Lewis  
Incorporator



CERTIFICATE OF AMENDMENT  
OF  
CERTIFICATE OF INCORPORATION  
OF  
ILC DATA DEVICE CORPORATION

ILC DATA DEVICE CORPORATION, a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware (the "Corporation"), DOES HEREBY CERTIFY:

1. That the Board of Directors of the Corporation, by the unanimous written consent of its members filed with the minutes of the Board of Directors, adopted a resolution proposing and declaring advisable the following amendment to the Certificate of Incorporation of the Corporation:

RESOLVED, that the Certificate of Incorporation of the Corporation be amended by changing Article FIRST thereof so that, as amended, said Article shall be and read as follows:

FIRST: The name of the corporation (hereinafter called the "corporation") is Data Device Corporation.

2. That in lieu of a meeting and vote of the sole stockholder of the Corporation, the sole stockholder of the Corporation gave its written consent to said amendment in accordance with the provisions of Section 228 of the General Corporation Law of the State of Delaware.

3. That the aforesaid amendment was duly adopted in accordance with the applicable provisions of Sections 242 of the General Corporation Law of the State of Delaware.

IN WITNESS WHEREOF, the Corporation has caused this certificate to be signed by its President this 19th day of April, 1999.

ILC DATA DEVICE CORPORATION

By: 

Clifford P. Lane  
President



CERTIFICATE OF AMENDMENT  
OF  
CERTIFICATE OF INCORPORATION  
OF  
DATA DEVICE CORPORATION

Data Device Corporation (the "Company") originally filed its Certificate of Incorporation with the Secretary of State of Delaware on October 23, 1970, is organized and existing under the General Corporation Law of the State of Delaware, and hereby certifies as follows:

1. The Board of Directors of the Company duly adopted resolutions by written consent in lieu of a meeting in accordance with Section 141(f) of the General Corporation Law of the State of Delaware proposing and declaring advisable the following amendment to the Certificate of Incorporation (the "Certificate") of the Company. The resolution setting forth the proposed amendment is as follows:

RESOLVED, that the Certificate is hereby amended by striking out Article SEVENTH thereof and by substituting in lieu of said paragraph the following:

"SEVENTH: Reserved."

2. This Certificate of Amendment of Certificate of Incorporation of the Company has been duly adopted in accordance with Section 242 of the General Corporation Law of the State of Delaware.

3. That thereafter, pursuant to a resolution of the Board of Directors and in lieu of a meeting of stockholders, the stockholders gave their approval of said amendment by written consent in accordance with the provisions of Section 228 of the General Corporation Law of the State of Delaware.

4. That the aforesaid amendment was duly adopted in accordance with the provisions of Sections 242 and 228 of the General Corporation Law of the State of Delaware.

5. That said amendment shall be executed, filed and recorded in accordance with Section 103 of the General Corporation Law of the State of Delaware.

IN WITNESS WHEREOF, Data Device Corporation has caused this Certificate of Amendment to be signed by an authorized officer thereof, this 14th day of July, 2014.

Data Device Corporation

By: /s/ William Riley

Name: William Riley

Title: Vice President of Finance and Secretary

BY - LAWS  
OF  
ILC DATA DEVICES CORPORATION  
(A Delaware Corporation)

ARTICLE I  
STOCKHOLDERS

1. CERTIFICATES REPRESENTING STOCK. Every holder of stock in the corporation shall be entitled to have a certificate signed by, or in the name of, the corporation by the Chairman or Vice-Chairman of the Board of Directors, if any, or by the President or a Vice-President and by the Treasurer or an Assistant Treasurer or the Secretary or an Assistant Secretary of the corporation certifying the number of shares owned by him in the corporation. If such certificate is countersigned by a transfer agent other than the corporation or its employee or by a registrar other than the corporation or its employee, any other signature on the certificate may be a facsimile. In case any officer, transfer agent, or registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer, transfer agent, or registrar before such certificate is issued, it may be issued by the corporation with the same effect as if he were such officer, transfer agent, or registrar at the date of issue.

Whenever the corporation shall be authorized to issue more than one class of stock or more than one series of any class of stock, and whenever the corporation shall issue any shares of its stock as partly paid stock, the certificates representing shares of any such class or series or of any such partly paid stock shall set forth thereon the statements prescribed by the General Corporation Law. Any restrictions on the transfer or registration of transfer of any shares of stock of any class or series shall be noted conspicuously on the certificate representing such shares.

The corporation may issue a new certificate of stock in place of any certificate theretofore issued by it, alleged to have been lost, stolen, or destroyed, and the Board of Directors may require the owner of any lost, stolen, or destroyed certificate, or his legal representative, to give the corpora-

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tion a bond sufficient to indemnify the corporation against any claim that may be made against it on account of the alleged loss, theft, or destruction of any such certificate or the issuance of any such new certificate.

2. FRACTIONAL SHARE INTERESTS. The corporation may, but shall not be required to, issue fractions of a share. If the corporation does not issue fractions of a share, it shall (1) arrange for the disposition of fractional interests by those entitled thereto, (2) pay in cash the fair value of fractions of a share as of the time when those entitled to receive such fractions are determined, or (3) issue scrip or warrants in registered or bearer form which shall entitle the holder to receive a certificate for a full share upon the surrender of such scrip or warrants aggregating a full share. A certificate for a fractional share shall, but scrip or warrants shall not unless otherwise provided therein, entitle the holder to exercise voting rights, to receive dividends thereon, and to participate in any of the assets of the corporation in the event of liquidation. The Board of Directors may cause scrip or warrants to be issued subject to the conditions that they shall become void if not exchanged for certificates representing full shares before a specified date, or subject to the conditions that the shares for which scrip or warrants are exchangeable may be sold by the corporation and the proceeds thereof distributed to the holders of scrip or warrants, or subject to any other conditions which the Board of Directors may impose.

3. STOCK TRANSFERS. Upon compliance with provisions restricting the transfer or registration of transfer of shares of stock, if any, transfers or registration of transfers of shares of stock of the corporation shall be made only on the stock ledger of the corporation by the registered holder thereof, or by his attorney thereunto authorized by power of attorney duly executed and filed with the Secretary of the corporation or with a transfer agent or a registrar, if any, and on surrender of the certificate or certificates for such shares of stock properly endorsed and the payment of all taxes due thereon.

4. RECORD DATE FOR STOCKHOLDERS. For the purpose of determining the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, or to express consent to corporate action in writing without a meeting, or entitled to receive payment of any dividend or other distribution or the allotment of any rights, or entitled to exercise any rights in respect of any change, conversion, or exchange of stock or for the purpose of any other lawful action, the directors may fix, in advance, a record date, which shall not be more

than sixty days nor less than ten days before the date of such meeting, nor more than sixty days prior to any other action. If no record date is fixed, the record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held; the record date for determining stockholders entitled to express consent to corporate action in writing without a meeting, when no prior action by the Board of Directors is necessary, shall be the day on which the first written consent is expressed; and the record date for determining stockholders for any other purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto. A determination of stockholders of record entitled to notice of or to vote at any meeting of stockholders shall apply to any adjournment of the meeting; provided, however, that the Board of Directors may fix a new record date for the adjourned meeting.

5. MEANING OF CERTAIN TERMS. As used herein in respect of the right to notice of a meeting of stockholders or a waiver thereof or to participate or vote thereat or to consent or dissent in writing in lieu of a meeting, as the case may be, the term "share" or "shares" or "share of stock" or "shares of stock" or "stockholder" or "stockholders" refers to an outstanding share or shares of stock and to a holder or holders of record of outstanding shares of stock when the corporation is authorized to issue only one class of shares of stock, and said reference is also intended to include any outstanding share or shares of stock and any holder or holders of record of outstanding shares of stock of any class upon which or upon whom the certificate of incorporation confers such rights where there are two or more classes or series of shares of stock or upon which or upon whom the General Corporation Law confers such rights notwithstanding that the certificate of incorporation may provide for more than one class or series of shares of stock, one or more of which are limited or denied such rights thereunder; provided, however, that no such right shall vest in the event of an increase or a decrease in the authorized number of shares of stock of any class or series which is otherwise denied voting rights under the provisions of the certificate of incorporation.

6. STOCKHOLDER MEETINGS.

- TIME. The annual meeting shall be held on the date and at the time fixed, from time to time, by the directors, provided, that the first annual meeting shall be held on a date



within thirteen months after the organization of the corporation, and each successive annual meeting shall be held on a date within thirteen months after the date of the preceding annual meeting. A special meeting shall be held on the date and at the time fixed by the directors.

- PLACE. Annual meetings and special meetings shall be held at such place, within or without the State of Delaware, as the directors may, from time to time fix. Whenever the directors shall fail to fix such place, the meeting shall be held at the registered office of the corporation in the State of Delaware.

- CALL. Annual meetings and special meetings may be called by the directors or by any officer instructed by the directors to call the meeting.

- NOTICE OR WAIVER OF NOTICE. Written notice of all meetings shall be given, stating the place, date, and hour of the meeting and stating the place within the city or other municipality or community at which the list of stockholders of the corporation may be examined. The notice of an annual meeting shall state that the meeting is called for the election of directors and for the transaction of other business which may properly come before the meeting, and shall, (if any other action which could be taken at a special meeting is to be taken at such annual meeting) state the purpose or purposes. The notice of a special meeting shall in all instances state the purpose or purposes for which the meeting is called. The notice of any meeting shall also include, or be accompanied by, any additional statements, information, or documents prescribed by the General Corporation Law. Except as otherwise provided by the General Corporation Law, a copy of the notice of any meeting shall be given, personally or by mail, not less than ten days nor more than fifty days before the date of the meeting, unless the lapse of the prescribed period of time shall have been waived, and directed to each stockholder at his record address or at such other address which he may have furnished by request in writing to the Secretary of the corporation. Notice by mail shall be deemed to be given when deposited, with postage thereon prepaid, in the United States mail. If a meeting is adjourned to another time, not more than thirty days hence, and/or to another place, and if an announcement of the adjourned time and/or place is made at the meeting, it shall not be necessary to give notice of the adjourned meeting unless the directors, after adjournment, fix a new record date for the adjourned meeting. Notice need not be given to any stockholder who submits a written waiver of notice signed by him before or after the time stated therein. Attendance of a stockholder at a meeting of

stockholders shall constitute a waiver of notice of such meeting, except when the stockholder attends the meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders need be specified in any written waiver of notice.

- STOCKHOLDER LIST. The officer who has charge of the stock ledger of the corporation shall prepare and make, at least ten days before every meeting of stockholders, a complete list of the stockholders, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, during ordinary business hours, for a period of at least ten days prior to the meeting, either at a place within the city or other municipality or community where the meeting is to be held, which place shall be specified in the notice of the meeting, or if not so specified, at the place where the meeting is to be held. The list shall also be produced and kept at the time and place of the meeting during the whole time thereof, and may be inspected by any stockholder who is present. The stock ledger shall be the only evidence as to who are the stockholders entitled to examine the stock ledger, the list required by this section or the books of the corporation, or to vote at any meeting of stockholders.

- CONDUCT OF MEETING. Meetings of the stockholders shall be presided over by one of the following officers in the order of seniority and if present and acting - the Chairman of the Board, if any, the Vice-Chairman of the Board, if any, the President, a Vice-President, or, if none of the foregoing is in office and present and acting, by a chairman to be chosen by the stockholders. The Secretary of the corporation, or in his absence, an Assistant Secretary, shall act as secretary of every meeting, but if neither the Secretary nor an Assistant Secretary is present the Chairman of the meeting shall appoint a secretary of the meeting.

- PROXY REPRESENTATION. Every stockholder may authorize another person or persons to act for him by proxy in all matters in which a stockholder is entitled to participate, whether by waiving notice of any meeting, voting or participating at a meeting, or expressing consent or dissent without a meeting. Every proxy must be signed by the stockholder or by his attorney-in-fact. No proxy shall be voted or acted

upon after three years from its date unless such proxy provides for a longer period. A duly executed proxy shall be irrevocable if it states that it is irrevocable and, if, and only as long as, it is coupled with an interest sufficient in law to support an irrevocable power. A proxy may be made irrevocable regardless of whether the interest with which it is coupled is an interest in the stock itself or an interest in the corporation generally.

- INSPECTORS. The directors, in advance of any meeting, may, but need not, appoint one or more inspectors of election to act at the meeting or any adjournment thereof. If an inspector or inspectors are not appointed, the person presiding at the meeting may, but need not, appoint one or more inspectors. In case any person who may be appointed as an inspector fails to appear or act, the vacancy may be filled by appointment made by the directors in advance of the meeting or at the meeting by the person presiding thereat. Each inspector, if any, before entering upon the discharge of his duties, shall take and sign an oath faithfully to execute the duties of inspector at such meeting with strict impartiality and according to the best of his ability. The inspectors, if any, shall determine the number of shares of stock outstanding and the voting power of each, the shares of stock represented at the meeting, the existence of a quorum, the validity and effect of proxies, and shall receive votes, ballots or consents, hear and determine all challenges and questions arising in connection with the right to vote, count and tabulate all votes, ballots or consents, determine the result, and do such acts as are proper to conduct the election or vote with fairness to all stockholders. On request of the person presiding at the meeting, the inspector or inspectors, if any, shall make a report in writing of any challenge, question or matter determined by him or them and execute a certificate of any fact found by him or them.

- QUORUM. The holders of a majority of the outstanding shares of stock shall constitute a quorum at a meeting of stockholders for the transaction of any business. The stockholders present may adjourn the meeting despite the absence of a quorum.

- VOTING. Each share of stock shall entitle the holder thereof to one vote. In the election of directors, a plurality of the votes cast shall elect. Any other action shall be authorized by a majority of the votes cast except where the General Corporation Law prescribes a different percentage of votes and/or a different exercise of voting power. In the election of directors, and for any other action, voting need not be by ballot.

7. STOCKHOLDER ACTION WITHOUT MEETING. Any action required by the General Corporation Law to be taken at any annual or special meeting of stockholders, or any action which may be taken at any annual or special meeting of stockholders, may be taken without a meeting, without prior notice and without a vote, if a consent in writing, setting forth the action so taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted. Prompt notice of the taking of the corporate action without a meeting by less than unanimous written consent shall be given to those stockholders who have not consented in writing.

ARTICLE II  
Directors

1. FUNCTIONS AND DEFINITION. The business and affairs of the corporation shall be managed by the Board of Directors of the corporation. The Board of Directors shall have authority to fix the compensation of the members thereof. The use of the phrase "whole board" herein refers to the total number of directors which the corporation would have if there were no vacancies.

2. QUALIFICATIONS AND NUMBER. A director need not be a stockholder, a citizen of the United States, or a resident of the State of Delaware. The number of Directors which shall constitute the whole Board shall be not less than one nor more than seven. Subject to the foregoing limitation and except for the first Board of Directors, such number may be fixed from time to time by action of the stockholders or of the directors, or, if the number is not fixed, the number shall be three. The number of directors may be increased or decreased by action of the stockholders or of the directors.

3. ELECTION AND TERM. The first Board of Directors, unless the members thereof shall have been named in the certificate of incorporation, shall be elected by the incorporator or incorporators and shall hold office until the first annual meeting of stockholders and until their successors are elected and qualified or until their earlier resignation or removal. Any director may resign at any time upon written notice to the corporation. Thereafter, directors who are elected at an annual meeting of stockholders, and directors who are elected in the interim to fill vacancies and newly created directorships, shall hold office until the next annual meeting of stockholders and until their successors are elected and qualified or until their

earlier resignation or removal. In the interim between annual meetings of stockholders or of special meetings of stockholders called for the election of directors and/or for the removal of one or more directors and for the filling of any vacancy in that connection, newly created directorships and any vacancies in the Board of Directors, including vacancies resulting from the removal of directors for cause or without cause, may be filled by the vote of a majority of the remaining directors then in office, although less than a quorum, or by the sole remaining director.

#### 4. MEETINGS.

- TIME. Meetings shall be held at such time as the Board shall fix, except that the first meeting of a newly elected Board shall be held as soon after its election as the directors may conveniently assemble.

- PLACE. Meetings shall be held at such place within or without the State of Delaware as shall be fixed by the Board.

- CALL. No call shall be required for regular meetings for which the time and place have been fixed. Special meetings may be called by or at the direction of the Chairman of the Board, if any, the Vice-Chairman of the Board, if any, of the President, or of a majority of the directors in office.

- NOTICE OR ACTUAL OR CONSTRUCTIVE WAIVER. No notice shall be required for regular meetings for which the time and place have been fixed. Written, oral, or any other mode of notice of the time and place shall be given for special meetings in sufficient time for the convenient assembly of the directors thereat. Notice need not be given to any director or to any member of a committee of directors who submits a written waiver of notice signed by him before or after the time stated therein. Attendance of any such person at a meeting shall constitute a waiver of notice of such meeting, except when he attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the directors need be specified in any written waiver of notice.

- QUORUM AND ACTION. A majority of the whole Board shall constitute a quorum except when a vacancy or vacancies prevents such majority, whereupon a majority of the directors in office shall constitute a quorum, provided, that such majority shall constitute at least one-third of the whole Board. A majority of the directors present, whether or not a quorum

is present, may adjourn a meeting to another time and place. Except as herein otherwise provided, and except as otherwise provided by the General Corporation Law, the vote of the majority of the directors present at a meeting at which a quorum is present shall be the act of the Board. The quorum and voting provisions herein stated shall not be construed as conflicting with any provisions of the General Corporation Law and these By-Laws which govern a meeting of directors held to fill vacancies and newly created directorships in the Board or action of disinterested directors.

- CHAIRMAN OF THE MEETING. The Chairman of the Board, if any and if present and acting, shall preside at all meetings. Otherwise, the Vice-Chairman of the Board, if any and if present and acting, or the President, if present and acting, or any other director chosen by the Board, shall preside.

5. REMOVAL OF DIRECTORS. Any or all of the directors may be removed for cause or without cause by the stockholders. One or more of the directors may be removed for cause by the Board of Directors.

6. COMMITTEES. Whenever its number consists of three or more, the Board of Directors may, by resolution passed by a majority of the whole Board, designate one or more committees, each committee to consist of two or more of the directors of the corporation. The Board may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of any member of any such committee or committees, the member or members thereof present at any meeting and not disqualified from voting, whether or not he or they constitute a quorum, may unanimously appoint another member of the Board of Directors to act at the meeting in the place of any such absent or disqualified member. Any such committee, to the extent provided in the resolution of the Board, shall have and may exercise the powers and authority of the Board of Directors in the management of the business and affairs of the corporation with the exception of any authority the delegation of which is prohibited by Section 141 of the General Corporation Law, and may authorize the seal of the corporation to be affixed to all papers which may require it.

7. INFORMAL ACTION. Any member or members of the Board of Directors or of any committee designated by the Board, may participate in a meeting of the Board, or any such committee, as the case may be, by means of conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear each other. Any action

required or permitted to be taken at any meeting of the Board of Directors or any committee thereof may be taken without a meeting if all members of the Board or committee, as the case may be, consent thereto in writing, and the writing or writings are filed with the minutes of proceedings of the Board or committee.

### ARTICLE III

#### OFFICERS

1. DESIGNATION. The officers of the corporation shall consist of a President, a Secretary, a Treasurer, and, if deemed necessary, expedient, or desirable by the Board of Directors, a Chairman of the Board, a Vice-Chairman of the Board, an Executive Vice-President, one or more other Vice-Presidents, one or more Assistant Secretaries, one or more Assistant Treasurers, and such other officers with such titles as the resolution or instrument choosing them shall designate.

2. QUALIFICATIONS. Except as may otherwise be provided in the resolution or instrument choosing him, no officer other than the Chairman of the Board, if any, and the Vice-Chairman of the Board, if any, need be a director.

Any number of offices may be held by the same person, as the directors may determine, except that no person may hold the offices of President and Secretary simultaneously.

3. TERM OF OFFICE. Unless otherwise provided in the resolution or instrument choosing him, each officer shall be chosen for a term which shall continue until the meeting of the Board of Directors following the next annual meeting of stockholders and until his successor shall have been chosen and qualified.

Any officer may be removed, with or without cause, by the Board of Directors; and any subordinate or junior officer not chosen by the Board of Directors, but chosen under duly constituted authority conferred by the Board of Directors, may be removed, with or without cause, by the officer or officers who chose him.

Any vacancy in any office may be filled by the Board of Directors. A vacancy in any junior or subordinate office not filled by the Board of Directors may be filled by the officer or officers duly vested with the authority to choose the person to fill such office.

4. CHOOSING OFFICERS. The Board of Directors shall choose the President, the Secretary, the Treasurer, the Chairman of the Board, if any, the Vice-Chairman of the Board, if any, an Executive Vice-President, if any, one or more additional Vice-Presidents, if any, and such other officers as may be designated by them, and may confer upon any executive officer or officers authority to choose junior or subordinate officers.

5. DUTIES AND AUTHORITY. All officers of the corporation shall have such authority and perform such duties in the management and operation of the corporation as shall be prescribed in the resolutions of the Board of Directors or the instruments designating and choosing such officers and prescribing their authority and duties, and shall have such additional authority and duties as are incident to their office except to the extent that such resolutions or instruments may be inconsistent therewith.

The chief executive officer of the corporation shall preside at all meetings of stockholders and shall, when requested, sign all certificates and instruments permitted or required to be signed by him under the General Corporation Law of Delaware. Except as the resolution choosing him and prescribing the authority and duties of the chief executive officer shall otherwise provide, and except as otherwise provided by any provision of law, the chief executive officer, by whatever title designated, shall negotiate, enter into, and sign or countersign and otherwise execute in the name, or on behalf, of the corporation all contracts, deeds, mortgages, pledges, bonds, evidences of indebtedness, leases, certificates, instruments, and other transactions; shall generally supervise, manage, and control the affairs of the corporation; and shall make reports to the Board of Directors, any committee thereof, and the stockholders. He shall also exercise such additional authority and perform such additional duties as the Board shall assign to him. Unless the Board otherwise determines, the President shall be the chief executive officer of the corporation.

The Secretary of the corporation shall record all of the proceedings of all meetings and actions in writing of stockholders, directors, and committees of directors, and shall exercise such additional authority and perform such additional duties as the Board shall assign to him.

The Treasurer shall be the principal financial officer of the corporation and shall exercise such authority and perform such duties as the Board of Directors shall assign to him.

All other officers of the corporation shall exercise such authority and perform such duties as may be provided for



in the resolutions or instruments choosing them and prescribing their authority and duties.

6. RESOLUTIONS AND INSTRUMENTS - EFFECT. The Secretary of the corporation shall keep, or cause to be kept, with the By-Laws of the corporation a copy of every resolution or instrument designating and choosing officers and prescribing their qualifications, tenure, authority, duties, compensation, and other appropriate incidents and attributes of office; and each such resolution or instrument shall be deemed to be a component part of these By-Laws.

ARTICLE IV

CORPORATE SEAL

The corporate seal shall be in such form as the Board of Directors shall prescribe.

ARTICLE V

FISCAL YEAR

The fiscal year of the corporation shall be fixed, and shall be subject to change, by the Board of Directors.

ARTICLE VI

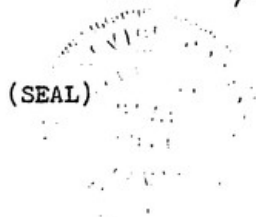
CONTROL OVER BY-LAWS

The power to amend, alter, and repeal these By-Laws and to adopt new By-Laws shall be vested in the Board of Directors; provided, that the Board of Directors may delegate such power, in whole or in part, to the stockholders; and provided, further, that any By-Law, other than an initial By-Law, which provides for the election of directors by classes for staggered terms shall be adopted by the stockholders.

I HEREBY CERTIFY that the foregoing is a full, true and correct copy of the By-Laws of ILC DATA DEVICES CORPORATION, a Delaware corporation, as in effect on the date hereof.

WITNESS my hand and the seal of the corporation.

Dated: *November 7, 1970*



*Stuart W. Adams*  
Secretary of  
ILC DATA DEVICES CORPORATION



**Amended and Restated Certificate of Incorporation****Of****ILC Holdings, Inc.**

ILC Holdings, Inc., a corporation organized and existing by virtue of the Delaware General Corporation Law (the "DGCL"), hereby certifies as follows:

1. The corporation filed its original Certificate of Incorporation with the Secretary of State of Delaware on November 16, 1966 under the name "ILC Industries, Inc." (as amended, the "Certificate of Incorporation").
2. Pursuant to Sections 242 and 245 of the DGCL, the Certificate of Incorporation is hereby amended and restated in its entirety as follows:

FIRST: The name of the corporation is ILC Holdings, Inc.

SECOND: The address of the corporation's registered office in the State of Delaware is Corporation Trust Center, 1209 Orange Street, in the City of Wilmington, County of New Castle 19801. The name of its registered agent at such address is The Corporation Trust Company.

THIRD: The nature of the business or purposes to be conducted or promoted are to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware.

FOURTH: The total number of shares of stock that the corporation shall have authority to issue is 1,000 shares, all of which shall be Common Stock, \$0.01 par value per share.

FIFTH: Any one or more of the directors may be removed, with or without cause, by the vote or written consent of the holders of a majority of the issued and outstanding shares of stock of the corporation entitled to be voted at an election of directors.

SIXTH: Meetings of stockholders shall be held at such place, within or without the State of Delaware, as may be designated by or in the manner provided in the By-laws of the corporation or, if not so designated, at the registered office of the corporation in the State of Delaware. Elections of directors need not be by written ballot unless and to the extent that the By-laws so provide.

SEVENTH:

(a) The corporation shall indemnify to the maximum extent permitted by law any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an

action by or in the right of the corporation) by reason of the fact that he is or was a director or officer of the corporation, or is or was serving at the request of the corporation as a director or officer of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by him in connection with such action, suit or proceeding if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful. The termination of any action, suit or proceeding by judgment, order, settlement, conviction, or upon a plea of nolo contendere or its equivalent, shall not, of itself, create a presumption that the person did not act in good faith and in a manner which he reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had reasonable cause to believe that his conduct was unlawful.

(b) The corporation shall indemnify to the maximum extent permitted by law any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the corporation to procure a judgment in its favor by reason of the fact that he is or was a director or officer of the corporation, or is or was serving at the request of the corporation as a director or officer of another corporation, partnership, joint venture, trust or other enterprise against expenses (including attorneys' fees) actually and reasonably incurred by him in connection with the defense or settlement of such action or suit if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation and except that no such indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery of Delaware or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which such Court of Chancery or such other court shall deem proper.

(c) To the extent that a director or officer of the corporation shall be successful on the merits or otherwise in defense of any action, suit or proceeding referred to in paragraphs (a) and (b), or in defense of any claim, issue or matter therein, he shall be indemnified against expenses (including attorneys' fees) actually and reasonably incurred by him in connection therewith.

(d) Any indemnification under paragraphs (a) and (b) (unless ordered by a court) shall be made by the corporation only as authorized in the specific case upon a determination that indemnification of the director or officer is proper in the circumstances because he has met the applicable standard of conduct set forth in paragraphs (a) and (b). Such determination shall be made (1) by the Board of Directors by a majority vote of a quorum consisting of directors who were not parties to such action, suit or proceeding, or (2) if such a quorum is not obtainable, or, even if obtainable a quorum of disinterested directors so directs, by independent legal counsel in a written opinion, or (3) by the stockholders. The corporation, acting through its Board of

Directors or otherwise, shall cause such determination to be made if so requested by any person who is indemnifiable under this Article Seventh.

(e) Expenses (including attorneys' fees) incurred by an officer or director in defending any civil, criminal, administrative or investigative action, suit or proceeding shall be paid by the corporation in advance of the final disposition of such action, suit or proceeding upon receipt of an undertaking by or on behalf of such director or officer to repay such amount if it shall ultimately be determined that he is not entitled to be indemnified by the corporation as authorized in this Article Seventh.

(f) The indemnification and advancement of expenses provided by, or granted pursuant to, the other paragraphs of this Article Seventh shall not be deemed exclusive of any other rights to which those seeking indemnification or advancement of expenses may be entitled under any bylaw, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in his official capacity and as to action in another capacity while holding such office.

(g) The Board of Directors may authorize, by a vote of a majority of a quorum of the Board of Directors, the corporation to purchase and maintain insurance on behalf of any person who is or was a director or officer of the corporation, or is or was serving at the request of the corporation as a director or officer of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against him and incurred by him in any such capacity, or arising out of his status as such, whether or not the corporation would have the power to indemnify him against such liability under the provisions of this Article Seventh.

(h) For the purposes of this Article Seventh, references to "the corporation" shall include, in addition to the resulting corporation, any constituent corporation (including any constituent of a constituent) absorbed in a consolidation or merger which, if its separate existence had continued, would have had power and authority to indemnify its directors or officers so that any person who is or was a director or officer of such constituent corporation, or is or was serving at the request of such constituent corporation as a director or officer of another corporation, partnership, joint venture, trust or other enterprise, shall stand in the same position under the provisions of this Article Seventh with respect to the resulting or surviving corporation as he would have with respect to such constituent corporation if its separate existence had continued.

(i) For purposes of this section, references to "other enterprises" shall include employee benefit plans; references to "fines" shall include any excise taxes assessed on a person with respect to an employee benefit plan; and references to "serving at the request of the corporation" shall include service as a director or officer of the corporation which imposes duties on, or involves services by, such director or officer with respect to an employee benefit plan, its participants or beneficiaries; and a person who acted in good faith and in a manner he reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan shall be deemed to have acted in a manner "not opposed to the best interests of the corporation" as referred to in this section.

(j) The indemnification and advancement of expenses provided by, or granted pursuant to, this Article Seventh shall, unless otherwise provided when authorized or ratified, continue as to a person who has ceased to be a director or officer and shall inure to the benefit of the heirs, executors and administrators of such a person.

(k) The corporation shall be required to indemnify a person in connection with an action, suit or proceeding (or part thereof) initiated by such person only if the action, suit or proceeding (or part thereof) was authorized by the Board of Directors of the corporation.

THE UNDERSIGNED, has signed this instrument the 23rd day of June, 2016 and does thereby acknowledge that it is his act and deed and that the facts stated therein are true.

/s/ Clifford P. Lane

Name: Clifford P. Lane

Title: President and Chief Executive Officer

**BY-LAWS**  
**OF**  
**ILC HOLDINGS, INC.**  
a Delaware corporation

**ARTICLE I**

**Meetings of Stockholders**

Section 1. **Annual Meetings**. The annual meeting of stockholders shall be held at such time and place and on such date in each year as may be fixed by the board of directors and stated in the notice of the meeting, for the election of directors, the consideration of reports to be laid before such meeting and the transaction of such other business as may properly come before the meeting.

Section 2. **Special Meetings**. Special meetings of the stockholders shall be called upon the written request of the chairman of the board of directors, the chief executive officer, the president, the directors by action at a meeting, a majority of the directors acting without a meeting, or of the holders of shares entitling them to exercise a majority of the voting power of the Corporation entitled to vote thereat. Calls for such meetings shall specify the purposes thereof. No business other than that specified in the call shall be considered at any special meeting.

Section 3. **Notices of Meetings**. Unless waived, and except as provided in Section 230 of the General Corporation Law of the State of Delaware (the "**DGCL**"), written notice of each annual or special meeting stating the date, time, place and purposes thereof shall be given by personal delivery or by mail to each stockholder of record entitled to vote at or entitled to notice of the meeting, not more than sixty days nor less than ten days before any such meeting. If mailed, such notice shall be directed to the stockholder at his address as the same appears upon the records of the Corporation. Any stockholder, either before or after any meeting, may waive any notice required to be given by law or under these By-laws.

Section 4. **Place of Meetings**. Meetings of stockholders shall be held at the principal office of the Corporation unless the board of directors determines that a meeting shall be held at some other place within or without the State of Delaware and causes the notice thereof to so state.

Section 5. **Quorum**. The holders of shares entitling them to exercise a majority of the voting power of the Corporation entitled to vote at any meeting, present in person or by proxy, shall constitute a quorum for the transaction of business to be considered at such meeting; provided, however, that no action required by law or by the Certificate of Incorporation or these By-laws to be authorized or taken by the holders of a designated proportion of the shares of any particular class or of each class may be authorized or taken by a lesser proportion; and provided, further, that if a separate class vote is required with respect to any matter, the holders of a majority of the outstanding shares of such class, present in person or by proxy, shall constitute a quorum of such class, and the affirmative vote of the majority of shares of such class so present shall be the act of such class. The holders of a majority of the voting shares represented at a



meeting, whether or not a quorum is present, may adjourn such meeting from time to time, until a quorum shall be present.

Section 6. Record Date. The board of directors may fix a record date for any lawful purpose, including, without limiting the generality of the foregoing, the determination of stockholders entitled to (i) receive notice of or to vote at any meeting of stockholders or any adjournment thereof or to express consent to corporate action in writing without a meeting, (ii) receive payment of any dividend or other distribution or allotment of any rights, or (iii) exercise any rights in respect of any change, conversion or exchange of stock. Such record date shall not precede the date on which the resolution fixing the record date is adopted by the board of directors. Such record date shall not be more than sixty days nor less than ten days before the date of such meeting, nor more than sixty days before the date fixed for the payment of any dividend or distribution or the date fixed for the receipt or the exercise of rights, nor more than ten days after the date on which the resolution fixing the record date for such written consent is adopted by the board of directors, as the case may be.

If a record date shall not be fixed in respect of any such matter, the record date shall be determined in accordance with the DGCL.

Section 7. Proxies. A person who is entitled to attend a stockholders' meeting, to vote thereat, or to execute consents, waivers or releases, may be represented at such meeting or vote thereat, and execute consents, waivers and releases, and exercise any of his other rights, by proxy or proxies appointed by a writing signed by such person.

## ARTICLE II

### Directors

Section 1. Number of Directors. Until changed in accordance with the provisions of this section, the number of directors of the Corporation, none of whom need be stockholders, shall be no fewer than two (2) and no more than three (3). The number of directors may be fixed or changed by amendment of these By-laws or by resolution of the board of directors.

Section 2. Election of Directors. Directors shall be elected at the annual meeting of stockholders, but when the annual meeting is not held or directors are not elected thereat, they may be elected at a special meeting called and held for that purpose. Such election shall be by ballot whenever requested by any stockholder entitled to vote at such election, but unless such request is made the election may be conducted in any manner approved at such meeting.

At each meeting of stockholders for the election of directors, the persons receiving the greatest number of votes shall be directors.

Section 3. Term of Office. Each director shall hold office until the annual meeting next succeeding his election and until his successor is elected and qualified, or until his earlier resignation, removal from office or death.

Section 4. Removal. All the directors, or all the directors of a particular class, or any individual director may be removed from office, without assigning any cause, by the vote of

the holders of a majority of the voting power entitling them to elect directors in place of those to be removed.

Section 5. Vacancies. Vacancies in the board of directors may be filled by a majority vote of the remaining directors until an election to fill such vacancies is held. Stockholders entitled to elect directors shall have the right to fill any vacancy in the board (whether the same has been temporarily filled by the remaining directors or not) at any meeting of the stockholders called for that purpose, and any directors elected at any such meeting of stockholders shall serve until the next annual election of directors and until their successors are elected and qualified.

Section 6. Quorum and Transaction of Business. A majority of the whole authorized number of directors shall constitute a quorum for the transaction of business, except that a majority of the directors in office shall constitute a quorum for filling a vacancy on the board. Whenever less than a quorum is present at the time and place appointed for any meeting of the board, a majority of those present may adjourn the meeting from time to time, until a quorum shall be present. The act of a majority of the directors present at a meeting at which a quorum is present shall be the act of the board.

Section 7. Annual Meeting. Annual meetings of the board of directors shall be held immediately following annual meetings of the stockholders, or as soon thereafter as is practicable. If no annual meeting of the stockholders is held, or if directors are not elected thereat, then the annual meeting of the board of directors shall be held immediately following any special meeting of the stockholders at which directors are elected, or as soon thereafter as is practicable. If such annual meeting of directors is held immediately following a meeting of the stockholders, it shall be held at the same place at which such stockholders' meeting was held.

Section 8. Regular Meetings. Regular meetings of the board of directors shall be held at such times and places, within or without the State of Delaware, as the board of directors may, by resolution, from time to time determine. The secretary shall give notice of each such resolution to any director who was not present at the time the same was adopted, but no further notice of such regular meeting need be given.

Section 9. Special Meetings. Special meetings of the board of directors may be called by the chairman of the board, the chief executive officer, the president, any vice president or any two members of the board of directors, and shall be held at such times and places, within or without the State of Delaware, as may be specified in such call.

Section 10. Notice of Annual or Special Meetings. Notice of the time and place of each annual or special meeting of the board of directors shall be given to each director by the secretary or by the person or persons calling such meeting. Such notice need not specify the purpose or purposes of the meeting and may be given in any manner or method and at such time so that the director receiving it may have reasonable opportunity to attend the meeting. Such notice shall, in all events, be deemed to have been properly and duly given if mailed at least forty-eight hours prior to the meeting and directed to the residence of each director as shown upon the secretary's records. The giving of notice shall be deemed to have been waived by any

director who shall attend and participate in such meeting and may be waived, in writing, by any director either before or after such meeting.

Section 11. Compensation. The directors, as such, shall be entitled to receive such reasonable compensation, if any, for their services as may be fixed from time to time by resolution of the board, and expenses of attendance, if any, may be allowed for attendance at each annual, regular or special meeting of the board. Nothing herein contained shall be construed to preclude any director from serving the Corporation in any other capacity and receiving compensation therefor. Members of the executive committee or of any standing or special committee may, by resolution of the board, be allowed such compensation for their services as the board may deem reasonable, and additional compensation may be allowed to directors for special services rendered.

### ARTICLE III

#### Committees

Section 1. Executive Committee. The board of directors may from time to time, by resolution passed by a majority of the whole board, create an executive committee of three or more directors, the members of which shall be elected by the board of directors to serve during the pleasure of the board. If the board of directors does not designate a chairman of the executive committee, the executive committee shall elect a chairman from its own number. Except as otherwise provided herein and in the resolution creating an executive committee, such committee shall, during the intervals between the meetings of the board of directors, possess and may exercise all of the powers of the board of directors in the management of the business and affairs of the Corporation, other than that of filling vacancies among the directors or in any committee of the directors or except as provided by law. The executive committee shall keep full records and accounts of its proceedings and transactions. All action by the executive committee shall be reported to the board of directors at its meeting next succeeding such action and shall be subject to control, revision and alteration by the board of directors, provided that no rights of third persons shall be prejudicially affected thereby. Vacancies in the executive committee shall be filled by the directors, and the directors may appoint one or more directors as alternate members of the committee who may take the place of any absent member or members at any meeting.

Section 2. Meetings of Executive Committee. Subject to the provisions of these By-laws, the executive committee shall fix its own rules of procedure and shall meet as provided by such rules or by resolutions of the board of directors, and it shall also meet at the call of the chairman of the board, the chief executive officer, the president, the chairman of the executive committee or any two members of the committee. Unless otherwise provided by such rules or by such resolutions, the provisions of Section 10 of Article II relating to the notice required to be given of meetings of the board of directors shall also apply to meetings of the members of the executive committee. A majority of the executive committee shall be necessary to constitute a quorum. The executive committee may act in writing without a meeting, but no such action of the executive committee shall be effective unless concurred in by all members of the committee.

Section 3. Other Committees. The board of directors may by resolution provide for such other standing or special committees as it deems desirable, and discontinue the same at its pleasure. Each such committee shall have such powers and perform such duties, not inconsistent with law, as may be delegated to it by the board of directors. The provisions of Section 1 and Section 2 of this Article shall govern the appointment and action of such committees so far as consistent, unless otherwise provided by the board of directors. Vacancies in such committees shall be filled by the board of directors or as the board of directors may provide.

#### ARTICLE IV

##### Officers

Section 1. General Provisions. The board of directors shall elect a president, such number of vice presidents, if any, as the board may from time to time determine, a secretary and a treasurer. The board of directors may also elect a chairman of the board of directors and may from time to time create such offices and appoint such other officers, subordinate officers and assistant officers as it may determine. The chairman of the board, if one be elected, shall be, but the other officers need not be, chosen from among the members of the board of directors. Any two or more of such offices, other than those of president and vice president, may be held by the same person.

Section 2. Term of Office. The officers of the Corporation shall hold office at the pleasure of the board of directors, and, unless sooner removed by the board of directors, until the annual meeting of the board of directors following the date of their election and until their successors are chosen and qualified. The board of directors may remove any officer at any time, with or without cause. Subject to the provisions of Section 8 of Article V of these By-laws, a vacancy in any office, however created, shall be filled by the board of directors.

#### ARTICLE V

##### Duties of Officers

Section 1. Chairman of the Board. The chairman of the board, if any, shall preside at all meetings of the board of directors and meetings of stockholders and shall have such other powers and duties as may be prescribed by the board of directors.

Section 2. Chief Executive Officer. The chief executive officer, if any, shall have, subject to the powers of the board of directors, charge of the overall general direction of the business and affairs of the Corporation, control of the general policies relating to all aspects of the Corporation's business operations, and the power to fix the compensation of officers and the power to remove officers. In the absence of the chairman of the board, or if none be elected, the chief executive officer shall preside at meetings of stockholders. The chief executive officer may appoint and discharge agents and employees and perform such other duties as are incident to such office. The chief executive officer shall have such other powers and perform such other duties as may be prescribed by the board of directors or as may be provided in these By-laws. In

the absence or disability of the officer designated as chief executive officer, the president shall perform any and all duties of the chief executive officer

Section 3. President. The president shall be the chief operating officer of the Corporation and shall have such other powers and duties as may be prescribed by the board of directors or the chief executive officer. The president shall have authority to sign all certificates for shares and all deeds, mortgages, bonds, agreements, notes, and other instruments requiring his signature; and shall have all the powers and duties prescribed by the DGCL and such others as the board of directors may from time to time assign to him.

Section 4. Vice Presidents. The vice presidents shall have such powers and duties as may from time to time be assigned to them by the board of directors, the chief executive officer or the president. At the request of the chief executive officer or the president, or in the case of his absence or disability, the vice president designated by the president (or in the absence of such designation, the vice president designated by the board) shall perform all the duties of the president and, when so acting, shall have all the powers of the president. The authority of vice presidents to sign in the name of the Corporation certificates for shares and deeds, mortgages, bonds, agreements, notes and other instruments shall be coordinate with like authority of the president.

Section 5. Secretary. The secretary shall keep minutes of all the proceedings of the stockholders and the board of directors and shall make proper record of the same, which shall be attested by him; shall have authority to execute and deliver certificates as to any of such proceedings and any other records of the Corporation; shall have authority to sign all certificates for shares and all deeds, mortgages, bonds, agreements, notes and other instruments to be executed by the Corporation which require his signature; shall give notice of meetings of stockholders and directors; shall produce on request at each meeting of stockholders a certified list of stockholders arranged in alphabetical order; shall keep such books and records as may be required by law or by the board of directors; and, in general, shall perform all duties incident to the office of secretary and such other duties as may from time to time be assigned to him by the board of directors, the chief executive officer or the president.

Section 6. Treasurer. The treasurer shall have general supervision of all finances; he shall have in charge all money, bills, notes, deeds, leases, mortgages and similar property belonging to the Corporation, and shall do with the same as may from time to time be required by the board of directors. He shall cause to be kept adequate and correct accounts of the business transactions of the Corporation, including accounts of its assets, liabilities, receipts, disbursements, gains, losses, stated capital and shares, together with such other accounts as may be required; and he shall have such other powers and duties as may from time to time be assigned to him by the board of directors, the chief executive officer or the president.

Section 7. Assistant and Subordinate Officers. Each other officer shall perform such duties as the board of directors, the chief executive officer or the president may prescribe. The board of directors may, from time to time, authorize any officer to appoint and remove subordinate officers, to prescribe their authority and duties, and to fix their compensation.

Section 8. Duties of Officers May Be Delegated. In the absence of any officer of the Corporation, or for any other reason the board of directors may deem sufficient, the board of directors may delegate, for the time being, the powers or duties, or any of them, of such officers to any other officer or to any director.

## ARTICLE VI

### Indemnification and Insurance

Section 1. Indemnification in Non-Derivative Actions. The Corporation shall indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the Corporation) by reason of the fact that he is or was a director or officer of the Corporation, or is or was serving at the request of the Corporation as a director, officer, member, manager, employee or agent of another corporation, limited liability company, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by him in connection with such action, suit or proceeding if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the Corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful. The termination of any action, suit or proceeding by judgment, order, settlement, conviction, or upon a plea of nolo contendere or its equivalent, shall not, of itself, create a presumption that the person did not act in good faith and in a manner which he reasonably believed to be in or not opposed to the best interests of the Corporation, and, with respect to any criminal action or proceeding, had reasonable cause to believe that his conduct was unlawful.

Section 2. Indemnification in Derivative Actions. The Corporation shall indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the Corporation to procure a judgment in its favor by reason of the fact that he is or was a director or officer of the Corporation, or is or was serving at the request of the Corporation as a director, officer, member, manager, employee or agent of another corporation, limited liability company, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees) actually and reasonably incurred by him in connection with the defense or settlement of such action or suit if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the Corporation and except that no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the Corporation unless and only to the extent that the Court of Chancery or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

Section 3. Indemnification as a Matter of Right. To the extent that a director, officer, employee or agent of the Corporation has been successful on the merits or otherwise in defense of any action, suit or proceeding referred to in Sections 1 and 2 of this Article VI, or in

defense of any claim, issue or matter therein, he shall be indemnified against expenses (including attorneys' fees) actually and reasonably incurred by him in connection therewith.

Section 4. Determination of Conduct. Any indemnification under Sections 1 and 2 of this Article VI (unless ordered by a court) shall be made by the Corporation only as authorized in the specific case upon a determination that indemnification of the director, officer, employee or agent is proper in the circumstances because he has met the applicable standard of conduct set forth in Sections 1 and 2 of this Article VI. Such determination shall be made (1) by the board of directors by a majority vote of a quorum consisting of directors who were not parties to such action, suit or proceeding, or (2) if such a quorum is not obtainable, or, even if obtainable a quorum of disinterested directors so directs, by independent legal counsel in a written opinion, or (3) by the stockholders.

Section 5. Advance Payment of Expenses. Expenses incurred in defending a civil or criminal action, suit or proceeding may be paid by the Corporation in advance of the final disposition of such action, suit or proceeding upon receipt of an undertaking by or on behalf of the director, officer, employee or agent to repay such amount if it shall ultimately be determined that he is not entitled to be indemnified by the Corporation as authorized in this section.

Section 6. Nonexclusivity. The indemnification and advancement of expenses provided by, or granted pursuant to, this Article VI shall not be deemed exclusive of any other rights to which those seeking indemnification or advancement of expenses may be entitled under any by-law, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in his official capacity and as to action in another capacity while holding such office.

Section 7. Liability Insurance. The Corporation shall have the power to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the Corporation, or is or was serving at the request of the Corporation as a director, officer, member, manager, employee or agent of another corporation, limited liability company, partnership, joint venture, trust or other enterprise against any liability asserted against him and incurred by him in any such capacity, or arising out of his status as such, whether or not the Corporation would have the power to indemnify him against such liability under the provisions of this section.

Section 8. Corporation. For purposes of this Article VI, references to "the Corporation" shall include, in addition to the resulting entity, any constituent entity (including any constituent of a constituent) absorbed in a consolidation or merger which, if its separate existence had continued, would have had power and authority to indemnify its directors, officers, members, managers and employees or agents, so that any person who is or was a director, officer, member, manager, employee or agent of such constituent entity, or is or was serving at the request of such constituent entity as a director, officer, member, manager, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, shall stand in the same position under the provisions of this Article VI with respect to the resulting or surviving entity as he would have with respect to such constituent entity if its separate existence had continued.

Section 9. Employee Benefit Plans. For purposes of this Article VI, references to any "other enterprise" shall include employee benefit plans; references to "fines" shall include

any excise taxes assessed on a person with respect to an employee benefit plan; and references to “serving at the request of the Corporation” shall include any service as a director, officer, employee or agent of the Corporation which imposes duties on, or involves services by, such director, officer, employee or agent with respect to an employee benefit plan, its participants, or beneficiaries; and a person who acted in good faith and in a manner he reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan shall be deemed to have acted in a manner “not opposed to the best interests of the Corporation” as referred to in this Article VI.

Section 10. Continuation. The indemnification and advancement of expenses provided by, or granted pursuant to, this Article VI shall, unless otherwise provided when authorized or ratified, continue as to a person who has ceased to be a director, officer, employee or agent and shall inure to the benefit of the heirs, executors and administrators of such a person.

## ARTICLE VII

### Certificates for Shares

Section 1. Form and Execution. Certificates for shares, certifying the number of full-paid shares owned, shall be issued to each stockholder in such form as shall be approved by the board of directors. Such certificates shall be signed by the chairman or vice-chairman of the board of directors, the chief executive officer or the president or a vice president and by the secretary or an assistant secretary or the treasurer or an assistant treasurer; provided, however, that the signatures of any of such officers and the seal of the Corporation upon such certificates may be facsimiles, engraved, stamped or printed. If any officer or officers who shall have signed, or whose facsimile signature shall have been used, printed or stamped on any certificate or certificates for shares, shall cease to be such officer or officers, because of death, resignation or otherwise, before such certificate or certificates shall have been delivered by the Corporation, such certificate or certificates shall nevertheless be as effective in all respects as though signed by a duly elected, qualified and authorized officer or officers, and as though the person or persons who signed such certificate or certificates, or whose facsimile signature or signatures shall have been used thereon, had not ceased to be an officer or officers of the Corporation.

Section 2. Registration of Transfer. Any certificate for shares of the Corporation shall be transferable in person or by attorney upon the surrender thereof to the Corporation or any transfer agent therefor (for the class of shares represented by the certificate surrendered) properly endorsed for transfer and accompanied by such assurances as the Corporation or such transfer agent may require as to the genuineness and effectiveness of each necessary endorsement.

Section 3. Lost, Destroyed or Stolen Certificates. A new share certificate or certificates may be issued in place of any certificate theretofore issued by the Corporation which is alleged to have been lost, destroyed or wrongfully taken upon (i) the execution and delivery to the Corporation by the person claiming the certificate to have been lost, destroyed or wrongfully taken of an affidavit of that fact, specifying whether or not, at the time of such alleged loss, destruction or taking, the certificate was endorsed, and (ii) the furnishing to the Corporation of indemnity and other assurances, if any, satisfactory to the Corporation and to all transfer agents



and registrars of the class of shares represented by the certificate against any and all losses, damages, costs, expenses or liabilities to which they or any of them may be subjected by reason of the issue and delivery of such new certificate or certificates or in respect of the original certificate.

Section 4. Registered Stockholders. A person in whose name shares are of record on the books of the Corporation shall conclusively be deemed the unqualified owner and holder thereof for all purposes and to have capacity to exercise all rights of ownership. Neither the Corporation nor any transfer agent of the Corporation shall be bound to recognize any equitable interest in or claim to such shares on the part of any other person, whether disclosed upon such certificate or otherwise, nor shall they be obliged to see to the execution of any trust or obligation.

#### ARTICLE VIII

##### Fiscal Year

The fiscal year of the Corporation shall end on such date in each year as shall be designated from time to time by the board of directors. In the absence of such designation, the fiscal year of the Corporation shall end on December 31 in each year.

#### ARTICLE IX

##### Seal

The board of directors may provide a suitable seal containing the name of the Corporation. If deemed advisable by the board of directors, duplicate seals may be provided and kept for the purposes of the Corporation.

#### ARTICLE X

##### Amendments

These By-laws shall be subject to alteration, amendment, repeal, or the adoption of new By-laws either by the affirmative vote or written consent of a majority of the whole board of directors, or by the affirmative vote or written consent of the holders of record of a majority of the outstanding stock of the Corporation, present in person or represented by proxy and entitled to vote in respect thereof, given at an annual meeting or at any special meeting at which a quorum shall be present.

CERTIFICATE OF FORMATION

OF

NEW ILC MERGECO, LLC

The undersigned, an authorized natural person, for the purpose of forming a limited liability company under the provisions and subject to the requirements of the State of Delaware (particularly Chapter 18, Title 6 of the Delaware Code and the acts amendatory thereof and supplemental thereto, and known, identified, and referred to herein as the "Delaware Limited Liability Company Act"), hereby certifies that:

1. The name of the limited liability company (hereinafter called the "Limited Liability Company") is New ILC MergeCo, LLC.
2. The address of the registered office and the name and the address of the registered agent of the Limited Liability Company required to be maintained by Section 18-104 of the Delaware Limited Liability Company Act is c/o Corporation Service Company, 2711 Centerville Road, Suite 400 in the City of Wilmington, County of New Castle.

IN WITNESS WHEREOF, the undersigned, as an authorized person of the Company, has caused this Certificate of Formation to be duly executed as of the date set forth below.

Effective Date: August 12, 2008

*/s/* Yedran I. Busija Vedran I. Busija  
(Authorized Signatory for the Company)

CERTIFICATE OF AMENDMENT  
TO  
CERTIFICATE OF FORMATION  
OF  
NEW ILC MERGECO, LLC

It is hereby certified that:

1. The name of the limited liability company is New ILC MergeCo, LLC (the "Company").
2. The certificate of formation of the Company is hereby amended by striking out the first numbered paragraph and by substituting in lieu of said paragraph the following new paragraph: "1. The name of the limited liability company (hereinafter called the "Limited Liability Company") is ILC Industries, LLC."

IN WITNESS WHEREOF, the undersigned, as an authorized person of the Company, has caused this Certificate of Amendment to the Certificate of Formation to be duly executed as of the date set forth below.

Effective Date: December 3, 2010

By: /s/ Kenneth J. Sheedy.  
Kenneth J. Sheedy  
(Authorized Signatory for the Company)

**AMENDED AND RESTATED**  
**LIMITED LIABILITY COMPANY AGREEMENT**  
**OF**  
**ILC INDUSTRIES LLC**

The undersigned, being the sole member of ILC Industries, LLC, a Delaware limited liability company (the "Company"), does hereby execute this Amended and Restated Limited Liability Company Agreement of the Company (this "Limited Liability Company Agreement") effective as of this 7th day of July, 2016. The Company was formed as a Delaware limited liability company on the 12th day of August, 2008, upon the filing of its Certificate of Formation with the Secretary of State of the State of Delaware.

**ARTICLE I**

**MEMBER**

ILC Holdings, Inc. is the sole member of the Company (the "Member").

**ARTICLE II**

**OFFICE**

The principal office of the Company shall be located at 1301 East Ninth Street, Suite 3000, Cleveland, Ohio 44114 (the "Principal Office"). The Company may have such other offices as the Member may designate or as the business of the Company may require.

**ARTICLE III**

**PURPOSE**

The sole purpose for which the Company is organized is to conduct any lawful business purpose as defined in the Delaware Limited Liability Company Act. The Company shall have all of the powers granted to a limited liability company under the laws of the State of Delaware.

**ARTICLE IV**

**DURATION OF THE COMPANY**

The Company shall continue in perpetuity unless terminated sooner by operation of law or by decision of the Member.

## **ARTICLE V**

### **CAPITAL CONTRIBUTIONS**

The Member may in the future contribute any additional capital deemed necessary by the Member for the operation of the Company.

## **ARTICLE VI**

### **OWNERSHIP OF MEMBERSHIP INTERESTS**

The Member shall own all of the membership interests in the Company and the Member shall have a 100% distributive share of the Company's profits, losses and cash flow.

## **ARTICLE VII**

### **MANAGEMENT**

The Member will manage the affairs of the Company, but shall be entitled to appoint or authorize representatives, including, but not limited to, such officers as the Member may deem necessary, to act on behalf of the Company and to delegate the authority otherwise reserved to the Member to such representatives. The signature of the Member of the Company shall be sufficient to bind the Company with respect to any matter on which the Member shall be required or entitled to act. The Member has the power, on behalf of the Company, to do all things necessary or convenient to carry out the business and affairs of the Company. A copy of this Limited Liability Company Agreement may be shown to third parties (and all third parties may rely hereupon) in order to confirm the identity and authorization of the Member.

## **ARTICLE VIII**

### **BOOKS AND RECORDS**

The Company books shall be maintained at the Principal Office. The fiscal year of the Company shall end on such date in each year as shall be designated from time to time by the Member. The Member shall cause all known business transactions pertaining to the purpose of the Company to be entered properly and completely into said books. The Member will prepare and file on behalf of the Company all tax returns in a timely manner.

## **ARTICLE IX**

### **AMENDMENTS**

This Limited Liability Company Agreement may be amended by a written instrument adopted by the Member and executed by the Member at any time, for any purpose, at the sole discretion of the Member.

## **ARTICLE IX**

### **INDEMNIFICATION**

To the fullest extent permitted by law, the Company shall defend, indemnify, and save harmless the Member and any officers of the Company (each an "Indemnified Person") for all loss, liability, damage, cost, or expense (including reasonable attorneys' fees) incurred by reason of any demands, claims, suits, actions, or proceedings arising out of (a) the Indemnified Person's relationship to the Company or (b) such Indemnified Person's capacity as an officer, except for such loss, liability, damage, cost, or expense as arises out of the theft, fraud, willful misconduct, or gross negligence by such Indemnified Person. To the fullest extent permitted by law, expenses incurred in defending a civil or criminal action, suit or proceeding shall be paid by the Company in advance of the final disposition of such action, suit or proceeding, and not less often than monthly upon receipt of an undertaking by and on behalf of the Indemnified Person to repay such amount if it shall be ultimately determined that he or she is not entitled to be indemnified by the Company. The indemnification and advancement of expenses authorized in or ordered by a court pursuant to this Article X shall continue for a person who has ceased to be an officer and inures to the benefit of the heirs, executors and administrators of such a person.

The Company may obtain, at the expense of the Company, directors and officers insurance coverage in an amount and on such terms as determined by the Member.

## **ARTICLE XI**

### **BANKING**

All funds of the Company shall be deposited in one or more Company checking accounts as shall be designated by the Member, and the Member is authorized to sign any such checks or withdrawal forms.

## **ARTICLE XII**

### **APPLICABILITY OF UCC ARTICLE 8**

The Company hereby irrevocably elects that all membership interests in the Company shall be securities governed by Article 8 of the Uniform Commercial Code. Each

certificate evidencing membership interests in the Company shall bear the following legend:

“This certificate evidences an interest in the Member and shall be a security governed by Article 8 of the Uniform Commercial Code as in effect in the State of Delaware and, to the extent permitted by applicable law, each other applicable jurisdiction.”

No change to this provision shall be effective until all outstanding certificates have been surrendered for cancellation and any new certificates thereafter issued shall not bear the foregoing legend.

### **ARTICLE XIII**

#### **MISCELLANEOUS**

This Limited Liability Company Agreement is made by the Member for the exclusive benefit of the Company, its Member, and his, her or its successors and assignees. This Limited Liability Company Agreement is expressly not intended for the benefit of any creditor of the Company or any other person or entity. Except and only to the extent provided by applicable statute or otherwise in this Limited Liability Company Agreement, no such creditor or third party shall have any rights under this Limited Liability Company Agreement or any agreement between the Company and the Member with respect to any capital contribution or otherwise.

[Signature Page Follows]

IN WITNESS WHEREOF, the Member has hereunto set its hand effective the day and year first written above.

ILC HOLDINGS, INC.  
its sole member

By: /s/ Terrance Paradie  
Name: Terrance Paradie  
Its: President



**CERTIFICATE OF FORMATION**

**OF**

**JOHNSON LIVERPOOL LLC**

(Under Section 18-201 of the Limited Liability Company Act)

**FIRST:** The name of the limited liability company is **Johnson Liverpool LLC**.

**SECOND:** The name and address of the: registered office, and the name and address of the registered agent for service of process, are Corporation Service Company, 2711 Centerville Road, Suite 400, Wilmington, Delaware 19808.

**IN WITNESS WHEREOF**, this certificate of formation has been subscribed this 26th day of January, 2007, by the undersigned who affirms that the statements made herein are true under the penalties of perjury.

/s/ Paul W. Reichel  
Paul W. Reichel, Esq.  
Bond, Schoeneck & King, PLLC  
One Lincoln Center  
Syracuse, New York 11202

**AMENDED AND RESTATED**  
**LIMITED LIABILITY COMPANY AGREEMENT**  
**OF**  
**JOHNSON LIVERPOOL LLC**

The undersigned, being the sole member of JOHNSON LIVERPOOL LLC, a Delaware limited liability company (the "Company"), does hereby execute this Amended and Restated Limited Liability Company Agreement of the Company (this "Limited Liability Company Agreement") effective as of this 23rd day of September, 2016. The Company was formed as a Delaware limited liability company on the 26th day of January, 2007, upon the filing of its Certificate of Formation with the Secretary of State of the State of Delaware.

**ARTICLE I**

**MEMBER**

Young & Franklin Inc. is the sole member of the Company (the "Member").

**ARTICLE II**

**OFFICE**

The principal office of the Company shall be located at 942 Old Liverpool Road, Liverpool, New York 13088 (the "Principal Office"). The Company may have such other offices as the Member may designate or as the business of the Company may require.

**ARTICLE III**

**PURPOSE**

The sole purpose for which the Company is organized is to conduct any lawful business purpose as defined in the Delaware Limited Liability Company Act. The Company shall have all of the powers granted to a limited liability company under the laws of the State of Delaware.

**ARTICLE IV**

**DURATION OF THE COMPANY**

The Company shall continue in perpetuity unless terminated sooner by operation of law or by decision of the Member.

## **ARTICLE V**

### **CAPITAL CONTRIBUTIONS**

The Member may in the future contribute any additional capital deemed necessary by the Member for the operation of the Company.

## **ARTICLE VI**

### **OWNERSHIP OF MEMBERSHIP INTERESTS**

The Member shall own all of the membership interests in the Company and the Member shall have a 100% distributive share of the Company's profits, losses and cash flow.

## **ARTICLE VII**

### **MANAGEMENT**

The Member will manage the affairs of the Company, but shall be entitled to appoint or authorize representatives, including, but not limited to, such officers as the Member may deem necessary, to act on behalf of the Company and to delegate the authority otherwise reserved to the Member to such representatives. The signature of the Member of the Company shall be sufficient to bind the Company with respect to any matter on which the Member shall be required or entitled to act. The Member has the power, on behalf of the Company, to do all things necessary or convenient to carry out the business and affairs of the Company. A copy of this Limited Liability Company Agreement may be shown to third parties (and all third parties may rely hereupon) in order to confirm the identity and authorization of the Member.

## **ARTICLE VIII**

### **BOOKS AND RECORDS**

The Company books shall be maintained at the Principal Office. The fiscal year of the Company shall end on such date in each year as shall be designated from time to time by the Member. The Member shall cause all known business transactions pertaining to the purpose of the Company to be entered properly and completely into said books. The Member will prepare and file on behalf of the Company all tax returns in a timely manner.

**ARTICLE IX**  
**AMENDMENTS**

This Limited Liability Company Agreement may be amended by a written instrument adopted by the Member and executed by the Member at any time, for any purpose, at the sole discretion of the Member.

**ARTICLE IX**  
**INDEMNIFICATION**

To the fullest extent permitted by law, the Company shall defend, indemnify, and save harmless the Member and any officers of the Company (each an "Indemnified Person") for all loss, liability, damage, cost, or expense (including reasonable attorneys' fees) incurred by reason of any demands, claims, suits, actions, or proceedings arising out of (a) the Indemnified Person's relationship to the Company or (b) such Indemnified Person's capacity as an officer, except for such loss, liability, damage, cost, or expense as arises out of the theft, fraud, willful misconduct, or gross negligence by such Indemnified Person. To the fullest extent permitted by law, expenses incurred in defending a civil or criminal action, suit or proceeding shall be paid by the Company in advance of the final disposition of such action, suit or proceeding, and not less often than monthly upon receipt of an undertaking by and on behalf of the Indemnified Person to repay such amount if it shall be ultimately determined that he or she is not entitled to be indemnified by the Company. The indemnification and advancement of expenses authorized in or ordered by a court pursuant to this Article X shall continue for a person who has ceased to be an officer and inures to the benefit of the heirs, executors and administrators of such a person.

The Company may obtain, at the expense of the Company, directors and officers insurance coverage in an amount and on such terms as determined by the Member.

**ARTICLE XI**  
**BANKING**

All funds of the Company shall be deposited in one or more Company checking accounts as shall be designated by the Member, and the Member is authorized to sign any such checks or withdrawal forms.

## ARTICLE XII

### APPLICABILITY OF UCC ARTICLE 8

The Company hereby irrevocably elects that all membership interests in the Company shall be securities governed by Article 8 of the Uniform Commercial Code. Each certificate evidencing membership interests in the Company shall bear the following legend:

“This certificate evidences an interest in Johnson Liverpool LLC and shall be a security for purposes of Article 8 of the Uniform Commercial Code.”

No change to this provision shall be effective until all outstanding certificates have been surrendered for cancellation and any new certificates thereafter issued shall not bear the foregoing legend.

## ARTICLE XIII

### MISCELLANEOUS

This Limited Liability Company Agreement is made by the Member for the exclusive benefit of the Company, its Member, and his, her or its successors and assignees. This Limited Liability Company Agreement is expressly not intended for the benefit of any creditor of the Company or any other person or entity. Except and only to the extent provided by applicable statute or otherwise in this Limited Liability Company Agreement, no such creditor or third party shall have any rights under this Limited Liability Company Agreement or any agreement between the Company and the Member with respect to any capital contribution or otherwise.

IN WITNESS WHEREOF, the Member has hereunto set its hand effective the day and year first written above.

Young & Franklin Inc., its sole member

By: /s/ Terrance Paradie  
Name: Terrance Paradie  
Its: Chief Executive Officer

CERTIFICATE OF INCORPORATION

OF

TACTAIR FLUID CONTROLS, INC.

Under Section 402 of the Business Corporation Law

The undersigned, a natural person of the age of eighteen years or over, desiring to form a corporation pursuant to the provisions of the Business Corporation Law of the State of New York, hereby certifies as follows:

FIRST: The name of the corporation is

Tactair Fluid Controls, Inc.

SECOND: The purpose for which it is formed is as follows:

To engage in any lawful act or activity for which corporations may be organized under the Business Corporation Law, provided, however, that the corporation is not formed to engage in any act or activity requiring the consent or approval of any state official, department, board, agency or other body without first obtaining the consent of such body.

THIRD: The office of the corporation in the State of New York is to be located in the County of Westchester.

FOURTH: The aggregate number of shares which the corporation shall have authority to issue is 200 shares, all of which have no par value.

FIFTH: The Secretary of State is designated as the agent of the corporation upon whom process against the corporation may be served, and the address to which the Secretary of State shall mail a copy of any process against the corporation served upon him is:

Young & Franklin, Inc.  
942 Old Liverpool Road  
Liverpool, New York 13088  
Attention: Dudley D. Johnson

IN WITNESS WHEREOF, this Certificate has been signed this 21st day of August, 1986,

and affirmed that the statements made herein are true under penalties of perjury.

/s/ Karen Foley  
Karen Foley, Sole Incorporator  
280 Park Avenue  
New York, New York 100178

CERTIFICATE OF AMENDMENT OF  
CERTIFICATE OF INCORPORATION OF  
TACTAIR FLUID CONTROLS INC.

Under Section 805 of the Business Corporation Law

Pursuant to the provisions of section 805 of the Business Corporation Law, the undersigned, Dudley D. Johnson and Thomas E. Kruger, being respectively the Chairman of the Board and Assistant Secretary of Tactair Fluid Controls Inc., a New York corporation (the "Corporation"), do hereby certify as follows:

FIRST: The name of the corporation is Tactair Fluid Controls Inc.

SECOND: The certificate of incorporation of the Corporation was filed by the Department of State, Albany, New York, on August 22, 1986 under the original name Tactair Fluid Controls Inc.

THIRD: The certificate of Incorporation is amended as authorized by Section 801 of the Business Corporation Law to amend Article FOURTH to Increase the aggregate number of shares the Corporation is authorized to issue from 200 common shares with no par value all of which are issued and outstanding to 100,000 shares of common stock with a par value of \$0.01 per share. In addition, the rate of change of the shares of Corporation stock, no par value, into shares of common stock, par value \$0.01 per share, is one share of common stock with a \$0.01 par value for one share of common stock with no par value on the effective date of this certificate of amendment.

FOURTH: To accomplish such amendment, Article FOURTH of the certificate of incorporation, which provides for the number of authorized shares that the Corporation shall have the authority to issue and the par value thereof, is amended in its entirety to read as follows:

"FOURTH: The aggregate number of shares which the Corporation shall have the authority to Issue is 100,000 shares, par value \$0.01 per share, all of which are to be of the same class and all of which are to be designated common shares."

FIFTH: The foregoing amendment of the certificate of incorporation was authorized and approved by the unanimous written consent of all the directors of the Corporation and by the unanimous written consent of all holders of all of the outstanding shares of the Corporation.

IN WITNESS WHEREOF, the undersigned have executed this certificate of amendment of certificate of incorporation and affirm the truth of the statements therein set forth under penalty of perjury this 8th day of June, 1998.

/s/ Dudley D. Johnson  
Dudley D. Johnson  
Chairman of the Board



/s/ Thomas E. Kruger  
Thomas E. Kruger  
Assistant Secretary

BY-LAWS  
OF  
TACTAIR FLUID CONTROLS, INC.  
a New York corporation (the "Corporation")

ARTICLE I - OFFICES

Section 1.1. Location. The address of the office of the Corporation in the State of New York shall be in the City of Liverpool and County of Onondaga or such other address as is designated by resolution of the Board of Directors. The Corporation may also have other offices at such places within or without the State of New York as the Board of Directors may from time to time designate or the business of the Corporation may require.

ARTICLE II - MEETINGS OF SHAREHOLDERS

Section 2.1. Annual Meeting. The annual meeting of the shareholders of the Corporation for the election of directors and for the transaction of such other business as may properly come before the meeting shall be held at the principal office of the Corporation in New York State, or at such other place within or without the State of New York as the Board of Directors may fix, at 10 o'clock A.M., local time, on the last business day of August of each year, commencing with the year 1987.

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Section 2.2. Special Meetings. Special meetings of shareholders, unless otherwise prescribed by law, may be called at any time by the Board of Directors, by the President or by order of the Board of Directors pursuant to the written request of the holders of ten percent of the outstanding stock of the Corporation. At any special meeting only such business may be transacted which is related to the purpose or purposes set forth in the notice required by Section 2.4. Special meetings of shareholders shall be held at such place within or without the State of New York as shall be designated in the notice of meeting.

Section 2.3. List of Shareholders Entitled to Vote. A list of shareholders as of the record date determined pursuant to Section 5.8, certified by the corporate officer responsible for its preparation or by the Corporation's transfer agent, shall be produced at any meeting of shareholders upon the request of any shareholder thereat or prior thereto. If the right to vote at any meeting is challenged, the inspectors of election, or person presiding thereat, shall require such list of shareholders to be produced as evidence of the right of the persons challenged to vote at such meeting, and all persons who appear from such list to be shareholders entitled to vote thereat may vote at such meeting.

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Section 2.4. Notice of Meetings. Written notice of each annual and special meeting of shareholders, other than any meeting the giving of notice of which is otherwise prescribed by law, stating the place, date and hour of the meeting, and, in the case of a special meeting, indicating that it is being issued by or at the direction of the person or persons calling the meeting and stating the purpose or purposes for which it is called, shall be given, personally or by mail, not less than ten nor more than fifty days before such meeting, to each shareholder entitled to vote thereat. If mailed, such notice shall be deemed given when deposited in the United States mail, postage prepaid, directed to such shareholder at his address as it appears on the record of shareholders of the Corporation. An affidavit of the Secretary or other person giving the notice or the transfer agent of the Corporation that notice has been given shall be evidence of the facts stated therein.

Notice of any meeting need not be given to any shareholder who submits a signed waiver of notice, whether before or after the meeting. The attendance of any shareholder at a meeting, in person or by proxy, without protesting prior to the conclusion of the meeting the lack of notice of such meeting, shall constitute a waiver of notice by him.

Section 2.5. Adjourned Meeting and Notice Thereof. Any meeting of shareholders may be adjourned to another time or

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place, and the Corporation may transact at any adjourned meeting any business which might have been transacted on the original date of the meeting. Notice need not be given of the adjourned meeting if the time and place thereof are announced at the meeting at which the adjournment is taken unless a new record date is fixed for the adjourned meeting by the Board of Directors. If notice of the adjourned meeting is given, such notice shall be given to each shareholder of record entitled to vote at the adjourned meeting in the manner prescribed in Section\_2.4.

Section 2.6. Quorum. At any meeting of shareholders, except as otherwise expressly required by law or the Certificate of Incorporation, the holders of a majority of the shares entitled to vote at such meeting shall constitute a quorum for the transaction of any business, provided that when a specified item of business is required to be voted on by a class or series, voting as a class, the holders of a majority of the shares of such class or series shall constitute a quorum for the transaction of such specified item of business. In the absence of a quorum, the shareholders present may adjourn any meeting. When a quorum is once present to organize a meeting, the quorum is not broken by the subsequent withdrawal of any shareholders.

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Section 2.7. Voting. Every shareholder of record shall be entitled at every meeting of shareholders to one vote for every share standing in his name on the record of shareholders of the Corporation unless otherwise provided in the Certificate of Incorporation. Directors shall, unless otherwise required by law or by the Certificate of Incorporation, be elected by a plurality of the votes cast at a meeting of shareholders by the holders of shares entitled to vote thereon. Whenever any corporate action, other than the election of directors, is to be taken by vote of the shareholders, it shall, except as otherwise required by law or by the Certificate of Incorporation, be authorized by a majority of the votes cast at a meeting of shareholders by the holders of shares entitled to vote thereon.

Each shareholder entitled to vote at a meeting of shareholders or to express consent or dissent without a meeting may authorize another person or persons to act for him by proxy. Every proxy must be signed by the shareholder or his attorney-in-fact. No proxy shall be valid after the expiration of eleven months from the date thereof unless otherwise provided in the proxy. Every proxy shall be revocable at the pleasure of the shareholder executing it, except as otherwise provided by law.

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The Board of Directors, in advance of any shareholders' meeting, may appoint one or more inspectors to act at the meeting or any adjournment thereof. If inspectors are not so appointed, the person presiding at a shareholders' meeting may, and on the request of any shareholder entitled to vote thereat shall, appoint one or more inspectors. In case any person appointed fails to appear or act, the vacancy may be filled by appointment made in advance of the meeting by the Board of Directors or at the meeting by the person presiding thereat.

Section 2.8. Voting Rights of Certain Shares. Neither treasury shares nor shares held by another corporation, if a majority of the shares entitled to vote in the election of directors of such other corporation is held by the Corporation, shall be counted for quorum purposes or entitled to vote. Shares held by an administrator, executor, guardian, conservator, committee, or other fiduciary, except a trustee, may be voted by him, either in person or by proxy, without transfer of such shares into his name. Shares held by a trustee may be voted by him, either in person or by proxy, only after the shares have been transferred into his name as trustee or into the name of his nominee. A shareholder whose shares are pledged shall be entitled to vote such shares until the shares have been transferred into the name of the pledgee, or a nominee of the pledgee.

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Section 2.9. Action by Consent of Shareholders. Unless otherwise provided in the Certificate of Incorporation, whenever shareholders are required or permitted by law, the Certificate of Incorporation or these By-Laws to take any action by vote, such action may be taken without a meeting on written consent setting forth the action so taken, signed by the holders of all outstanding shares entitled to vote thereon.

ARTICLE III - BOARD OF DIRECTORS

Section 3.1. General Powers. The business of the Corporation shall be managed by the Board of Directors. The Board of Directors may exercise all such powers of the Corporation and have such authority and do all such lawful acts and things as are permitted by law, the Certificate of Incorporation or these By-Laws.

Section 3.2. Number of Directors. The number of directors constituting the entire Board of Directors shall not be less than three, except that if all the shares of the Corporation are owned beneficially and of record by less than three shareholders, the number of directors may be less than three but not less than the number of shareholders. Subject to such limitation, such number may be fixed or increased or decreased by amendment of the By-Laws or by action of the shareholders, or the Board of Directors, by vote of a majority of the entire Board of Directors; provided that no decrease shall shorten the



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term of any incumbent director. Initially the number of directors shall be one unless otherwise fixed pursuant to this Section.

As used in this Article, "entire Board of Directors" means the total number of directors which the Corporation would have if there were no vacancies in the Board of Directors.

Section 3.3. Election. Directors of the Corporation shall be elected to hold office until the next annual meeting. At each annual meeting of shareholders or at a special meeting in lieu of the annual meeting called for such purpose, a new Board of Directors of the Corporation shall be elected.

Section 3.4. Term. Each director shall hold office until the expiration of the term for which he is elected and until his successor is duly elected and qualified, except in the event of the earlier termination of his term of office by reason of death, resignation, removal or other reason.

Section 3.5. Resignation and Removal. Any director may resign at any time upon written notice to the Board of Directors, the President or the Secretary. The resignation of any director shall take effect upon receipt of notice thereof or at such later time as shall be specified in such notice, and unless otherwise specified therein, the acceptance of such resignation shall not be necessary to make it effective.

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Any director may be removed for cause by vote of the shareholders or the Board of Directors. Any director may be removed without cause by vote of the shareholders.

Section 3.6. Vacancies. Newly created directorships resulting from an increase in the number of directors and vacancies occurring in the Board of Directors for any reason except the removal of directors without cause may be filled by vote of a majority of the directors then in office, although less than a quorum exists.

Vacancies occurring in the Board of Directors by reason of the removal of directors without cause may be filled only by vote of the shareholders.

A director elected to fill a vacancy shall be elected to hold office for the unexpired term of his predecessor.

Section 3.7. Quorum and Voting. Unless the Certificate of Incorporation provides otherwise, at all meetings of the Board of Directors a majority of the entire Board of Directors shall constitute a quorum for the transaction of business or of any specified item of business. A director interested in a contract or transaction may be counted in determining the presence of a quorum at a meeting of the Board of Directors which authorizes the contract or transaction. In the absence of a quorum, a majority of the directors present may adjourn the meeting until a quorum shall be present.

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The vote of the majority of the directors present at the time of a vote at a meeting at which a quorum is present shall be the act of the Board of Directors unless the Certificate of Incorporation shall require the vote of a greater number.

Section 3.8. Regulations. The Board of Directors may adopt such rules and regulations for the conduct of the business and management of the Corporation, not inconsistent with the law or the Certificate of Incorporation or these By-Laws, as the Board of Directors may deem proper.

The Board of Directors may hold its meetings at any place within or without the State of New York as the Board of Directors may from time to time determine.

Section 3.9. Annual Meeting of Board of Directors. An annual meeting of the Board of Directors shall be called and held for the purpose of organization, election of officers and transaction of any other business. If such meeting is held promptly after and at the place specified for the annual meeting of shareholders, no notice of the annual meeting of the Board of Directors need be given. Otherwise such annual meeting shall be held at such time (not more than thirty days after the annual meeting of shareholders) and place as may be specified in a notice of the meeting.

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Section 3.10. Regular Meetings. Regular meetings of the Board of Directors shall be held at the time and place as shall from time to time be determined by the Board of Directors. After there has been such determination and notice thereof has been given to each member of the Board of Directors, no further notice shall be required for any such regular meeting. Except as otherwise provided by law, any business may be transacted at any regular meeting.

Section 3.11. Special Meetings. Special meetings of the Board of Directors may, unless otherwise prescribed by law, be called from time to time by the President, and shall be called by the President or the Secretary upon the written request of a majority of the Board of Directors then in office directed to the President or the Secretary. Except as provided below, notice of any special meeting of the Board of Directors, stating the time and place of such special meeting, shall be given to each director.

Section 3.12. Notice of Meeting; Waiver of Notice. Notice of any meeting of the Board of Directors shall be deemed to be duly given to a director (i) if mailed to such director, addressed to him at his address as it appears upon the books of the Corporation, or at the address last made known in writing to the Corporation by such director at the address to which such notices are to be sent, at least four days before the day

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on which such meeting is to be held, or (ii) if sent to him at such address by telegraph, cable, radio or wireless not later than two days before the day on which such meeting is to be held, or (iii) if delivered to him personally or orally, by telephone or otherwise, not later than the day before the day on which such meeting is to be held. Each such notice shall state the time and place of the meeting.

Notice of any meeting of the Board of Directors need not be given to any director who submits a signed waiver of notice whether before or after the holding of such meeting, or who attends such meeting without protesting, prior thereto or at its commencement, the lack of notice to him.

Section 3.13. Committees of Directors. The Board of Directors may, by resolution or resolutions passed by a majority of the entire Board of Directors, designate one or more committees each committee to consist of one or more of the directors of the Corporation.

Vacancies in membership of any committee shall be filled by the vote of a majority of the entire Board of Directors. The Board of Directors may designate one or more directors as alternate members of any committee, who may replace any absent member at any meeting of the committee. Members of a committee shall hold office for such period as may be fixed by a resolution adopted by a majority of the entire Board of

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Directors, subject, however, to removal at any time by the vote of the Board of Directors.

Section 3.14. Powers and Duties of Committees. Except as otherwise provided by law, any committee, to the extent provided in the resolution or resolutions creating such committee, shall have all the authority of the Board of Directors except that no such committee shall have authority as to the following matters: (1) the submission to shareholders of any action that needs shareholders' approval; (2) the filling of vacancies in the Board of Directors or in any committee, (3) the fixing of compensation of the directors for serving on the Board of Directors or on any committee; (4) the amendment or repeal of the By-Laws, or the adoption of new By-Laws; and (5) the amendment or repeal of any resolution of the Board of Directors which by its terms shall not be so amendable or repealable.

Each committee may adopt its own rules of procedure and may meet at stated times or on such notice as such committee may determine. Except as otherwise permitted by these By-Laws, each committee shall keep regular minutes of its proceedings and report the same to the Board of Directors when required.

Section 3.15. Compensation of Directors. The Board of Directors may from time to time, in its discretion, fix the

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amounts which shall be payable to directors and to members of any committee of the Board of Directors for attendance at the meetings of the Board of Directors or of such committee and for services rendered to the Corporation.

Section 3.16. Action Without Meeting. Unless otherwise provided by the Certificate of Incorporation, any action required or permitted to be taken by the Board of Directors or any committee thereof may be taken without a meeting if all members of the Board of Directors or the committee consent in writing to the adoption of a resolution authorizing the action. The resolution and written consents thereto by the members of the Board of Directors or committee shall be filed with the minutes of the proceedings of the Board of Directors or the committee.

Section 3.17. Action by Conference Telephone. Unless otherwise provided by the Certificate of Incorporation, any one or more members of the board or any committee thereof may participate in a meeting of such board or committee by means of a conference telephone or similar communications equipment allowing all persons participating in the meeting to hear each other at the same time. Participation by such means shall constitute presence in person at a meeting.

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ARTICLE IV - OFFICERS

Section 4.1. Principal Officers. The principal officers of the Corporation shall be elected by the Board of Directors and may include a Chairman of the Board, a President, a Secretary and a Treasurer and may, at the discretion of the Board of Directors, also include one or more Vice Presidents and a Controller. Any two or more principal offices may be held by the same person except the offices of President and Secretary, except that when all of the issued and outstanding stock of the Corporation is held by one person, such person may hold all or any combination of offices.

Section 4.2. Election of Principal Officers; Term of Office. The principal officers of the Corporation shall be elected annually by the Board of Directors at each annual meeting of the Board of Directors.

If the Board of Directors shall fail to fill any principal office at an annual meeting, or if any vacancy in any principal office shall occur, or if any principal office shall be newly created, such principal office may be filled at any regular or special meeting of the Board of Directors.

Each principal officer shall hold office until his successor is duly elected and qualified, or until his earlier death, resignation or removal, provided that the terms of office of all Vice Presidents shall terminate at any annual



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meeting of the Board of Directors at which the President or any Vice President is elected.

Section 4.3. Subordinate Officers, Agents and Employees. In addition to the principal officers, the Corporation may have one or more Assistant Treasurers, Assistant Secretaries and such other subordinate officers, agents and employees as the Board of Directors may deem advisable, each of whom shall hold office for such period and have such authority and perform such duties as the Board of Directors, the President, or any officer designated by the Board of Directors, may from time to time determine. The Board of Directors at any time may appoint and remove, or may delegate to any principal officer, the power to appoint and to remove, any subordinate officer, agent or employee of the Corporation.

Section 4.4. Delegation of Duties of Officers. The Board of Directors may delegate the duties and powers of any officer of the Corporation to any other officer or to any director for a specified period of time for any reason that the Board of Directors may deem sufficient.

Section 4.5. Removal of Officers. Any officer of the Corporation may be removed with or without cause by resolution of the Board of Directors.

Section 4.6. Resignation. Any officer may resign at any time by giving written notice of resignation to the Board

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of Directors, to the President or to the Secretary. Any such resignation shall take effect upon receipt of such notice or at any later time specified therein. Unless otherwise specified in the notice, the acceptance of a resignation shall not be necessary to make the resignation effective.

Section 4.7. President. The President will be the chief executive officer, and direct the policies, of the Corporation. He will have general management of the business, property and affairs of the Corporation, and general supervision, direction and control over its other officers, its employees and its agents. The President will preside at all meetings of the Board of Directors and shareholders at which he is present.

Section 4.8. Vice President. In the absence or disability of the President or if the office of President be vacant, the Vice Presidents in the order determined by the Board of Directors, or if no such determination has been made in the order of their seniority, shall perform the duties and exercise the powers of the President, subject to the right of the Board of Directors at any time to extend or confine such powers and duties or to assign them to others. Any Vice President may have such additional designation in his title as the Board of Directors may determine. The Vice Presidents shall generally assist the President in such manner as the President shall direct. Each Vice President shall have such other powers and

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perform such other duties as may be assigned to him from time to time by the Board of Directors or the President.

Section 4.9. Secretary. The Secretary shall act as Secretary of all meetings of shareholders and of the Board of Directors at which he is present, shall record all the proceedings of all such meetings in a book to be kept for that purpose, shall have supervision over the giving and service of notices of the Corporation, and shall have supervision over the care and custody of the corporate records and the corporate seal of the Corporation. The Secretary shall be empowered to affix the corporate seal to documents the execution of which, on behalf of the Corporation under its seal, is duly authorized, and when so affixed may attest the same. The Secretary shall have all powers and duties usually incident to the office of Secretary, except as specifically limited by a resolution of the Board of Directors. The Secretary shall have such other powers and perform such other duties as may be assigned to him from time to time by the Board of Directors or the President.

Section 4.10. Treasurer. The Treasurer shall have general supervision over the care and custody of the funds and over the receipts and disbursements of the Corporation and shall cause the funds of the Corporation to be deposited in the name of the Corporation in such banks or other depositories as the Board of Directors may designate. The Treasurer shall have

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supervision over the care and safekeeping of the securities of the Corporation. The Treasurer shall have all powers and duties usually incident to the office of Treasurer, including the duties of Controller if none is elected, except as specifically limited by a resolution of the Board of Directors. The Treasurer shall have such other powers and perform such other duties as may be assigned to him from time to time by the Board of Directors or the President.

Section 4.11. Controller. The Controller, if one is elected, shall be the chief accounting officer of the Corporation and shall have supervision over the maintenance and custody of the accounting operations of the Corporation, including the keeping of accurate accounts of all receipts and disbursements and all other financial transactions. The Controller shall have all powers and duties usually incident to the office of Controller except as specifically limited by a resolution of the Board of Directors. The Controller shall have such other powers and perform such other duties as may be assigned to him from time to time by the Board of Directors or the President.

Section 4.12. Bond. The Board of Directors shall have power, to the extent permitted by law, to require any officer, agent or employee of the Corporation to give bond for the faithful discharge of his duties in such form and with such surety or sureties as the Board of Directors may determine.

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ARTICLE V - CAPITAL STOCK

Section 5.1. Issuance of Certificates for Stock.

Each shareholder of the Corporation shall be entitled to a certificate or certificates in such form as shall be approved by the Board of Directors, certifying the number of shares of capital stock of the Corporation owned by such shareholder.

Section 5.2. Signatures on Stock Certificates. Certificates for shares of capital stock of the Corporation shall be signed by, or in the name of the Corporation by, the President or a Vice President and by the Secretary, the Treasurer, an Assistant Secretary or an Assistant Treasurer and shall bear the corporate seal of the Corporation or a printed or engraved facsimile thereof.

If any such certificate is countersigned by a transfer agent or registered by a registrar, other than the Corporation or its employee, any other signature on the certificate may be a facsimile. In case any officer who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer before such certificate is issued, such certificate may be issued by the Corporation with the same effect as if such signer were such officer at the date of issue.

Section 5.3. Stock Ledger. A record of all certificates for capital stock issued by the Corporation shall be kept

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by the Secretary or any other officer, employee or agent designated by the Board of Directors. Such record shall show the name and address of such shareholder, the number and class of shares held by each and the date when each became the owner of record thereof, and, in the case of certificates which have been cancelled, the dates of cancellation thereof.

The Corporation shall be entitled to treat the holder of record of shares of capital stock as shown on the stock ledger as the owner thereof and as the person entitled to receive dividends thereon, to vote such shares, to receive notice of meetings, and for all other purposes. Prior to due presentment for registration of transfer of any certificate for shares of capital stock of the Corporation, the Corporation shall not be bound to recognize any equitable or other claim to or interest in any share of capital stock represented by such certificate on the part of any other person whether or not the Corporation shall have express or other notice thereof.

Section 5.4. Regulations Relating to Transfer. The Board of Directors may make such rules and regulations as it may deem expedient, not inconsistent with law, the Certificate of Incorporation or these By-Laws, concerning issuance, transfer and registration of certificates for shares of capital stock of the Corporation. The Board of Directors may appoint, or authorize any principal officer to appoint, one or more

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transfer clerks or one or more transfer agents and one or more registrars and may require all certificates for capital stock to bear the signature or signatures of any of them.

Section 5.5. Transfers. Transfers of capital stock shall be made on the books of the Corporation only upon delivery to the Corporation or its transfer agent of (i) a written direction of the registered holder named in the certificate or such holder's attorney lawfully constituted in writing, (ii) the certificate for the shares of capital stock being transferred, and (iii) a written assignment of the shares of capital stock evidenced thereby.

Section 5.6. Cancellation. Each certificate for capital stock surrendered to the Corporation for exchange or transfer shall be cancelled and no new certificate or certificates shall be issued in exchange for any existing certificate (other than pursuant to Section 5.7) until such existing certificate shall have been cancelled.

Section 5.7. Lost, Destroyed, Stolen and Mutilated Certificates. In the event that any certificate for shares of capital stock of the Corporation shall be mutilated the Corporation shall issue a new certificate in place of such mutilated certificate. In case any such certificate shall be lost, stolen or destroyed the Corporation may, in the discretion of the Board of Directors or a committee designated thereby with

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power so to act, issue a new certificate for capital stock in the place of any such lost, stolen or destroyed certificate. The applicant for any substituted certificate or certificates shall surrender any mutilated certificate or, in the case of any lost, stolen or destroyed certificate, furnish satisfactory proof of such loss, theft or destruction of such certificate and of the ownership thereof. The Board of Directors or such committee may, in its discretion, require the owner of a lost, stolen or destroyed certificate, or his representatives, to furnish to the Corporation a bond with an acceptable surety or sureties and in such sum as will be sufficient to indemnify the Corporation against any claim that may be made against it on account of the lost, stolen or destroyed certificate or the issuance of such new certificate. A new certificate may be issued without requiring a bond when, in the judgment of the Board of Directors, it is proper to do so.

Section 5.8. Fixing of Record Dates. (a) The Board of Directors may fix, in advance, a record date, which shall not be more than fifty nor less than ten days before the date of any meeting of shareholders, nor more than fifty days prior to any other action, for the purpose of determining shareholders entitled to notice of or to vote at such meeting of shareholders or any adjournment thereof, or to express consent or dissent to corporate action in writing without a meeting, or to



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receive payment of any dividend or allotment of any rights, or for the purpose of any other action.

(b) If no record date is fixed by the Board of Directors:

(i) The record date for determining shareholders entitled to notice of or to vote at a meeting of shareholders shall be at the close of business on the next day preceding the day on which notice is given, or if no notice is given, the day on which the meeting is held;

(ii) The record date for determining shareholders for any purpose other than that specified in subparagraph (i) shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto.

(c) A determination of shareholders of record entitled to notice of or to vote at a meeting of shareholders shall apply to any adjournment of the meeting, provided that the Board of Directors may fix a new record date for the adjourned meeting.

#### ARTICLE VI - INDEMNIFICATION

Section 6.1. Indemnification. The Corporation shall, to the full extent permitted by applicable law, indemnify any person

(a) made a party to an action by or in the right of the Corporation to procure a judgment in its favor, by

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reason of the fact that he, his testator or intestate, is or was a director or officer of the Corporation, against the reasonable expenses, including attorneys' fees, actually and necessarily incurred by him in connection with the defense of such action, or in connection with an appeal therein;

(b) made, or threatened to be made, a party to an action or proceeding other than one by or in the right of the Corporation to procure a judgment in its favor, whether civil or criminal, including an action by or in the right of any other corporation, of any type or kind, domestic or foreign, which any director or officer of the Corporation served in any capacity at the request of the Corporation, by reason of the fact that he, his testator or intestate, was a director or officer of the Corporation, or served such other corporation in any capacity, against judgments, fines, amounts paid in settlement and reasonable expenses, including attorneys' fees actually and necessarily incurred as a result of such action or proceeding, or any appeal therein.

A person who has been wholly successful, on the merits or otherwise, in the defense of a civil or criminal action or proceeding of the character described in subsection (a) or (b) above shall be entitled to indemnification as authorized by law.

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Any indemnification by the Corporation pursuant hereto shall be only made in the manner and to the extent authorized by applicable law, and any such indemnification shall not be deemed exclusive of any other rights to which those seeking indemnification may otherwise be entitled.

Section 6.2. Indemnification Insurance. To the extent permitted by law, the Corporation shall have power to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against him and incurred by him in any such capacity, or arising out of his status as such.

#### ARTICLE VII - MISCELLANEOUS PROVISIONS

Section 7.1. Corporate Seal. The seal of the Corporation shall be circular in form with the name of the Corporation in the circumference and the words and figures "Corporate Seal - 1986, New York" in the center. The seal may be used by causing it to be affixed or impressed, or a facsimile thereof may be reproduced or otherwise used in such manner as the Board of Directors may determine.

Section 7.2. Fiscal Year. The fiscal year of the Corporation shall end on December 31st of each year, or such

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other twelve consecutive months as the Board of Directors may designate.

Section 7.3. Execution of Instruments, Contracts, etc. All checks, drafts, bills of exchange, notes or other obligations or orders for the payment of money shall be signed in the name of the Corporation by such officer or officers or person or persons as the Board of Directors may from time to time designate.

Except as otherwise provided by law, the Board of Directors, any committee given specific authority in the premises by the Board of Directors, or any committee given authority to exercise generally the powers of the Board of Directors during the intervals between meetings of the Board of Directors, may authorize any officer, employee or agent, in the name of and on behalf of the Corporation, to enter into or execute and deliver deeds, bonds, mortgages, contracts and other obligations or instruments, and such authority may be general or confined to specific instances.

All applications, written instruments and papers required by any department of the United States Government or by any state, county, municipal or other governmental authority, may be executed in the name of the Corporation by any principal officer or subordinate officer of the Corporation, or, to the extent designated for such purpose from time to time by the

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Board of Directors, by an employee or agent of the Corporation. Such designation may contain the powers to substitute, in the discretion of the person named, one or more other persons.

ARTICLE VIII - AMENDMENTS

Section 8.1. By Shareholders. These By-Laws may be amended or repealed, or new By-Laws may be adopted, at any meeting of shareholders.

Section 8.2. By Directors. These By-Laws may be amended or repealed, or new By-Laws may be adopted, by the Board of Directors.



**RESTATED CERTIFICATE OF INCORPORATION OF  
YOUNG & FRANKLIN INC.**

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**Under Section 807 of the New York Business Corporation Law**

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FIRST: The name of the corporation is Young & Franklin Inc.

SECOND: The certificate of incorporation of the corporation was filed by the Department of State of New York on January 7, 1921 under the original name of "Young & Franklin Tool Works Inc."

THIRD: The Certificate of Incorporation, as amended to date, is hereby restated without any further amendments or changes as follows:

1. The name of the corporation is: YOUNG & FRANKLIN INC. (the Corporation).
2. The purpose for which the Corporation is formed is to engage in any lawful act or activity for which corporations may be organized under the Business Corporation Law of New York, provided that it is not formed to engage in any act or activity requiring the consent or approval of any state official, department, board, agency or other body without such consent or approval first being obtained.
3. The office of the Corporation is to be located in the Village of Liverpool, County of Onondaga, State of New York.
4. The aggregate number of shares which the Corporation shall have authority to issue is 1,000 common shares without par value.
5. The Secretary of State is designated as the agent of the Corporation upon whom process against the Corporation may be served. The name and address of the registered agent of the Corporation to which the Secretary of State shall mail a copy of any process against the Corporation served upon him or her is: CT Corporation System, 111 Eighth Avenue, New York, New York 10011.
6. The Board of Directors is expressly authorized to adopt, amend or repeal the by-laws of the Corporation (the "by-laws"), provided that any by-law adopted or amended by the Board of Directors may be amended or repealed by the shareholders.
7. Any action to be taken by the shareholders by vote may be taken without a meeting on written consent, setting forth the action so taken, signed by the holders of outstanding shares having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted.
8. No director of the Corporation shall be personally liable to the Corporation or its shareholders for damages for any breach of duty in such capacity, except as otherwise provided by the Business Corporation Law of New York.

FOURTH: The foregoing Restated Certificate of Incorporation was authorized by the board of directors by unanimous written consent on November 7, 2016.

IN WITNESS WHEREOF, the Corporation has caused this certificate to be signed by an authorized officer on November 7, 2016.

YOUNG & FRANKLIN INC.

By: /s/ Halle Terrion  
Name: Halle Terrion  
Title: Secretary



**BY-LAWS OF YOUNG & FRANKLIN INC.****ARTICLE I****MEETINGS OF THE SHAREHOLDERS**

**Section 1.01 Annual Meeting.** The annual meeting of the shareholders of the corporation, for the election of directors and for the transaction of such other business as may be set forth in the notice of the meeting, shall be held each year at such time and such place within or without the State of New York as the board of directors shall determine and the notice of the meeting or a duly executed waiver of notice shall specify.

**Section 1.02 Special Meetings.** Special meetings of the shareholders for any purpose or purposes may be called by the board of directors and shall be held on such date, at such time and place, either within or without the State of New York, as shall be determined by the board of directors and stated in the notice of the meeting. The only business which may be conducted at a special meeting, other than procedural matters and matters relating to the conduct of the meeting, shall be the matter or matters described in the notice of such meeting.

**Section 1.03 Notice of Meetings.** Written notice of each meeting of the shareholders shall be given, personally or by mail (written or electronic), not fewer than ten nor more than 60 days before the date of the meeting, to each shareholder entitled to vote at such meeting. If mailed, such notice shall be deposited in the United States mail, with first-class postage thereon prepaid, directed to the shareholder at his or her address as it appears on the record of shareholders, or, if a shareholder shall have filed with the Secretary of the corporation a written request that notices to such shareholder be mailed to some other address, then directed to such shareholder at such other address. If transmitted electronically, such notice shall be directed to the shareholder's electronic address supplied to the Secretary of the corporation or as otherwise directed pursuant to the shareholder's authorization or instructions. The notice shall state the place, date and hour of the meeting, the purpose or purposes for which the meeting is called if a special meeting and, unless it is the annual meeting, indicate that the notice is being issued by or at the direction of the person or persons calling the meeting. The notice need not refer to the approval of minutes or to other matters normally incident to the conduct of the meeting. Except for such matters, the business which may be transacted at the meeting shall be confined to business which is related to the purpose or purposes set forth in the notice.

**Section 1.04 Waiver of Notice.** Notice of meeting need not be given to any shareholder who submits a waiver of notice. Waiver of notice may be written or electronic and may be submitted before or after the meeting. The attendance of any shareholder at a meeting,

in person or by proxy, without protesting prior to the conclusion of the meeting the lack of notice of such meeting, shall constitute a waiver of such notice by him or her.

**Section 1.05 Procedure.** At each meeting of shareholders, the order of business and all other matters of procedure shall be determined by the person presiding at the meeting.

**Section 1.06 List of Shareholders.** A list of shareholders as of the record date, certified by the corporate officer responsible for its preparation or by a transfer agent, shall be produced at any meeting of shareholders upon the request thereat or prior thereto of any shareholder. If the right to vote at any meeting is challenged, the inspectors of election, or person presiding thereat, shall require such list of shareholders to be produced as evidence of the right of the persons challenged to vote at such meeting, and all persons who appear from such list to be shareholders entitled to vote thereat may vote at such meeting.

**Section 1.07 Quorum.** At each meeting of shareholders for the transaction of any business, a quorum must be present to organize such meeting. Except as otherwise provided by law, a quorum shall consist of the holders of a majority of the votes of shares of the corporation entitled to vote at such meeting, present either in person or by proxy. When a quorum is once present to organize a meeting of the shareholders, it is not broken by the subsequent withdrawal of any shareholders.

**Section 1.08 Adjournments.** The shareholders entitled to vote who are present in person or by proxy at any meeting of shareholders, whether or not a quorum shall be present at the meeting, shall have power by a majority vote to adjourn the meeting from time to time without notice other than announcement at the meeting of the time and place to which the meeting is adjourned. At any adjourned meeting at which a quorum is present any business may be transacted that might have been transacted on the original date of the meeting, and the shareholders entitled to vote at the meeting on the original date (whether or not they were present thereat), and no others, shall be entitled to vote at such adjourned meeting. However, if after the adjournment the board fixes a new record date for the adjourned meeting, notice of the adjourned meeting shall be given to each shareholder of record on the new record date entitled to such notice.

**Section 1.09 Voting; Proxies.** Each shareholder of record shall be entitled at every meeting of shareholders to one vote for each share having voting power standing in the shareholder's name on the record of shareholders of the corporation on the record date fixed pursuant to **Section 6.03** of these by-laws unless otherwise provided in the certificate of incorporation of the corporation. Each shareholder entitled to vote at a meeting of shareholders may vote in person, or may authorize another person or persons to act for the shareholder by proxy. Any proxy shall be signed by the shareholder or the

shareholder's duly authorized agent or attorney-in-fact and shall be delivered to the secretary of the meeting. The signature of a shareholder on any proxy, including without limitation a telegram, cablegram, facsimile signature or other means of electronic transmission, may be printed, stamped or written, provided such signature is executed or adopted by the shareholder with intention to authenticate the proxy. No proxy shall be valid after the expiration of 11 months from the date of its execution unless otherwise provided in the proxy. Every proxy shall be revocable at the pleasure of the shareholder executing it, except as otherwise provided by law.

Directors shall, except as otherwise provided by law or the certificate of incorporation, be elected by a plurality of the votes cast by the holders of shares entitled to vote in the election. All other corporate action to be taken by vote of the shareholders shall, except as otherwise provided by law, the certificate of incorporation or these by-laws, be authorized by a majority of the votes cast in favor of such action at a meeting of the shareholders. The vote for directors, or upon any corporate action coming before a meeting of shareholders, shall not be by ballot unless the person presiding at such meeting shall so direct or any shareholder, present in person or by proxy and entitled to vote thereon, shall so demand. Except as otherwise provided in the certificate of incorporation, an abstention shall not constitute a vote cast.

**Section 1.10 Appointment of Inspectors of Election.** The board of directors may, in advance of any meeting of the shareholders, appoint one or more inspectors to act at the meeting or any adjournment thereof, and shall do so if the corporation has a class of voting shares that is listed on a national securities exchange or authorized for quotation on an interdealer quotation system of a registered national securities association. If inspectors are not so appointed in advance of the meeting, the person presiding at such meeting may, and on the request of any shareholder entitled to vote thereat shall, appoint one or more inspectors. In case any inspector appointed fails to appear or act, the vacancy may be filled by appointment made by the board of directors in advance of the meeting or at the meeting by the person presiding thereat. Each inspector, before entering upon the discharge of his or her duties, shall take and sign an oath faithfully to execute the duties of inspector at such meeting with strict impartiality and according to the best of his or her ability. No person who is a candidate for the office of director of the corporation shall act as an inspector at any meeting of the shareholders at which directors are elected.

**Section 1.11 Duties of Inspectors of Election.** Whenever one or more inspectors of election may be appointed as provided in these by-laws, he or she or they shall determine the number of shares outstanding and entitled to vote, the shares represented at the meeting, the existence of a quorum, and the validity and effect of proxies, and shall receive votes, ballots or consents, hear and determine all challenges and questions arising in connection with the right to vote, count and tabulate all votes, ballots, or consents, determine the result, and do such acts as are proper to conduct the election or vote with fairness to all shareholders.

**Section 1.12 Written Consent of Shareholders Without a Meeting.** Whenever by law shareholders are required or permitted to take any action by vote, such action may be

taken without a meeting on written consent, setting forth the action so taken, signed by the holders of outstanding shares having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted. Every written consent shall bear the date of signature of each shareholder who signs the consent, and no written consent shall be effective to take the corporate action referred to therein unless, within 60 days of the earliest dated consent delivered in the manner required by this **Section 1.13**, written consents signed by the requisite holders to take action are delivered to the corporation. Written consent thus given by the holders of all such number of shares as is required under this **Section 1.13** shall have the same effect as a valid vote of holders of such number of shares. Prompt notice of the taking of any corporate action without a meeting by less than unanimous written consent shall be given to those shareholders who have not consented in writing.

## **ARTICLE II DIRECTORS**

**Section 2.01 Number and Qualifications.** The board of directors shall consist of one or more members. Subject to any provision as to the number of directors contained in the certificate of incorporation or these by-laws, the exact number of directors shall be fixed from time to time by action of the shareholders or by vote of a majority of the entire board of directors, provided that no decrease in the number of directors shall shorten the term of any incumbent director. If the number of directors be increased at any time, the vacancy or vacancies in the board arising from such increase shall be filled as provided in **Section 2.06**. If the number of directors is not otherwise fixed as provided above, it shall be one. Each of the directors shall be at least 18 years of age.

**Section 2.02 Powers.** The business of the corporation shall be managed under the direction of the board of directors, which shall have and may exercise all of the powers of the corporation except such as are expressly conferred upon the shareholders by law, by the certificate of incorporation or by these by-laws.

**Section 2.03 Election and Term of Office.** Except as otherwise provided by law or these by-laws, each director of the corporation shall be elected at an annual meeting of shareholders or at any meeting of the shareholders held in lieu of such annual meeting, which meeting, for the purposes of these by-laws, shall be deemed the annual meeting.

and shall hold office until the next annual meeting of shareholders and until his or her successor has been elected and qualified.

**Section 2.04 Resignation.** Any director of the corporation may resign at any time by giving his or her resignation to the President or any Vice President or the Secretary. Such resignation shall take effect at the time specified therein; and, unless otherwise specified therein, the acceptance of such resignation shall not be necessary to make it effective.

**Section 2.05 Removal of Directors.** Any or all of the directors may be removed with or without for cause by vote of the shareholders.

**Section 2.06 Vacancies.** Except as otherwise provided by law or these by-laws, newly created directorships resulting from an increase in the number of directors and vacancies occurring in the board of directors for any reason, except the removal of directors without cause, may be filled by vote of a majority of the directors then in office, even if less than a quorum exists. Any such newly created directorships and vacancies occurring in the board of directors for any reason may also be filled by vote of the shareholders at any meeting of shareholders and notice of which shall have referred to the proposed election. If any such newly created directorships or vacancies occurring in the board of directors for any reason shall not be filled prior to the next annual meeting of shareholders, they shall be filled by vote of the shareholders at such annual meeting. A director elected to fill a vacancy, unless elected by the shareholders, shall hold office until the next meeting of shareholders at which the election of directors is in the regular order of business, and until his or her successor has been elected and qualified.

**Section 2.07 Directors' Fees.** Directors may receive a fee for their services as directors and travelling and other out-of-pocket expenses incurred in attending any regular or special meeting of the board. The fee may be a fixed sum to be paid for attending each meeting of the board of directors or a fixed sum to be paid monthly, quarterly or semi-annually, irrespective of the number of meetings attended or not attended. The amount of the fee, if any, and the basis on which it shall be paid shall be determined by the board of directors. Nothing herein contained shall preclude any director from serving the corporation in any other capacity and receiving compensation for such services.

**Section 2.08 First Meeting of Newly Elected Directors.** The first meeting of the newly elected board of directors may be held immediately after the annual meeting of shareholders and at the same place as such annual meeting of shareholders, provided a quorum be present, and no notice of such meeting shall be necessary. In the event such first meeting of the newly elected board of directors is not held at said time and place, the same shall be held as provided in **Section 2.09**.

**Section 2.09 Meetings of Directors.** Regular and special meetings of the board of directors may be held at such times and at such places, within or without the State of New York as the board of directors or the President, or, in the absence or disability of the President, any Vice President, may determine.

**Section 2.10 Notice of Meetings.** Regular meetings of the board of directors may be held without notice if the times and places of such meetings are fixed by the board. Except as provided in the preceding sentence, notice of each regular or special meeting of the board of directors to be held in accordance with **Section 2.09**, stating the time and place thereof, shall be given by the President, the Secretary, any Assistant Secretary or any member of the board to each member of the board (a) not less than three days before the meeting by depositing the notice in the United States mail, with first-class postage thereon prepaid, directed to each member of the board at the address designated by him or her for such purpose (or, if none is designated, at his or her last known address), or (b) not less than 24 hours before the meeting by either (i) delivering the same to each member of the board personally, (ii) sending the same by telephone, telegraph, cable, electronic mail or other transmission method to the address or contact information designated by him or her for such purposes (or, if none is designated, to his or her last known address or other contact information) or (iii) delivering the notice to the address or other contact information designated by him or her for such purpose (or, if none is designated, to his or her last known address or contact information). Notice of a meeting need not be given to any director who submits a signed waiver of notice whether before or after the meeting. The notice of any meeting of the board of directors need not specify the purpose or purposes for which the meeting is called, except as provided in **Section 2.06** and as provided in **Article IX** of these by-laws.

**Section 2.11 Quorum and Action By the Board.** At all meetings of the board of directors, except as otherwise provided by law, the certificate of incorporation or these by-laws, a quorum shall be required for the transaction of business and shall consist of not less than a majority of the entire board, and the vote of a majority of the directors present shall decide any question that may come before the meeting. A majority of the directors present, whether or not a quorum is present, may adjourn any meeting to another time or place without notice other than announcement at the meeting of the time and place to which the meeting is adjourned.

**Section 2.12 Procedure.** The order of business and all other matters of procedure at every meeting of directors may be determined by the person presiding at the meeting.

**Section 2.13 Action Without a Meeting.** Any action required or permitted to be taken by the board or any committee thereof may be taken without a meeting if all members of the board or the committee consent in writing to the adoption of a resolution authorizing

the action. The resolution and the written consents thereto by the members of the board or committee shall be filed with the minutes of the proceedings of the board or committee.

**Section 2.14 Presence at a Meeting By Telephone.** Unless otherwise restricted by the certificate of incorporation of the corporation, members of the board of directors or any committee thereof may participate in a meeting of such board or committee by means of a conference telephone or similar communications equipment allowing all persons participating in the meeting to hear each other at the same time. Participation in a meeting by such means shall constitute presence in person at such meeting.

### **ARTICLE III COMMITTEES OF DIRECTORS**

**Section 3.01 Designation of Committees.** The board of directors, by resolution or resolutions adopted by a majority of the entire board, may designate from among its members an executive committee and other committees, each consisting of one or more directors, and may designate one or more directors as alternate members of any such committee, who may replace any absent or disqualified member or members at any meeting of such committee. In the interim between meetings of the board of directors, the executive committee, if and to the extent permitted in the resolution designating such committee, shall have all the authority of the board of directors except as otherwise provided by law and shall serve at the pleasure of the board of directors. Each other committee so designated shall have such name as may be provided from time to time in the resolution or resolutions, shall serve at the pleasure of the board of directors and shall have, to the extent provided in such resolution or resolutions, all the authority of the board of directors except as otherwise provided by law.

**Section 3.02 Acts and Proceedings.** All acts done and power and authority conferred by the executive committee from time to time within the scope of its authority shall be, and may be deemed to be, and may be specified as being, the act and under the authority of the board of directors. The executive committee and each other committee shall keep regular minutes of its proceedings and report its actions to the board of directors when required.

**Section 3.03 Compensation.** Members of the executive committee or of any other committee may receive such compensation for their services as the board of directors shall from time to time determine.

**ARTICLE IV**  
**OFFICERS**

**Section 4.01 Officers.** The board of directors may annually appoint or elect a President, one or more Vice Presidents, a Secretary and a Treasurer. The board of directors may from time to time appoint or elect such additional officers as it may determine. Such additional officers shall have such titles and such authority and perform such duties as the board of directors may from time to time prescribe.

**Section 4.02 Term of Office.** The President, each Vice President, the Secretary and the Treasurer shall, unless otherwise determined by the board of directors, hold office until the first meeting of the board following the next annual meeting of shareholders and until their successors have been appointed or elected and qualified. Each additional officer appointed or elected by the board of directors shall hold office for such term as shall be determined from time to time by the board of directors and until his or her successor has been appointed or elected and qualified. Any officer, however, may be removed or have his or her authority suspended by the board of directors at any time, with or without cause. If the office of any officer becomes vacant for any reason, the board of directors shall have the power to fill such vacancy.

**Section 4.03 The President.** The President shall be the chief executive officer of the corporation. He or she shall preside at all meetings of the shareholders and of the board of directors. He or she shall have the general powers and duties of supervision and management of the corporation which usually pertain to his or her office, and shall perform all such other duties as are properly required of him or her by the board of directors.

**Section 4.04 The Vice Presidents.** Each Vice President may be designated by such title as the board of directors may determine, and each such Vice President in such order of seniority as may be determined by the board, shall, in the absence or disability of the President, or at his or her request, perform the duties and exercise the powers of the President. Each Vice President also shall have such powers and perform such duties as usually pertain to his or her office or as are properly required of him or her by the board of directors.

**Section 4.05 The Secretary and Assistant Secretaries.** The Secretary shall issue notices of all meetings of shareholders and directors where notices of such meetings are required by law or these by-laws. He or she shall attend all meetings of shareholders and of the board of directors and keep the minutes thereof. He or she shall affix the corporate seal to and sign such instruments as require the seal and his or her signature and shall



perform such other duties as usually pertain to his or her office or as are properly required of him or her by the board of directors.

Each Assistant Secretary may, in the absence or disability of the Secretary, or at his or her request or the request of the President, perform the duties and exercise the powers of the Secretary, and shall perform such other duties as the board of directors shall prescribe.

**Section 4.06 The Treasurer and Assistant Treasurers.** The Treasurer shall have the care and custody of all the moneys and securities of the corporation. He or she shall cause to be entered in books of the corporation to be kept for that purpose full and accurate accounts of all moneys received by him or her and paid by him or her on account of the corporation. The Treasurer shall make and sign such reports, statements and instruments as may be required of him or her by the board of directors or by the laws of the United States or by any state, country or other jurisdiction in which the corporation transacts business, and shall perform such other duties as usually pertain to his or her office or as are properly required of him or her by the board of directors.

Each Assistant Treasurer may, in the absence or disability of the Treasurer, or at his or her request or the request of the President, perform the duties and exercise the powers of the Treasurer and shall perform such other duties as the board of directors shall prescribe.

**Section 4.07 Officers Holding Two or More Offices.** Any two or more offices may be held by the same person. When all the issued and outstanding shares of the corporation are held by one individual, such individual may hold all or any combination of offices.

**Section 4.08 Duties of Officers May be Delegated.** In case of the absence or disability of any officer of the corporation or in case of a vacancy in any office or for any other reason that the board of directors may deem sufficient, the board of directors, except as otherwise provided by law, may temporarily delegate the powers or duties of any officer to any other officer or to any director.

**Section 4.09 Compensation.** The compensation of the President shall be determined by the board of directors. The compensation of all other employees shall be fixed by the President or the President's designees within such limits as may be prescribed by the board of directors.

**Section 4.10 Security.** The board of directors may require any officer, agent or employee of the corporation to give security for the faithful performance of his or her

duties, in such amount as may be satisfactory to the board. Such security may be in the form of a fidelity bond obtained by the corporation at its expense.

## ARTICLE V INDEMNIFICATION OF DIRECTORS AND OFFICERS

**Section 5.01 Right of Indemnification.** Each director or officer of the corporation, whether or not then in office, and any person whose testator or intestate was such a director or officer, shall be indemnified by the corporation for the defense of, or in connection with, any threatened, pending or completed actions or proceedings and appeals therein, whether civil, criminal, administrative or investigative, in accordance with and to the fullest extent permitted by the Business Corporation Law of the State of New York or other applicable law, as such law now exists or may hereafter be adopted or amended, against, without limitation, all judgments, fines, amounts paid in settlements, and all expenses, including attorneys' and other experts' fees, costs and disbursements, actually and reasonably incurred by such person as a result of such action or proceeding, or actually and reasonably incurred by such person (a) in making an application for payment of such expenses before any court or other governmental body, (b) in otherwise seeking to enforce the provisions of this **Section 5.01**, or (c) in securing or enforcing such person's right under any policy or director or officer liability insurance provided by the corporation; provided, however, that the corporation shall provide indemnification in connection with an action or proceeding (or part thereof) initiated by such a director or officer only if such action or proceeding (or part thereof) was authorized by the board of directors.

**Section 5.02 Advancement of Expenses.** Expenses incurred by a director or officer in connection with any action or proceeding as to which indemnification may be given under **Section 5.01** may be paid by the corporation in advance of the final disposition of such action or proceeding upon (a) the receipt of an undertaking by or on behalf of such director or officer to repay such advancement in case such director or officer is ultimately found not to be entitled to indemnification as authorized by this Article V and (b) approval by the board of directors acting by a quorum consisting of directors who are not parties to such action or proceeding or, if such a quorum is not obtainable, then approval by the shareholders. To the extent permitted by law, the board of directors or, if applicable, the shareholders, shall not be required to find that the director or officer has met the applicable standard of conduct provided by law for indemnification in connection with such action or proceeding before the corporation makes any advance payment of expenses hereunder.

**Section 5.03 Availability and Interpretation.** To the extent permitted under applicable law, the rights of indemnification and to the advancement of expenses provided in this Article V (a) shall be available with respect to events occurring prior to the adoption of

this Article V, (b) shall continue to exist after any rescission or restrictive amendment of this Article V with respect to events occurring prior to such rescission or amendment, (c) shall be interpreted on the basis of applicable law in effect at the time of the occurrence of the event or events giving rise to the action or proceeding or, at the sole discretion of the director or officer or, if applicable, the testator or intestate of such director or officer seeking such rights, on the basis of applicable law in effect at the time such rights are claimed and (d) shall be in the nature of contract rights that may be enforced in any court of competent jurisdiction as if the corporation and the director or officer for whom such rights are sought were parties to a separate written agreement.

**Section 5.04 Other Rights.** The rights of indemnification and to the advancement of expenses provided in this Article V shall not be deemed exclusive of any other rights to which any director or officer of the corporation or other person may now or hereafter be otherwise entitled whether contained in the certificate of incorporation, these by-laws, a resolution of the shareholders, a resolution of the board of directors or an agreement providing for such indemnification, the creation of such other rights being hereby expressly authorized. Without limiting the generality of the foregoing, the rights of indemnification and to the advancement of expenses provided in this Article V shall not be deemed exclusive of any rights, pursuant to statute or otherwise, of any director or officer of the corporation or other person in any action or proceeding to have assessed or allowed in his or her favor, against the corporation or otherwise, his or her costs and expenses incurred therein or in connection therewith or any part thereof.

**Section 5.05 Severability.** If this Article V or any part hereof shall be held unenforceable in any respect by a court of competent jurisdiction, it shall be deemed modified to the minimum extent necessary to make it enforceable, and the remainder of this Article V shall remain fully enforceable.

## ARTICLE VI

### SHARES

**Section 6.01 Certificate of Shares.** The shares of the corporation shall be represented by certificates which shall be numbered and shall be entered in the records of the corporation as they are issued. Each share certificate shall when issued state upon the face thereof that the corporation is formed under the laws of the State of New York, the name of the person or persons to whom issued, and the number and class of shares and the designation of the series, if any, which such certificate represents and shall be signed by the President or a Vice President and by the Treasurer, an Assistant Treasurer, the Secretary or an Assistant Secretary, and shall be sealed with the seal of the corporation or a facsimile thereof. The signatures of the officers upon a certificate may be facsimiles if (a) the certificate is countersigned by a transfer agent or registered by a registrar other than the corporation itself or its employee or (b) the corporation's shares are listed on a registered national securities exchange. In case any officer who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer before such certificate is issued, it may be issued by the corporation with the same effect as if he or she were such officer at the date of issue. No certificate shall be valid until

countersigned by a transfer agent if the corporation has a transfer agent, or until registered by a registrar if the corporation has a registrar.

**Section 6.02 Transfers of Shares.** Shares of the corporation shall be transferable on the books of the corporation by the holder thereof, in person or by duly authorized attorney, upon the surrender of the certificate representing the shares to be transferred, properly endorsed. Except as otherwise provided by law, the corporation shall be entitled to treat the holder of record of any share as the owner thereof and shall not be bound to recognize any equitable or other claim to or interest in such share on the part of any other person whether or not it shall have express or other notice thereof. The board of directors, to the extent permitted by law, shall have power and authority to make all rules and regulations as it may deem expedient concerning the issue, transfer and registration of share certificates and may appoint one or more transfer agents and registrars of the shares of the corporation.

**Section 6.03 Fixing of Record Time.** The board of directors may fix, in advance, a day and hour not more than 60 days nor less than ten days before the date on which any meeting of the shareholders entitled to notice of and to vote at such meeting and at all adjournments thereof shall be determined; and, in the event such record date and time are fixed by the board of directors, no one other than the holders of record on such date and time of shares entitled to notice of and to vote at such meeting shall be entitled to notice of or to vote at such meeting or any adjournment thereof. If a record date and time shall not be fixed by the board of directors for the determination of shareholders entitled to notice of and to vote at any meeting of the shareholders, shareholders of record at the close of business on the day next preceding the day on which notice of such meeting is given, and no others, shall be entitled to notice of and to vote at such meeting or any adjournment thereof; provided, however, that if no notice of such meeting is given, shareholders of record at the close of business on the day next preceding the day on which such meeting is held, and no others, shall be entitled to vote at such meeting or any adjournment thereof.

The board of directors may fix, in advance, a day and hour not more than 60 days before the date fixed for the payment of a dividend of any kind or the allotment of any rights, as the record time for the determination of shareholders entitled to receive such dividend or rights, and in such case only shareholders of record at the date and time so fixed shall be entitled to receive such dividend or rights; *provided, however*, that if no record date and time for the determination of shareholders entitled to receive such dividend or rights are fixed, shareholders of record at the close of business on the day on

which the resolution of the board of directors authorizing the payment of such dividend or the allotment of such rights is adopted shall be entitled to receive such dividend or rights.

**Section 6.04 Record of Shareholders.** The corporation shall keep at its office in the State of New York, or at the office of its transfer agent or registrar in this state, a record containing the names and addresses of all shareholders, the number and class of shares held by each and the dates when they respectively became the owners of record thereof.

**Section 6.05 Lost Share Certificates.** The board of directors may in its discretion cause a new certificate for shares to be issued by the corporation in place of any certificate theretofore issued by it, alleged to have been lost or destroyed, and the board may require the owner of the lost or destroyed certificate, or his or her legal representatives, to give the corporation a bond sufficient to indemnify the corporation against any claim that may be made against it on account of the alleged loss or destruction of any such certificate or the issuance of any such new certificate; but the board of directors may in its discretion refuse to issue such new certificate save upon the order of a court having jurisdiction in such matters.

## ARTICLE VII

### FINANCES

**Section 7.01 Corporate Funds.** The funds of the corporation shall be deposited in its name with such banks, trust companies or other depositories as the board of directors or the officers may from time to time designate. All checks, notes, drafts and other negotiable instruments of the corporation shall be signed by such officer or officers, employee or employees, agent or agents as the board of directors may from time to time designate. No officers, employees or agents of the corporation, alone or with others, shall have power to make any checks, notes, drafts or other negotiable instruments in the name of the corporation or to bind the corporation thereby, except as provided in this section.

**Section 7.02 Fiscal Year.** The fiscal year of the corporation shall be designated by resolution of the board of directors.

**Section 7.03 Loans to Directors.** The corporation may not lend money to or guarantee the obligation of a director of the corporation unless (a) the particular loan or guarantee is approved by the shareholders, with the holders of a majority of the shares entitled to vote thereon constituting a quorum, but shares held of record or beneficially by directors who are benefited by such loan or guarantee shall not be entitled to vote or to be included in the determination of a quorum, or (b) the board determines that the loan or guarantee benefits the corporation and either approves the specific loan or guarantee or a general

plan authorizing loans and guarantees. The fact that a loan or guarantee is made in violation of this section does not affect the borrower's liability on the loan.

## **ARTICLE VIII CORPORATE SEAL**

**Section 8.01 Form of Seal.** The seal of the corporation, if it elects to have one, shall be in such form as may be determined from time to time by the board of directors. The seal on any corporate obligation for the payment of money may be facsimile.

## **ARTICLE IX AMENDMENTS**

**Section 9.01 Procedure for Amending By-laws.** By-laws of the corporation may be adopted, amended or repealed at any meeting of shareholders, notice of which shall have referred to the proposed action, by a majority of the votes cast by the holders of the shares of the corporation at the time entitled to vote in the election of any directors, or at any meeting of the board of directors, notice of which shall have referred to the proposed action, by the vote of a majority of the entire board of directors.

CERTIFICATE OF FORMATION  
OF  
BETA TRANSFORMER TECHNOLOGY LLC

The undersigned, an authorized natural person, for the purpose of forming a limited liability company under the provisions and subject to the requirements of the Limited Liability Company Act of the State of Delaware. hereby certifies that:

FIRST: The name of the limited liability company is Beta Transformer Technology LLC.

SECOND: The address of its registered office in the State of Delaware is: 2711 Ccnterville Road, Suite 400. in the City of Wilmington. County of New Castle, Delaware 19808. The name of its registered agent at such address is Corporation Service Company.

IN WITNESS WHEREOF, the undersigned has executed this Certificate of Formation on May 30, 2013.

By: /s/ Vedran I. Busija Name: Vedran I. Busija

**TRANSDIGM INC.,**  
**TRANSDIGM GROUP INCORPORATED,**  
**THE GUARANTORS NAMED HEREIN,**  
AND  
**THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.,**  
as Trustee

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**SEVENTH SUPPLEMENTAL INDENTURE**

Dated as of April 1, 2016  
to  
Indenture  
Dated as of October 15, 2012  
by and among  
**TRANSDIGM INC.,**  
**TRANSDIGM GROUP INCORPORATED,**  
**THE GUARANTORS NAMED THEREIN,**  
AND  
**THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.,**  
as Trustee

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**5.50% Senior Subordinated Notes due 2020**  
**of TransDigm Inc.**



This SEVENTH SUPPLEMENTAL INDENTURE (this “*Supplemental Indenture*”), dated as of April 1, 2016, by and among Breeze-Eastern LLC, a Delaware limited liability company (the “*Guaranteeing Subsidiary*”), TransDigm Inc., a Delaware corporation (the “*Company*”), TransDigm Group Incorporated, a Delaware corporation (“*TD Group*”), Adams Rite Aerospace, Inc., a California corporation (“*Adams Rite*”), MarathonNorco Aerospace, Inc., a Delaware corporation (“*Marathon*”), Champion Aerospace LLC, a Delaware limited liability company (“*Champion*”), Avionic Instruments LLC, a Delaware limited liability company (“*Avionic*”), Skurka Aerospace Inc., a Delaware corporation (“*Skurka*”), CDA InterCorp LLC, a Florida limited liability company (“*CDA*”), Aviation Technologies, Inc., a Delaware corporation (“*ATI*”), AvtechTye, Inc., a Washington corporation (“*Avtech*”), Transicoil LLC, a Delaware limited liability company (“*Transicoil*”), AeroControlex Group, Inc., a Delaware corporation (“*AeroControlex*”), Bruce Aerospace Inc., a Delaware corporation (“*Bruce Aerospace*”), CEF Industries, LLC, a Delaware limited liability company (“*CEF*”), Acme Aerospace, Inc., a Delaware corporation (“*Acme*”), Dukes Aerospace, Inc., a Delaware corporation (“*Dukes*”), Semco Instruments, Inc., a Delaware corporation, (“*Semco*”), Hartwell Corporation, a California corporation (“*Hartwell*”), McKechnie Aerospace DE, Inc., a Delaware corporation (“*McKechnie Aerospace DE*”), McKechnie Aerospace Holdings, Inc., a Delaware corporation (“*McKechnie Aerospace Holdings*”), McKechnie Aerospace Investments, Inc., a Delaware corporation (“*McKechnie Aerospace Investments*”), McKechnie Aerospace US LLC, a Delaware limited liability company (“*McKechnie Aerospace US*”), Texas Rotronics, Inc., a Texas corporation (“*Rotronics*”), Electromech Technologies LLC (formerly Western Sky Industries, LLC), a Delaware limited liability company (“*Electromech*”), Schneller LLC, a Delaware limited liability company (“*Schneller*”), HARCO LLC (formerly Harco Laboratories, Incorporated), a Connecticut limited liability company (“*HARCO*”), AmSafe Global Holdings, Inc., a Delaware corporation (“*AmSafe Global*”), Bridport Holdings, Inc., a Delaware corporation (“*Bridport Holdings*”), AmSafe, Inc., a Delaware corporation (“*AmSafe Inc.*”), Shield Restraint Systems, Inc. (formerly AmSafe Commercial Products, Inc.), a Delaware corporation (“*Shield*”), Bridport-Air Carrier, Inc., a Washington corporation (“*Bridport-Air*”), Bridport Erie Aviation, Inc., a Delaware corporation (“*Bridport Erie*”), Arkwin Industries, Inc., a New York corporation (“*Arkwin*”), Whippany Actuation Systems, LLC, a Delaware limited liability company (“*Whippany*”), Aerosonic LLC, a Delaware limited liability company (“*Aerosonic*”), Avionics Specialties, Inc., a Virginia corporation (“*Avionics Specialties*”), Airborne Global, Inc., a Delaware corporation (“*Airborne Global*”), Airborne Holdings, Inc., a Delaware Corporation (“*Airborne Holdings*”), Airborne Acquisition, Inc., a Delaware corporation (“*Airborne Acquisitions*”), Airborne Systems NA Inc., a Delaware corporation (“*Airborne Systems NA*”), Airborne Systems North America Inc., a Delaware corporation (“*Airborne Systems North America*”), Airborne Systems North America of CA Inc., a Delaware corporation (“*Airborne Systems North America CA*”), Airborne Systems North America of NJ Inc., a New Jersey corporation (“*Airborne Systems North America NJ*”), Telair US LLC, a Delaware limited liability company (“*Telair US*”), Telair International LLC, a Delaware limited liability company (“*Telair International*”), Pexco Aerospace, Inc., a Delaware corporation (“*Pexco Aerospace*”) and PneuDraulics, Inc., a California corporation (collectively with TD Group, Adams Rite, Marathon, Champion, Avionic, Skurka, CDA, ATI, Avtech, Transicoil, AeroControlex, Bruce Aerospace, CEF, Acme, Dukes, Semco, Hartwell, McKechnie Aerospace DE, McKechnie Aerospace Holdings, McKechnie Aerospace Investments, McKechnie Aerospace US, Rotronics, Electromech, Schneller, HARCO, AmSafe Global, Bridport Holdings, AmSafe Inc., Shield, Bridport-Air, Bridport Erie, Arkwin, Whippany, Aerosonic, Avionics Specialties, Airborne Global, Airborne Holdings, Airborne Acquisitions, Airborne Systems NA, Airborne Systems North America, Airborne Systems North America CA, Airborne Systems North America NJ, Telair US, Telair International and Pexco Aerospace, the “*Existing Guarantors*”), and The Bank of New York Mellon Trust Company, N.A., as trustee (the “*Trustee*”) under the Indenture referred to below. Capitalized terms used herein and not otherwise defined shall have the meaning assigned to them in the Indenture.

**WITNESSETH:**

**WHEREAS**, the Company and the Existing Guarantors have heretofore executed and delivered to the Trustee an indenture, dated as of October 15, 2012 (as supplemented by the First Supplemental Indenture thereto, dated as of June 5, 2013, the Second Supplemental Indenture thereto, dated as of June 26, 2013, the Third Supplemental Indenture thereto, dated as of December 19, 2013, the Fourth Supplemental Indenture thereto, dated as of April 9, 2015, the Fifth Supplemental Indenture thereto, dated as of June 12, 2015, and the Sixth Supplemental Indenture thereto, dated as of August 28, 2015, the "**Indenture**"), providing for the issuance by the Company of 5.50% Senior Subordinated Notes due 2020 (the "**Notes**") and the guarantees thereof by each of the Existing Guarantors;

**WHEREAS**, the Indenture provides that under certain circumstances described therein, newly created or acquired Domestic Restricted Subsidiaries shall execute and deliver to the Trustee a supplemental indenture to the Indenture providing for a senior subordinated guarantee of payment of the Notes by such Domestic Restricted Subsidiary (the "**Guarantee**");

**WHEREAS**, all things necessary to make this Supplemental Indenture the legal, valid and binding obligation of the Company, the Existing Guarantors and the Guaranteeing Subsidiary have been done; and

**WHEREAS**, pursuant to Section 9.01(g) of the Indenture, the Trustee is authorized to execute and deliver this Supplemental Indenture without the consent of the Holders of the Notes.

**NOW, THEREFORE**, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, the Guaranteeing Subsidiary covenants and agrees for the equal and ratable benefit of the Holders of the Notes as follows:

1. **CAPITALIZED TERMS.** Capitalized terms used herein without definition shall have the meanings assigned to them in the Indenture.
2. **GUARANTEE, ETC.** The Guaranteeing Subsidiary hereby agrees that from and after the date hereof it shall be a Guarantor under the Indenture and be bound by the terms thereof applicable to Guarantors and shall be entitled to all of the rights and subject to all the obligations of a Guarantor thereunder.
3. **RATIFICATION OF INDENTURE; SUPPLEMENTAL INDENTURE PART OF INDENTURE.** The Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every holder of Notes heretofore or hereafter authenticated and delivered shall be bound hereby.
4. **EXECUTION AND DELIVERY.** The Guaranteeing Subsidiary agrees that the Guarantee granted by it pursuant to the terms hereof shall remain in full force and effect notwithstanding any failure to endorse on each Note a notation of such Guarantee.
5. **NO RECOURSE AGAINST OTHERS.** No past, present or future director, officer, employee, incorporator, stockholder or agent of the Guaranteeing Subsidiary (or any successor entity) (other than the Company or the Existing Guarantors), as such, shall have any liability for any obligations of the Company, TD Group, the Guaranteeing Subsidiary or any other Guarantor under the Notes, any Guarantee, the Indenture or this Supplemental Indenture or for any claim based on, in respect of, or by reason of, such obligations or their creation. Each Holder of the Notes by accepting a Note waives and releases all such liability. The waiver and release are part of the consideration for issuance of the Notes.
6. **NEW YORK LAW TO GOVERN.** THE INTERNAL LAW OF THE STATE OF NEW YORK SHALL GOVERN AND BE USED TO CONSTRUE THIS SUPPLEMENTAL INDENTURE AND THE GUARANTEE GRANTED HEREUNDER WITHOUT GIVING EFFECT TO APPLICABLE

PRINCIPLES OF CONFLICTS OF LAW TO THE EXTENT THAT THE APPLICATION OF THE LAWS OF ANOTHER JURISDICTION WOULD BE REQUIRED THEREBY.

7. **COUNTERPART ORIGINALS.** The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.
8. **EFFECT OF HEADINGS.** The Section headings have been inserted for convenience of reference only, are not to be considered part of this Supplemental Indenture and shall in no way modify or restrict any of the terms or provisions hereof.
9. **THE TRUSTEE.** The Trustee shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Supplemental Indenture or for or in respect of the recitals contained herein, all of which recitals are made solely by the Guaranteeing Subsidiary, the Existing Guarantors and the Company.

*[Signature page follows.]*

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed as of the date hereof.

TRANSDIGM INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Executive Vice President and Chief Financial Officer

TRANSDIGM GROUP INCORPORATED

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Executive Vice President and Chief  
Financial Officer

ACME AEROSPACE, INC.  
ADAMS RITE AEROSPACE, INC.  
AEROCONTROLEX GROUP, INC.  
AIRBORNE ACQUISITION, INC.  
AIRBORNE GLOBAL, INC.  
AIRBORNE HOLDINGS, INC.  
AIRBORNE SYSTEMS NORTH AMERICA OF CA INC.  
AIRBORNE SYSTEMS NORTH AMERICA OF NJ INC.  
AMSAFE GLOBAL HOLDINGS, INC.  
AMSAFE, INC.  
ARKWIN INDUSTRIES, INC.  
AVIATION TECHNOLOGIES, INC.  
AVTECHTYEE, INC.  
BRIDPORT-AIR CARRIER, INC.  
BRIDPORT HOLDINGS, INC.  
BRUCE AEROSPACE INC.  
HARTWELL CORPORATION  
MARATHONNORCO AEROSPACE, INC.  
MCKECHNIE AEROSPACE DE, INC.  
MCKECHNIE AEROSPACE US LLC  
By: McKechnie Aerospace DE, Inc., its sole member  
SHIELD RESTRAINT SYSTEMS, INC.  
SEMCO INSTRUMENTS, INC.  
SKURKA AEROSPACE INC.

[Signature Page to the Seventh Supplemental Indenture – 2020 Notes]

TEXAS ROTRONICS, INC.  
TRANSICOIL LLC  
By: Aviation Technologies, Inc., its sole member

By: /s/ Gregory Rufus  
Name: Gregory Rufus  
Title: Chief Executive Officer

AEROSONIC LLC  
AVIONIC INSTRUMENTS LLC  
BREEZE-EASTERN LLC  
CDA INTERCORP LLC  
CEF INDUSTRIES, LLC  
CHAMPION AEROSPACE LLC  
HARCO LLC  
SCHNELLER LLC  
TELAIR INTERNATIONAL LLC  
TELAIR US LLC  
WHIPPANY ACTUATION SYSTEMS, LLC  
By: TransDigm Inc., its sole member

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Executive Vice President and Chief Financial Officer

AIRBORNE SYSTEMS NA INC.  
AIRBORNE SYSTEMS NORTH AMERICA INC.  
AVIONICS SPECIALTIES, INC.  
ELECTROMECH TECHNOLOGIES LLC  
By: McKechnie Aerospace Investments, Inc., its sole member  
MCKECHNIE AEROSPACE HOLDINGS, INC.  
MCKECHNIE AEROSPACE INVESTMENTS, INC.

By: /s/ Gregory Rufus  
Name: Gregory Rufus  
Title: President

BRIDPORT ERIE AVIATION, INC.

By: /s/ Gregory Rufus  
Name: Gregory Rufus  
Title: Vice President and Treasurer

DUKES AEROSPACE, INC.

By: /s/ Gregory Rufus  
Name: Gregory Rufus  
Title: Chairman of the Board

PEXCO AEROSPACE, INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie

[Signature Page to the Seventh Supplemental Indenture – 2020 Notes]

Title: President

PNEUDRAULICS, INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Chief Executive Officer

[Signature Page to the Seventh Supplemental Indenture – 2020 Notes]

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., AS TRUSTEE

By: /s/ Lawrence M. Kusch  
Name: Lawrence M. Kusch  
Title: Vice President

[Signature Page to the Seventh Supplemental Indenture – 2020 Notes]

**TRANSDIGM INC.,**  
**TRANSDIGM GROUP INCORPORATED,**  
**THE GUARANTORS NAMED HEREIN,**  
AND  
**THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.,**  
as Trustee

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**EIGHTH SUPPLEMENTAL INDENTURE**

Dated as of July 8, 2016  
to  
Indenture  
Dated as of October 15, 2012  
by and among  
**TRANSDIGM INC.,**  
**TRANSDIGM GROUP INCORPORATED,**  
**THE GUARANTORS NAMED THEREIN,**  
AND  
**THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.,**  
as Trustee

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**5.50% Senior Subordinated Notes due 2020**  
**of TransDigm Inc.**



This **EIGHTH SUPPLEMENTAL INDENTURE** (this “**Supplemental Indenture**”), dated as of July 8, 2016, by and among ILC Holdings, Inc., a Delaware corporation (“**ILC Holdings**”), ILC Industries, LLC, a Delaware limited liability company (“**ILC Industries**”), Data Device Corporation, a Delaware corporation (“**DDC**”), Beta Transformer Technology Corporation, a New York corporation (“**Beta Corporation**”), and Beta Transformer Technology LLC, a Delaware limited liability company (“**Beta LLC**”) and, together with ILC Holdings, ILC Industries, DDC and Beta Corporation, the “**Guaranteeing Subsidiaries**”), TransDigm Inc., a Delaware corporation (the “**Company**”), TransDigm Group Incorporated, a Delaware corporation (“**TD Group**”), Adams Rite Aerospace, Inc., a California corporation (“**Adams Rite**”), MarathonNorco Aerospace, Inc., a Delaware corporation (“**Marathon**”), Champion Aerospace LLC, a Delaware limited liability company (“**Champion**”), Avionic Instruments LLC, a Delaware limited liability company (“**Avionic**”), Skurka Aerospace Inc., a Delaware corporation (“**Skurka**”), CDA InterCorp LLC, a Florida limited liability company (“**CDA**”), Aviation Technologies, Inc., a Delaware corporation (“**ATI**”), AvtechTye, Inc., a Washington corporation (“**Avtech**”), Transicoil LLC, a Delaware limited liability company (“**Transicoil**”), AeroControlex Group, Inc., a Delaware corporation (“**AeroControlex**”), Bruce Aerospace Inc., a Delaware corporation (“**Bruce Aerospace**”), CEF Industries, LLC, a Delaware limited liability company (“**CEF**”), Acme Aerospace, Inc., a Delaware corporation (“**Acme**”), Dukes Aerospace, Inc., a Delaware corporation (“**Dukes**”), Semco Instruments, Inc., a Delaware corporation, (“**Semco**”), Hartwell Corporation, a California corporation (“**Hartwell**”), McKechnie Aerospace DE, Inc., a Delaware corporation (“**McKechnie Aerospace DE**”), McKechnie Aerospace Holdings, Inc., a Delaware corporation (“**McKechnie Aerospace Holdings**”), McKechnie Aerospace Investments, Inc., a Delaware corporation (“**McKechnie Aerospace Investments**”), McKechnie Aerospace US LLC, a Delaware limited liability company (“**McKechnie Aerospace US**”), Texas Rotronics, Inc., a Texas corporation (“**Rotronics**”), Electromech Technologies LLC (formerly Western Sky Industries, LLC), a Delaware limited liability company (“**Electromech**”), Schneller LLC, a Delaware limited liability company (“**Schneller**”), HARCO LLC (formerly Harco Laboratories, Incorporated), a Connecticut limited liability company (“**HARCO**”), AmSafe Global Holdings, Inc., a Delaware corporation (“**AmSafe Global**”), Bridport Holdings, Inc., a Delaware corporation (“**Bridport Holdings**”), AmSafe, Inc., a Delaware corporation (“**AmSafe Inc.**”), Shield Restraint Systems, Inc. (formerly AmSafe Commercial Products, Inc.), a Delaware corporation (“**Shield**”), Bridport-Air Carrier, Inc., a Washington corporation (“**Bridport-Air**”), Bridport Erie Aviation, Inc., a Delaware corporation (“**Bridport Erie**”), Arkwin Industries, Inc., a New York corporation (“**Arkwin**”), Whippany Actuation Systems, LLC, a Delaware limited liability company (“**Whippany**”), Aerosonic LLC, a Delaware limited liability company (“**Aerosonic**”), Avionics Specialties, Inc., a Virginia corporation (“**Avionics Specialties**”), Airborne Global, Inc., a Delaware corporation (“**Airborne Global**”), Airborne Holdings, Inc., a Delaware Corporation (“**Airborne Holdings**”), Airborne Acquisition, Inc., a Delaware corporation (“**Airborne Acquisitions**”), Airborne Systems NA Inc., a Delaware corporation (“**Airborne Systems NA**”), Airborne Systems North America Inc., a Delaware corporation (“**Airborne Systems North America**”), Airborne Systems North America of CA Inc., a Delaware corporation (“**Airborne Systems North America CA**”), Airborne Systems North America of NJ Inc., a New Jersey corporation (“**Airborne Systems North America NJ**”), Telair US LLC, a Delaware limited liability company (“**Telair US**”), Telair International LLC, a Delaware limited liability company (“**Telair International**”), Pexco Aerospace, Inc., a Delaware corporation (“**Pexco Aerospace**”), PneuDrualics, Inc., a California corporation (“**PneuDrualics**”) and Breeze-Eastern LLC, a Delaware limited liability company (collectively with TD Group, Adams Rite, Marathon, Champion, Avionic, Skurka, CDA, ATI, Avtech, Transicoil, AeroControlex, Bruce Aerospace, CEF, Acme, Dukes, Semco, Hartwell, McKechnie Aerospace DE, McKechnie Aerospace Holdings, McKechnie Aerospace Investments, McKechnie Aerospace US, Rotronics, Electromech, Schneller, HARCO, AmSafe Global, Bridport Holdings, AmSafe Inc., Shield, Bridport-Air, Bridport Erie, Arkwin, Whippany, Aerosonic, Avionics Specialties, Airborne Global, Airborne Holdings, Airborne Acquisitions, Airborne Systems NA, Airborne Systems North America, Airborne Systems North America CA, Airborne Systems North America NJ, Telair US, Telair International, Pexco Aerospace and PneuDrualics, the “**Existing Guarantors**”), and The Bank of New York Mellon Trust Company, N.A., as trustee (the “**Trustee**”) under the Indenture referred to below. Capitalized terms used herein and not otherwise defined shall have the meaning assigned to them in the Indenture.

**WITNESSETH:**

**WHEREAS**, the Company and the Existing Guarantors have heretofore executed and delivered to the Trustee an indenture, dated as of October 15, 2012 (as supplemented by the First Supplemental Indenture thereto, dated as of June 5, 2013, the Second Supplemental Indenture thereto, dated as of June 26, 2013, the Third Supplemental Indenture thereto, dated as of December 19, 2013, the Fourth Supplemental Indenture thereto, dated as of April 9, 2015, the Fifth Supplemental Indenture thereto, dated as of June 12, 2015, the Sixth Supplemental Indenture thereto, dated as of August 28, 2015 and the Seventh Supplemental Indenture thereto, dated as of April 1, 2016, the "**Indenture**"), providing for the issuance by the Company of 5.50% Senior Subordinated Notes due 2020 (the "**Notes**") and the guarantees thereof by each of the Existing Guarantors;

**WHEREAS**, the Indenture provides that under certain circumstances described therein, newly created or acquired Domestic Restricted Subsidiaries shall execute and deliver to the Trustee a supplemental indenture to the Indenture providing for a senior subordinated guarantee of payment of the Notes by such Domestic Restricted Subsidiary (the "**Guarantee**");

**WHEREAS**, all things necessary to make this Supplemental Indenture the legal, valid and binding obligation of the Company, the Existing Guarantors and the Guaranteeing Subsidiaries have been done; and

**WHEREAS**, pursuant to Section 9.01(g) of the Indenture, the Trustee is authorized to execute and deliver this Supplemental Indenture without the consent of the Holders of the Notes.

**NOW, THEREFORE**, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, each of the Guaranteeing Subsidiaries covenants and agrees for the equal and ratable benefit of the Holders of the Notes as follows:

1. **CAPITALIZED TERMS.** Capitalized terms used herein without definition shall have the meanings assigned to them in the Indenture.
2. **GUARANTEE, ETC.** Each of the Guaranteeing Subsidiaries hereby agrees that from and after the date hereof it shall be a Guarantor under the Indenture and be bound by the terms thereof applicable to Guarantors and shall be entitled to all of the rights and subject to all the obligations of a Guarantor thereunder.
3. **RATIFICATION OF INDENTURE; SUPPLEMENTAL INDENTURE PART OF INDENTURE.** The Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every holder of Notes heretofore or hereafter authenticated and delivered shall be bound hereby.
4. **EXECUTION AND DELIVERY.** Each of the Guaranteeing Subsidiaries agrees that the Guarantee granted by it pursuant to the terms hereof shall remain in full force and effect notwithstanding any failure to endorse on each Note a notation of such Guarantee.
5. **NO RECOURSE AGAINST OTHERS.** No past, present or future director, officer, employee, incorporator, stockholder or agent of any of the Guaranteeing Subsidiaries (or any successor entity) (other than the Company or the Existing Guarantors), as such, shall have any liability for any obligations of the Company, TD Group, the Guaranteeing Subsidiaries or any other Guarantor under the Notes, any Guarantee, the Indenture or this Supplemental Indenture or for any claim based on, in respect of, or by reason of, such obligations or their creation. Each Holder of the Notes by accepting a Note waives and releases all such liability. The waiver and release are part of the consideration for issuance of the Notes.
6. **NEW YORK LAW TO GOVERN.** THE INTERNAL LAW OF THE STATE OF NEW YORK SHALL GOVERN AND BE USED TO CONSTRUE THIS SUPPLEMENTAL INDENTURE AND THE GUARANTEE GRANTED HEREUNDER WITHOUT GIVING EFFECT TO APPLICABLE

PRINCIPLES OF CONFLICTS OF LAW TO THE EXTENT THAT THE APPLICATION OF THE LAWS OF ANOTHER JURISDICTION WOULD BE REQUIRED THEREBY.

7. **COUNTERPART ORIGINALS.** The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.
8. **EFFECT OF HEADINGS.** The Section headings have been inserted for convenience of reference only, are not to be considered part of this Supplemental Indenture and shall in no way modify or restrict any of the terms or provisions hereof.
9. **THE TRUSTEE.** The Trustee shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Supplemental Indenture or for or in respect of the recitals contained herein, all of which recitals are made solely by the Guaranteeing Subsidiaries, the Existing Guarantors and the Company.

*[Signature page follows.]*

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed as of the date hereof.

TRANSDIGM INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Executive Vice President and Chief Financial Officer

TRANSDIGM GROUP INCORPORATED

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Executive Vice President and Chief  
Financial Officer

ACME AEROSPACE, INC.  
ADAMS RITE AEROSPACE, INC.  
AIRBORNE SYSTEMS NORTH AMERICA OF NJ INC.  
AMSAFE GLOBAL HOLDINGS, INC.  
AMSAFE, INC.  
ARKWIN INDUSTRIES, INC.  
AVTECHTYEE, INC.  
BRUCE AEROSPACE INC.  
DUKES AEROSPACE, INC.  
ELECTROMECH TECHNOLOGIES LLC

By: McKechnie Aerospace Investments, Inc., its sole

member

HARTWELL CORPORATION  
MARATHONNORCO AEROSPACE, INC.  
MCKECHNIE AEROSPACE INVESTMENTS, INC.  
PEXCO AEROSPACE, INC.  
PNEUDRAULICS, INC.  
SHIELD RESTRAINT SYSTEMS, INC.  
SEMCO INSTRUMENTS, INC.  
SKURKA AEROSPACE INC.  
TEXAS ROTRONICS, INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Chief Executive Officer

[Signature page to the Eighth Supplemental Indenture – 2020 Notes]

AEROCONTROLEX GROUP, INC.  
AIRBORNE ACQUISITION, INC.  
AIRBORNE GLOBAL, INC.  
AIRBORNE HOLDINGS, INC.  
AVIATION TECHNOLOGIES, INC.  
BRIDPORT HOLDINGS, INC.  
BRIDPORT-AIR CARRIER, INC.  
MCKECHNIE AEROSPACE DE, INC.  
MCKECHNIE AEROSPACE US LLC

TRANSCOIL LLC

By: McKechnie Aerospace DE, Inc., its sole member

By: Aviation Technologies, Inc., its sole member

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: President and Chief Executive Officer

AEROSONIC LLC  
AVIONIC INSTRUMENTS LLC  
BREEZE-EASTERN LLC  
CDA INTERCORP LLC  
CEF INDUSTRIES, LLC  
CHAMPION AEROSPACE LLC  
HARCO LLC  
SCHNELLER LLC  
TELAIR US LLC  
WHIPPANY ACTUATION SYSTEMS, LLC

By: TransDigm Inc., its sole member

By: Telair US LLC, its sole member

TELAIR INTERNATIONAL LLC

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Executive Vice President and Chief Financial Officer

AIRBORNE SYSTEMS NA INC.  
AIRBORNE SYSTEMS NORTH AMERICA INC.  
AVIONICS SPECIALTIES, INC.  
MCKECHNIE AEROSPACE HOLDINGS, INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: President

BRIDPORT ERIE AVIATION, INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Vice President and Treasurer

AIRBORNE SYSTEMS NORTH AMERICA OF CA INC.

By: /s/ Sean P. Maroney  
Name: Sean P. Maroney  
Title: Treasurer

[Signature page to the Eighth Supplemental Indenture – 2020 Notes]

BETA TRANSFORMER TECHNOLOGY CORPORATION  
DATA DEVICE CORPORATION  
ILC HOLDINGS, INC.  
ILC INDUSTRIES, LLC

By: ILC Holdings, Inc., its sole member

By: /s/ Halle F. Terrion  
Name: Halle F. Terrion  
Title: Secretary

BETA TRANSFORMER TECHNOLOGY LLC

By: /s/ Vincent Buffa  
Name: Vincent Buffa  
Title: Manager

[Signature page to the Eighth Supplemental Indenture – 2020 Notes]

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., AS TRUSTEE

By: /s/ Lawrence M. Kusch  
Name: Lawrence M. Kusch  
Title: Vice President

[Signature page to the Eighth Supplemental Indenture – 2020 Notes]

**TRANSDIGM INC.,**  
**TRANSDIGM GROUP INCORPORATED,**  
**THE GUARANTORS NAMED HEREIN,**  
AND  
**THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.,**  
as Trustee

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**NINTH SUPPLEMENTAL INDENTURE**

Dated as of October 28, 2016

to

Indenture

Dated as of October 15, 2012

by and among

**TRANSDIGM INC.,**  
**TRANSDIGM GROUP INCORPORATED,**  
**THE GUARANTORS NAMED THEREIN,**  
AND  
**THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.,**  
as Trustee

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**5.50% Senior Subordinated Notes due 2020**  
**of TransDigm Inc.**



This NINTH SUPPLEMENTAL INDENTURE (this “*Supplemental Indenture*”), dated as of October 28, 2016, by and among Young & Franklin Inc., a New York corporation (“*Young & Franklin*”), Tactair Fluid Controls, Inc., a New York corporation (“*Tactair*”), and Johnson Liverpool LLC, a Delaware limited liability company (together with Young & Franklin and Tactair, the “*Guaranteeing Subsidiaries*”), TransDigm Inc., a Delaware corporation (the “*Company*”), TransDigm Group Incorporated, a Delaware corporation (“*TD Group*”), Adams Rite Aerospace, Inc., a California corporation (“*Adams Rite*”), MarathonNorco Aerospace, Inc., a Delaware corporation (“*Marathon*”), Champion Aerospace LLC, a Delaware limited liability company (“*Champion*”), Avionic Instruments LLC, a Delaware limited liability company (“*Avionic*”), Skurka Aerospace Inc., a Delaware corporation (“*Skurka*”), CDA InterCorp LLC, a Florida limited liability company (“*CDA*”), Aviation Technologies, Inc., a Delaware corporation (“*ATP*”), AvtechTyee, Inc., a Washington corporation (“*Avtech*”), Transicoil LLC, a Delaware limited liability company (“*Transicoil*”), AeroControlex Group, Inc., a Delaware corporation (“*AeroControlex*”), Bruce Aerospace Inc., a Delaware corporation (“*Bruce Aerospace*”), CEF Industries, LLC, a Delaware limited liability company (“*CEF*”), Acme Aerospace, Inc., a Delaware corporation (“*Acme*”), Dukes Aerospace, Inc., a Delaware corporation (“*Dukes*”), Semco Instruments, Inc., a Delaware corporation (“*Semco*”), Hartwell Corporation, a California corporation (“*Hartwell*”), McKechnie Aerospace DE, Inc., a Delaware corporation (“*McKechnie Aerospace DE*”), McKechnie Aerospace Holdings, Inc., a Delaware corporation (“*McKechnie Aerospace Holdings*”), McKechnie Aerospace Investments, Inc., a Delaware corporation (“*McKechnie Aerospace Investments*”), McKechnie Aerospace US LLC, a Delaware limited liability company (“*McKechnie Aerospace US*”), Texas Rotronics, Inc., a Texas corporation (“*Rotronics*”), Electromech Technologies LLC (formerly Western Sky Industries, LLC), a Delaware limited liability company (“*Electromech*”), Schneller LLC, a Delaware limited liability company (“*Schneller*”), HARCO LLC (formerly Harco Laboratories, Incorporated), a Connecticut limited liability company (“*HARCO*”), AmSafe Global Holdings, Inc., a Delaware corporation (“*AmSafe Global*”), Bridport Holdings, Inc., a Delaware corporation (“*Bridport Holdings*”), AmSafe, Inc., a Delaware corporation (“*AmSafe Inc.*”), Shield Restraint Systems, Inc. (formerly AmSafe Commercial Products, Inc.), a Delaware corporation (“*Shield*”), Bridport-Air Carrier, Inc., a Washington corporation (“*Bridport-Air*”), Bridport Erie Aviation, Inc., a Delaware corporation (“*Bridport Erie*”), Arkwin Industries, Inc., a New York corporation (“*Arkwin*”), Whippany Actuation Systems, LLC, a Delaware limited liability company (“*Whippany*”), Aerosonic LLC, a Delaware limited liability company (“*Aerosonic*”), Avionics Specialties, Inc., a Virginia corporation (“*Avionics Specialties*”), Airborne Global, Inc., a Delaware corporation (“*Airborne Global*”), Airborne Holdings, Inc., a Delaware Corporation (“*Airborne Holdings*”), Airborne Acquisition, Inc., a Delaware corporation (“*Airborne Acquisitions*”), Airborne Systems NA Inc., a Delaware corporation (“*Airborne Systems NA*”), Airborne Systems North America Inc., a Delaware corporation (“*Airborne Systems North America*”), Airborne Systems North America of CA Inc., a Delaware corporation (“*Airborne Systems North America CA*”), Airborne Systems North America of NJ Inc., a New Jersey corporation (“*Airborne Systems North America NJ*”), Telair US LLC, a Delaware limited liability company (“*Telair US*”), Telair International LLC, a Delaware limited liability company (“*Telair International*”), Pexco Aerospace, Inc., a Delaware corporation (“*Pexco Aerospace*”), PneuDraulics, Inc., a California corporation (“*PneuDraulics*”), Breeze-Eastern LLC, a Delaware limited liability company (“*Breeze-Eastern*”), ILC Holdings, Inc., a Delaware corporation (“*ILC Holdings*”), ILC Industries, LLC, a Delaware limited liability company (“*ILC Industries*”), Data Device Corporation, a Delaware corporation (“*DDC*”), Beta Transformer Technology Corporation, a New York corporation (“*Beta Corporation*”), and Beta Transformer Technology LLC, a Delaware limited liability company (collectively with TD Group, Adams Rite, Marathon, Champion, Avionic, Skurka, CDA, ATI, Avtech, Transicoil, AeroControlex, Bruce Aerospace, CEF, Acme, Dukes, Semco, Hartwell, McKechnie Aerospace DE, McKechnie Aerospace Holdings, McKechnie Aerospace Investments, McKechnie Aerospace US, Rotronics, Electromech, Schneller, HARCO, AmSafe Global, Bridport Holdings, AmSafe Inc., Shield, Bridport-Air, Bridport Erie, Arkwin, Whippany, Aerosonic, Avionics Specialties, Airborne Global, Airborne Holdings, Airborne Acquisitions, Airborne Systems NA, Airborne Systems North America, Airborne Systems North America CA, Airborne Systems North America NJ, Telair US, Telair International, Pexco Aerospace, PneuDraulics, Breeze-Eastern, ILC Holdings, ILC Industries, DDC and Beta Corporation, the “*Existing Guarantors*”), and The Bank of New York Mellon Trust Company, N.A., as trustee (the “*Trustee*”) under the Indenture referred to below. Capitalized terms used herein and not otherwise defined shall have the meaning assigned to them in the Indenture.

**WITNESSETH:**

**WHEREAS**, the Company and the Existing Guarantors have heretofore executed and delivered to the Trustee an indenture, dated as of October 15, 2012 (as supplemented by the First Supplemental Indenture thereto, dated as of June 5, 2013, the Second Supplemental Indenture thereto, dated as of June 26, 2013, the Third Supplemental Indenture thereto, dated as of December 19, 2013, the Fourth Supplemental Indenture thereto, dated as of April 9, 2015, the Fifth Supplemental Indenture thereto, dated as of June 12, 2015, the Sixth Supplemental Indenture thereto, dated as of August 28, 2015, the Seventh Supplemental Indenture thereto, dated as of April 1, 2016, and the Eighth Supplemental Indenture thereto, dated as of July 8, 2016, the "**Indenture**"), providing for the issuance by the Company of 5.50% Senior Subordinated Notes due 2020 (the "**Notes**") and the guarantees thereof by each of the Existing Guarantors;

**WHEREAS**, the Indenture provides that under certain circumstances described therein, newly created or acquired Domestic Restricted Subsidiaries shall execute and deliver to the Trustee a supplemental indenture to the Indenture providing for a senior subordinated guarantee of payment of the Notes by such Domestic Restricted Subsidiary (the "**Guarantee**");

**WHEREAS**, all things necessary to make this Supplemental Indenture the legal, valid and binding obligation of the Company, the Existing Guarantors and the Guaranteeing Subsidiaries have been done; and

**WHEREAS**, pursuant to Section 9.01(g) of the Indenture, the Trustee is authorized to execute and deliver this Supplemental Indenture without the consent of the Holders of the Notes.

**NOW, THEREFORE**, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, each of the Guaranteeing Subsidiaries covenants and agrees for the equal and ratable benefit of the Holders of the Notes as follows:

1. **CAPITALIZED TERMS.** Capitalized terms used herein without definition shall have the meanings assigned to them in the Indenture.
2. **GUARANTEE, ETC.** Each of the Guaranteeing Subsidiaries hereby agrees that from and after the date hereof it shall be a Guarantor under the Indenture and be bound by the terms thereof applicable to Guarantors and shall be entitled to all of the rights and subject to all the obligations of a Guarantor thereunder.
3. **RATIFICATION OF INDENTURE; SUPPLEMENTAL INDENTURE PART OF INDENTURE.** The Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every holder of Notes heretofore or hereafter authenticated and delivered shall be bound hereby.
4. **EXECUTION AND DELIVERY.** Each of the Guaranteeing Subsidiaries agrees that the Guarantee granted by it pursuant to the terms hereof shall remain in full force and effect notwithstanding any failure to endorse on each Note a notation of such Guarantee.
5. **NO RECOURSE AGAINST OTHERS.** No past, present or future director, officer, employee, incorporator, stockholder or agent of any of the Guaranteeing Subsidiaries (or any successor entity) (other than the Company or the Existing Guarantors), as such, shall have any liability for any obligations of the Company, TD Group, the Guaranteeing Subsidiaries or any other Guarantor under the Notes, any Guarantee, the Indenture or this Supplemental Indenture or for any claim based on, in respect of, or by reason of, such obligations or their creation. Each Holder of the Notes by accepting a Note waives and releases all such liability. The waiver and release are part of the consideration for issuance of the Notes.
6. **NEW YORK LAW TO GOVERN.** THE INTERNAL LAW OF THE STATE OF NEW YORK SHALL GOVERN AND BE USED TO CONSTRUE THIS SUPPLEMENTAL INDENTURE AND

THE GUARANTEE GRANTED HEREUNDER WITHOUT GIVING EFFECT TO APPLICABLE PRINCIPLES OF CONFLICTS OF LAW TO THE EXTENT THAT THE APPLICATION OF THE LAWS OF ANOTHER JURISDICTION WOULD BE REQUIRED THEREBY.

7. **COUNTERPART ORIGINALS.** The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.
8. **EFFECT OF HEADINGS.** The Section headings have been inserted for convenience of reference only, are not to be considered part of this Supplemental Indenture and shall in no way modify or restrict any of the terms or provisions hereof.
9. **THE TRUSTEE.** The Trustee shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Supplemental Indenture or for or in respect of the recitals contained herein, all of which recitals are made solely by the Guaranteeing Subsidiaries, the Existing Guarantors and the Company.

*[Signature page follows.]*

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed as of the date hereof.

TRANSDIGM INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Executive Vice President and Chief Financial Officer

TRANSDIGM GROUP INCORPORATED

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Executive Vice President and Chief Financial Officer

ACME AEROSPACE, INC.  
ADAMS RITE AEROSPACE, INC.  
AIRBORNE SYSTEMS NORTH AMERICA OF NJ INC.  
AMSAFE GLOBAL HOLDINGS, INC.  
AMSAFE, INC.  
ARKWIN INDUSTRIES, INC.  
AVTECHTYEE, INC.  
BRUCE AEROSPACE INC.  
DUKES AEROSPACE, INC.  
ELECTROMECH TECHNOLOGIES LLC

member

HARTWELL CORPORATION  
JOHNSON LIVERPOOL LLC

By: McKechnie Aerospace Investments, Inc., its sole

By: Young & Franklin Inc., its sole member

MARATHONNORCO AEROSPACE, INC.  
MCKECHNIE AEROSPACE INVESTMENTS, INC.  
PEXCO AEROSPACE, INC.  
PNEUDRAULICS, INC.  
SHIELD RESTRAINT SYSTEMS, INC.  
SEMCO INSTRUMENTS, INC.  
SKURKA AEROSPACE INC.  
TACTAIR FLUID CONTROLS, INC.  
TEXAS ROTRONICS, INC.  
YOUNG & FRANKLIN INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Chief Executive Officer

[Signature page to the Ninth Supplemental Indenture – 2020 Notes]

AEROCONTROLEX GROUP, INC.  
AIRBORNE ACQUISITION, INC.  
AIRBORNE GLOBAL, INC.  
AIRBORNE HOLDINGS, INC.  
AVIATION TECHNOLOGIES, INC.  
BRIDPORT HOLDINGS, INC.  
BRIDPORT-AIR CARRIER, INC.  
MCKECHNIE AEROSPACE DE, INC.  
MCKECHNIE AEROSPACE US LLC

By: McKechnie Aerospace DE, Inc., its sole member

TRANSICOIL LLC

By: Aviation Technologies, Inc., its sole member

By: /s/ Terrance M. Paradie

Name: Terrance M. Paradie

Title: President and Chief Executive Officer

AEROSONIC LLC  
AVIONIC INSTRUMENTS LLC  
BREEZE-EASTERN LLC  
CDA INTERCORP LLC  
CEF INDUSTRIES, LLC  
CHAMPION AEROSPACE LLC  
HARCO LLC  
SCHNELLER LLC  
TELAIR US LLC  
WHIPPANY ACTUATION SYSTEMS, LLC

By: TransDigm Inc., its sole member

TELAIR INTERNATIONAL LLC

By: Telair US LLC, its sole member

By: /s/ Terrance M. Paradie

Name: Terrance M. Paradie

Title: Executive Vice President and Chief Financial Officer

AIRBORNE SYSTEMS NA INC.  
AIRBORNE SYSTEMS NORTH AMERICA INC.  
AVIONICS SPECIALTIES, INC.  
MCKECHNIE AEROSPACE HOLDINGS, INC.

By: /s/ Terrance M. Paradie

Name: Terrance M. Paradie

Title: President

BRIDPORT ERIE AVIATION, INC.

By: /s/ Terrance M. Paradie

Name: Terrance M. Paradie

Title: Vice President and Treasurer

AIRBORNE SYSTEMS NORTH AMERICA OF CA INC.

By: /s/ Sean P. Maroney

Name: Sean P. Maroney

Title: Treasurer

[Signature page to the Ninth Supplemental Indenture – 2020 Notes]

BETA TRANSFORMER TECHNOLOGY CORPORATION  
BETA TRANSFORMER TECHNOLOGY LLC

By: Beta Transformer Technology Corporation, its

sole

member  
DATA DEVICE CORPORATION  
ILC HOLDINGS, INC.  
ILC INDUSTRIES, LLC

By: ILC Holdings, Inc., its sole member

By: /s/ Halle F. Terrion  
Name: Halle F. Terrion  
Title: Secretary

[Signature page to the Ninth Supplemental Indenture – 2020 Notes]

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., AS TRUSTEE

By: /s/ Lawrence M. Kusch  
Name: Lawrence M. Kusch  
Title: Vice President

[Signature page to the Ninth Supplemental Indenture – 2020 Notes]

**TRANSDIGM INC.,**  
**TRANSDIGM GROUP INCORPORATED,**  
**THE GUARANTORS NAMED HEREIN,**  
AND  
**THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.,**  
as Trustee

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**FIFTH SUPPLEMENTAL INDENTURE**

Dated as of April 1, 2016  
to  
Indenture  
Dated as of July 1, 2013  
by and among  
**TRANSDIGM INC.,**  
**TRANSDIGM GROUP INCORPORATED,**  
**THE GUARANTORS NAMED THEREIN,**  
AND  
**THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.,**  
as Trustee

---

**7.50% Senior Subordinated Notes due 2021**  
**of TransDigm Inc.**



This **FIFTH SUPPLEMENTAL INDENTURE** (this “**Supplemental Indenture**”), dated as of April 1, 2016, by and among Breeze-Eastern LLC, a Delaware limited liability company (the “**Guaranteeing Subsidiary**”), TransDigm Inc., a Delaware corporation (the “**Company**”), TransDigm Group Incorporated, a Delaware corporation (“**TD Group**”), Adams Rite Aerospace, Inc., a California corporation (“**Adams Rite**”), MarathonNorco Aerospace, Inc., a Delaware corporation (“**Marathon**”), Champion Aerospace LLC, a Delaware limited liability company (“**Champion**”), Avionic Instruments LLC, a Delaware limited liability company (“**Avionic**”), Skurka Aerospace Inc., a Delaware corporation (“**Skurka**”), CDA InterCorp LLC, a Florida limited liability company (“**CDA**”), Aviation Technologies, Inc., a Delaware corporation (“**ATF**”), AvtechTyee, Inc., a Washington corporation (“**Avtech**”), Transicoil LLC, a Delaware limited liability company (“**Transicoil**”), AeroControlex Group, Inc., a Delaware corporation (“**AeroControlex**”), Bruce Aerospace Inc., a Delaware corporation (“**Bruce Aerospace**”), CEF Industries, LLC, a Delaware limited liability company (“**CEF**”), Acme Aerospace, Inc., a Delaware corporation (“**Acme**”), Dukes Aerospace, Inc., a Delaware corporation (“**Dukes**”), Semco Instruments, Inc., a Delaware corporation (“**Semco**”), Hartwell Corporation, a California corporation (“**Hartwell**”), McKechnie Aerospace DE, Inc., a Delaware corporation (“**McKechnie Aerospace DE**”), McKechnie Aerospace Holdings, Inc., a Delaware corporation (“**McKechnie Aerospace Holdings**”), McKechnie Aerospace Investments, Inc., a Delaware corporation (“**McKechnie Aerospace Investments**”), McKechnie Aerospace US LLC, a Delaware limited liability company (“**McKechnie Aerospace US**”), Texas Rotronics, Inc., a Texas corporation (“**Rotronics**”), Electromech Technologies LLC (formerly Western Sky Industries, LLC), a Delaware limited liability company (“**Electromech**”), Schneller LLC, a Delaware limited liability company (“**Schneller**”), HARCO LLC (formerly Harco Laboratories, Incorporated), a Connecticut limited liability company (“**HARCO**”), AmSafe Global Holdings, Inc., a Delaware corporation (“**AmSafe Global**”), Bridport Holdings, Inc., a Delaware corporation (“**Bridport Holdings**”), AmSafe, Inc., a Delaware corporation (“**AmSafe Inc.**”), Shield Restraint Systems, Inc. (formerly AmSafe Commercial Products, Inc.), a Delaware corporation (“**Shield**”), Bridport-Air Carrier, Inc., a Washington corporation (“**Bridport-Air**”), Bridport Erie Aviation, Inc., a Delaware corporation (“**Bridport Erie**”), Arkwin Industries, Inc., a New York corporation (“**Arkwin**”), Whippany Actuation Systems, LLC, a Delaware limited liability company (“**Whippany**”), Aerosonic LLC, a Delaware limited liability company (“**Aerosonic**”), Avionics Specialties, Inc., a Virginia corporation (“**Avionics Specialties**”), Airborne Global, Inc., a Delaware corporation (“**Airborne Global**”), Airborne Holdings, Inc., a Delaware Corporation (“**Airborne Holdings**”), Airborne Acquisition, Inc., a Delaware corporation (“**Airborne Acquisitions**”), Airborne Systems NA Inc., a Delaware corporation (“**Airborne Systems NA**”), Airborne Systems North America Inc., a Delaware corporation (“**Airborne Systems North America**”), Airborne Systems North America of CA Inc., a Delaware corporation (“**Airborne Systems North America CA**”), Airborne Systems North America of NJ Inc., a New Jersey corporation (“**Airborne Systems North America NJ**”), Telair US LLC, a Delaware limited liability company (“**Telair US**”), Telair International LLC, a Delaware limited liability company (“**Telair International**”), Pexco Aerospace, Inc., a Delaware corporation (“**Pexco Aerospace**”) and PneuDrualics, Inc., a California corporation (collectively with TD Group, Adams Rite, Marathon, Champion, Avionic, Skurka, CDA, ATI, Avtech, Transicoil, AeroControlex, Bruce Aerospace, CEF, Acme, Dukes, Semco, Hartwell, McKechnie Aerospace DE, McKechnie Aerospace Holdings, McKechnie Aerospace Investments, McKechnie Aerospace US, Rotronics, Electromech, Schneller, HARCO, AmSafe Global, Bridport Holdings, AmSafe Inc., Shield, Bridport-Air, Bridport Erie, Arkwin, Whippany, Aerosonic, Avionics Specialties, Airborne Global, Airborne Holdings, Airborne Acquisitions, Airborne Systems NA, Airborne Systems North America, Airborne Systems North America CA, Airborne Systems North America NJ, Telair US, Telair International and Pexco Aerospace, the “**Existing Guarantors**”), and The Bank of New York Mellon Trust Company, N.A., as trustee (the “**Trustee**”) under the Indenture referred to below. Capitalized terms used herein and not otherwise defined shall have the meaning assigned to them in the Indenture.

**WITNESSETH:**

**WHEREAS**, the Company and the Existing Guarantors have heretofore executed and delivered to the Trustee an indenture, dated as of July 1, 2013 (as supplemented by the First Supplemental Indenture thereto, dated as of December 19, 2013, the Second Supplemental Indenture thereto, dated as of April 9, 2015, the Third Supplemental Indenture thereto, dated as of May 29, 2015, and the Fourth Supplemental Indenture thereto, dated as of August 28, 2015, the "**Indenture**"), providing for the issuance by the Company of 7.50% Senior Subordinated Notes due 2021 (the "**Notes**") and the guarantees thereof by each of the Existing Guarantors;

**WHEREAS**, the Indenture provides that under certain circumstances described therein, newly created or acquired Domestic Restricted Subsidiaries shall execute and deliver to the Trustee a supplemental indenture to the Indenture providing for a senior subordinated guarantee of payment of the Notes by such Domestic Restricted Subsidiary (the "**Guarantee**");

**WHEREAS**, all things necessary to make this Supplemental Indenture the legal, valid and binding obligation of the Company, the Existing Guarantors and the Guaranteeing Subsidiary have been done; and

**WHEREAS**, pursuant to Section 9.01(g) of the Indenture, the Trustee is authorized to execute and deliver this Supplemental Indenture without the consent of the Holders of the Notes.

**NOW, THEREFORE**, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, the Guaranteeing Subsidiary covenants and agrees for the equal and ratable benefit of the Holders of the Notes as follows:

1. **CAPITALIZED TERMS.** Capitalized terms used herein without definition shall have the meanings assigned to them in the Indenture.
2. **GUARANTEE, ETC.** The Guaranteeing Subsidiary hereby agrees that from and after the date hereof it shall be a Guarantor under the Indenture and be bound by the terms thereof applicable to Guarantors and shall be entitled to all of the rights and subject to all the obligations of a Guarantor thereunder.
3. **RATIFICATION OF INDENTURE; SUPPLEMENTAL INDENTURE PART OF INDENTURE.** The Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every holder of Notes heretofore or hereafter authenticated and delivered shall be bound hereby.
4. **EXECUTION AND DELIVERY.** The Guaranteeing Subsidiary agrees that the Guarantee granted by it pursuant to the terms hereof shall remain in full force and effect notwithstanding any failure to endorse on each Note a notation of such Guarantee.
5. **NO RECOURSE AGAINST OTHERS.** No past, present or future director, officer, employee, incorporator, stockholder or agent of the Guaranteeing Subsidiary (or any successor entity) (other than the Company or the Existing Guarantors), as such, shall have any liability for any obligations of the Company, TD Group, the Guaranteeing Subsidiary or any other Guarantor under the Notes, any Guarantee, the Indenture or this Supplemental Indenture or for any claim based on, in respect of, or by reason of, such obligations or their creation. Each Holder of the Notes by accepting a Note waives and releases all such liability. The waiver and release are part of the consideration for issuance of the Notes.
6. **NEW YORK LAW TO GOVERN.** THE INTERNAL LAW OF THE STATE OF NEW YORK SHALL GOVERN AND BE USED TO CONSTRUE THIS SUPPLEMENTAL INDENTURE AND THE GUARANTEE GRANTED HEREUNDER WITHOUT GIVING EFFECT TO APPLICABLE PRINCIPLES OF CONFLICTS OF LAW TO THE EXTENT THAT THE APPLICATION OF THE LAWS OF ANOTHER JURISDICTION WOULD BE REQUIRED THEREBY.

7. **COUNTERPART ORIGINALS.** The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.
8. **EFFECT OF HEADINGS.** The Section headings have been inserted for convenience of reference only, are not to be considered part of this Supplemental Indenture and shall in no way modify or restrict any of the terms or provisions hereof.
9. **THE TRUSTEE.** The Trustee shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Supplemental Indenture or for or in respect of the recitals contained herein, all of which recitals are made solely by the Guaranteeing Subsidiary, the Existing Guarantors and the Company.

*[Signature pages follow.]*

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IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed as of the date hereof.

TRANSDIGM INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Executive Vice President and Chief Financial Officer

TRANSDIGM GROUP INCORPORATED

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Executive Vice President and Chief  
Financial Officer

ACME AEROSPACE, INC.  
ADAMS RITE AEROSPACE, INC.  
AEROCONTROLEX GROUP, INC.  
AIRBORNE ACQUISITION, INC.  
AIRBORNE GLOBAL, INC.  
AIRBORNE HOLDINGS, INC.  
AIRBORNE SYSTEMS NORTH AMERICA OF CA INC.  
AIRBORNE SYSTEMS NORTH AMERICA OF NJ INC.  
AMSAFE GLOBAL HOLDINGS, INC.  
AMSAFE, INC.  
ARKWIN INDUSTRIES, INC.  
AVIATION TECHNOLOGIES, INC.  
AVTECHTYEE, INC.  
BRIDPORT-AIR CARRIER, INC.  
BRIDPORT HOLDINGS, INC.  
BRUCE AEROSPACE INC.  
HARTWELL CORPORATION  
MARATHONNORCO AEROSPACE, INC.  
MCKECHNIE AEROSPACE DE, INC.  
MCKECHNIE AEROSPACE US LLC  
By: McKechnie Aerospace DE, Inc., its sole member  
SHIELD RESTRAINT SYSTEMS, INC.  
SEMCO INSTRUMENTS, INC.  
SKURKA AEROSPACE INC.

[Signature Page to the Fifth Supplemental Indenture – 2021 Notes]

TEXAS ROTRONICS, INC.  
TRANSICOIL LLC

By: Aviation Technologies, Inc., its sole member

By: /s/ Gregory Rufus

Name: Gregory Rufus  
Title: Chief Executive Officer

AEROSONIC LLC  
AVIONIC INSTRUMENTS LLC  
BREEZE-EASTERN LLC  
CDA INTERCORP LLC  
CEF INDUSTRIES, LLC  
CHAMPION AEROSPACE LLC  
HARCO LLC  
SCHNELLER LLC  
TELAIR INTERNATIONAL LLC  
TELAIR US LLC  
WHIPPANY ACTUATION SYSTEMS, LLC

By: TransDigm Inc., its sole member

By: /s/ Terrance M. Paradie

Name: Terrance M. Paradie  
Title: Executive Vice President and Chief Financial Officer

AIRBORNE SYSTEMS NA INC.  
AIRBORNE SYSTEMS NORTH AMERICA INC.  
AVIONICS SPECIALTIES, INC.  
ELECTROMECH TECHNOLOGIES LLC

By: McKechnie Aerospace Investments, Inc., its sole member

MCKECHNIE AEROSPACE HOLDINGS, INC.  
MCKECHNIE AEROSPACE INVESTMENTS, INC.

By: /s/ Gregory Rufus

Name: Gregory Rufus  
Title: President

BRIDPORT ERIE AVIATION, INC.

By: /s/ Gregory Rufus

Name: Gregory Rufus  
Title: Vice President and Treasurer

DUKES AEROSPACE, INC.

By: /s/ Gregory Rufus

Name: Gregory Rufus  
Title: Chairman of the Board

PEXCO AEROSPACE, INC.

By: /s/ Terrance M. Paradie

Name: Terrance M. Paradie  
Title: President

[Signature Page to the Fifth Supplemental Indenture – 2021 Notes]

PNEUDRAULICS, INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Chief Executive Officer

[Signature Page to the Fifth Supplemental Indenture – 2021 Notes]

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., AS TRUSTEE

By: /s/ Lawrence M. Kusch  
Name: Lawrence M. Kusch  
Title: Vice President

[Signature Page to the Fifth Supplemental Indenture – 2021 Notes]

**TRANSDIGM INC.,**  
**TRANSDIGM GROUP INCORPORATED,**  
**THE GUARANTORS NAMED HEREIN,**  
AND  
**THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.,**  
as Trustee

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**SIXTH SUPPLEMENTAL INDENTURE**

Dated as of July 8, 2016  
to  
Indenture  
Dated as of July 1, 2013  
by and among  
**TRANSDIGM INC.,**  
**TRANSDIGM GROUP INCORPORATED,**  
**THE GUARANTORS NAMED THEREIN,**  
AND  
**THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.,**  
as Trustee

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**7.50% Senior Subordinated Notes due 2021**  
**of TransDigm Inc.**



This **SIXTH SUPPLEMENTAL INDENTURE** (this “**Supplemental Indenture**”), dated as of July 8, 2016, by and among ILC Holdings, Inc., a Delaware corporation (“**ILC Holdings**”), ILC Industries, LLC, a Delaware limited liability company (“**ILC Industries**”), Data Device Corporation, a Delaware corporation (“**DDC**”), Beta Transformer Technology Corporation, a New York corporation (“**Beta Corporation**”), and Beta Transformer Technology LLC, a Delaware limited liability company (“**Beta LLC**” and, together ILC Holdings, ILC Industries, DDC and Beta Corporation, the “**Guaranteeing Subsidiaries**”), TransDigm Inc., a Delaware corporation (the “**Company**”), TransDigm Group Incorporated, a Delaware corporation (“**TD Group**”), Adams Rite Aerospace, Inc., a California corporation (“**Adams Rite**”), MarathonNorco Aerospace, Inc., a Delaware corporation (“**Marathon**”), Champion Aerospace LLC, a Delaware limited liability company (“**Champion**”), Avionic Instruments LLC, a Delaware limited liability company (“**Avionic**”), Skurka Aerospace Inc., a Delaware corporation (“**Skurka**”), CDA InterCorp LLC, a Florida limited liability company (“**CDA**”), Aviation Technologies, Inc., a Delaware corporation (“**ATI**”), AvtechTyeec, Inc., a Washington corporation (“**Avtech**”), Transicoil LLC, a Delaware limited liability company (“**Transicoil**”), AeroControlex Group, Inc., a Delaware corporation (“**AeroControlex**”), Bruce Aerospace Inc., a Delaware corporation (“**Bruce Aerospace**”), CEF Industries, LLC, a Delaware limited liability company (“**CEF**”), Acme Aerospace, Inc., a Delaware corporation (“**Acme**”), Dukes Aerospace, Inc., a Delaware corporation (“**Dukes**”), Semco Instruments, Inc., a Delaware corporation, (“**Semco**”), Hartwell Corporation, a California corporation (“**Hartwell**”), McKechnie Aerospace DE, Inc., a Delaware corporation (“**McKechnie Aerospace DE**”), McKechnie Aerospace Holdings, Inc., a Delaware corporation (“**McKechnie Aerospace Holdings**”), McKechnie Aerospace Investments, Inc., a Delaware corporation (“**McKechnie Aerospace Investments**”), McKechnie Aerospace US LLC, a Delaware limited liability company (“**McKechnie Aerospace US**”), Texas Rotronics, Inc., a Texas corporation (“**Rotronics**”), Electromech Technologies LLC (formerly Western Sky Industries, LLC), a Delaware limited liability company (“**Electromech**”), Schneller LLC, a Delaware limited liability company (“**Schneller**”), HARCO LLC (formerly Harco Laboratories, Incorporated), a Connecticut limited liability company (“**HARCO**”), AmSafe Global Holdings, Inc., a Delaware corporation (“**AmSafe Global**”), Bridport Holdings, Inc., a Delaware corporation (“**Bridport Holdings**”), AmSafe, Inc., a Delaware corporation (“**AmSafe Inc.**”), Shield Restraint Systems, Inc. (formerly AmSafe Commercial Products, Inc.), a Delaware corporation (“**Shield**”), Bridport-Air Carrier, Inc., a Washington corporation (“**Bridport-Air**”), Bridport Erie Aviation, Inc., a Delaware corporation (“**Bridport Erie**”), Arkwin Industries, Inc., a New York corporation (“**Arkwin**”), Whippany Actuation Systems, LLC, a Delaware limited liability company (“**Whippany**”), Aerosonic LLC, a Delaware limited liability company (“**Aerosonic**”), Avionics Specialties, Inc., a Virginia corporation (“**Avionics Specialties**”), Airborne Global, Inc., a Delaware corporation (“**Airborne Global**”), Airborne Holdings, Inc., a Delaware Corporation (“**Airborne Holdings**”), Airborne Acquisition, Inc., a Delaware corporation (“**Airborne Acquisitions**”), Airborne Systems NA Inc., a Delaware corporation (“**Airborne Systems NA**”), Airborne Systems North America Inc., a Delaware corporation (“**Airborne Systems North America**”), Airborne Systems North America of CA Inc., a Delaware corporation (“**Airborne Systems North America CA**”), Airborne Systems North America of NJ Inc., a New Jersey corporation (“**Airborne Systems North America NJ**”), Telair US LLC, a Delaware limited liability company (“**Telair US**”), Telair International LLC, a Delaware limited liability company (“**Telair International**”), Pexco Aerospace, Inc., a Delaware corporation (“**Pexco Aerospace**”), PneuDrualics, Inc., a California corporation (“**PneuDrualics**”) and Breeze-Eastern LLC, a Delaware limited liability company (collectively with TD Group, Adams Rite, Marathon, Champion, Avionic, Skurka, CDA, ATI, Avtech, Transicoil, AeroControlex, Bruce Aerospace, CEF, Acme, Dukes, Semco, Hartwell, McKechnie Aerospace DE, McKechnie Aerospace Holdings, McKechnie Aerospace Investments, McKechnie Aerospace US, Rotronics, Electromech, Schneller, HARCO, AmSafe Global, Bridport Holdings, AmSafe Inc., Shield, Bridport-Air, Bridport Erie, Arkwin, Whippany, Aerosonic, Avionics Specialties, Airborne Global, Airborne Holdings, Airborne Acquisitions, Airborne Systems NA, Airborne Systems North America, Airborne Systems North America CA, Airborne Systems North America NJ, Telair US, Telair International, Pexco Aerospace and PneuDrualics, the “**Existing Guarantors**”), and The Bank of New York Mellon Trust Company, N.A., as trustee (the “**Trustee**”) under the Indenture referred to below. Capitalized terms used herein and not otherwise defined shall have the meaning assigned to them in the Indenture.

**WITNESSETH:**

**WHEREAS**, the Company and the Existing Guarantors have heretofore executed and delivered to the Trustee an indenture, dated as of July 1, 2013 (as supplemented by the First Supplemental Indenture thereto, dated as of December 19, 2013, the Second Supplemental Indenture thereto, dated as of April 9, 2015, the Third Supplemental Indenture thereto, dated as of May 29, 2015, the Fourth Supplemental Indenture thereto, dated as of August 28, 2015 and the Fifth Supplemental Indenture thereto, dated as of April 1, 2016, the "**Indenture**"), providing for the issuance by the Company of 7.50% Senior Subordinated Notes due 2021 (the "**Notes**") and the guarantees thereof by each of the Existing Guarantors;

**WHEREAS**, the Indenture provides that under certain circumstances described therein, newly created or acquired Domestic Restricted Subsidiaries shall execute and deliver to the Trustee a supplemental indenture to the Indenture providing for a senior subordinated guarantee of payment of the Notes by such Domestic Restricted Subsidiary (the "**Guarantee**");

**WHEREAS**, all things necessary to make this Supplemental Indenture the legal, valid and binding obligation of the Company, the Existing Guarantors and the Guaranteeing Subsidiaries have been done; and

**WHEREAS**, pursuant to Section 9.01(g) of the Indenture, the Trustee is authorized to execute and deliver this Supplemental Indenture without the consent of the Holders of the Notes.

**NOW, THEREFORE**, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, each of the Guaranteeing Subsidiaries covenants and agrees for the equal and ratable benefit of the Holders of the Notes as follows:

1. **CAPITALIZED TERMS.** Capitalized terms used herein without definition shall have the meanings assigned to them in the Indenture.
2. **GUARANTEE, ETC.** Each of the Guaranteeing Subsidiaries hereby agrees that from and after the date hereof it shall be a Guarantor under the Indenture and be bound by the terms thereof applicable to Guarantors and shall be entitled to all of the rights and subject to all the obligations of a Guarantor thereunder.
3. **RATIFICATION OF INDENTURE; SUPPLEMENTAL INDENTURE PART OF INDENTURE.** The Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every holder of Notes heretofore or hereafter authenticated and delivered shall be bound hereby.
4. **EXECUTION AND DELIVERY.** Each of the Guaranteeing Subsidiaries agrees that the Guarantee granted by it pursuant to the terms hereof shall remain in full force and effect notwithstanding any failure to endorse on each Note a notation of such Guarantee.
5. **NO RECOURSE AGAINST OTHERS.** No past, present or future director, officer, employee, incorporator, stockholder or agent of any of the Guaranteeing Subsidiaries (or any successor entity) (other than the Company or the Existing Guarantors), as such, shall have any liability for any obligations of the Company, TD Group, the Guaranteeing Subsidiaries or any other Guarantor under the Notes, any Guarantee, the Indenture or this Supplemental Indenture or for any claim based on, in respect of, or by reason of, such obligations or their creation. Each Holder of the Notes by accepting a Note waives and releases all such liability. The waiver and release are part of the consideration for issuance of the Notes.
6. **NEW YORK LAW TO GOVERN.** THE INTERNAL LAW OF THE STATE OF NEW YORK SHALL GOVERN AND BE USED TO CONSTRUE THIS SUPPLEMENTAL INDENTURE AND THE GUARANTEE GRANTED HEREUNDER WITHOUT GIVING EFFECT TO APPLICABLE

PRINCIPLES OF CONFLICTS OF LAW TO THE EXTENT THAT THE APPLICATION OF THE LAWS OF ANOTHER JURISDICTION WOULD BE REQUIRED THEREBY.

7. **COUNTERPART ORIGINALS.** The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.
8. **EFFECT OF HEADINGS.** The Section headings have been inserted for convenience of reference only, are not to be considered part of this Supplemental Indenture and shall in no way modify or restrict any of the terms or provisions hereof.
9. **THE TRUSTEE.** The Trustee shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Supplemental Indenture or for or in respect of the recitals contained herein, all of which recitals are made solely by the Guaranteeing Subsidiaries, the Existing Guarantors and the Company.

*[Signature pages follow.]*

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed as of the date hereof.

TRANSDIGM INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Executive Vice President and Chief Financial Officer

TRANSDIGM GROUP INCORPORATED

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Executive Vice President and Chief  
Financial Officer

ACME AEROSPACE, INC.  
ADAMS RITE AEROSPACE, INC.  
AIRBORNE SYSTEMS NORTH AMERICA OF NJ INC.  
AMSAFE GLOBAL HOLDINGS, INC.  
AMSAFE, INC.  
ARKWIN INDUSTRIES, INC.  
AVTECHTYEE, INC.  
BRUCE AEROSPACE INC.  
DUKES AEROSPACE, INC.  
ELECTROMECH TECHNOLOGIES LLC

By: McKechnie Aerospace Investments, Inc., its sole

member

HARTWELL CORPORATION  
MARATHONNORCO AEROSPACE, INC.  
MCKECHNIE AEROSPACE INVESTMENTS, INC.  
PEXCO AEROSPACE, INC.  
PNEUDRAULICS, INC.  
SHIELD RESTRAINT SYSTEMS, INC.  
SEMCO INSTRUMENTS, INC.  
SKURKA AEROSPACE INC.  
TEXAS ROTRONICS, INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Chief Executive Officer

[Signature page to the Sixth Supplemental Indenture – 2021 Notes]

AEROCONTROLEX GROUP, INC.  
AIRBORNE ACQUISITION, INC.  
AIRBORNE GLOBAL, INC.  
AIRBORNE HOLDINGS, INC.  
AVIATION TECHNOLOGIES, INC.  
BRIDPORT HOLDINGS, INC.  
BRIDPORT-AIR CARRIER, INC.  
MCKECHNIE AEROSPACE DE, INC.  
MCKECHNIE AEROSPACE US LLC

By: McKechnie Aerospace DE, Inc., its sole member

TRANSICOIL LLC

By: Aviation Technologies, Inc., its sole member

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: President and Chief Executive Officer

AEROSONIC LLC  
AVIONIC INSTRUMENTS LLC  
BREEZE-EASTERN LLC  
CDA INTERCORP LLC  
CEF INDUSTRIES, LLC  
CHAMPION AEROSPACE LLC  
HARCO LLC  
SCHNELLER LLC  
TELAIR US LLC  
WHIPPANY ACTUATION SYSTEMS, LLC

By: TransDigm Inc., its sole member

TELAIR INTERNATIONAL LLC

By: Telair US LLC, its sole member

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Executive Vice President and Chief Financial Officer

AIRBORNE SYSTEMS NA INC.  
AIRBORNE SYSTEMS NORTH AMERICA INC.  
AVIONICS SPECIALTIES, INC.  
MCKECHNIE AEROSPACE HOLDINGS, INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: President

BRIDPORT ERIE AVIATION, INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Vice President and Treasurer

AIRBORNE SYSTEMS NORTH AMERICA OF CA INC.

By: /s/ Sean P. Maroney  
Name: Sean P. Maroney  
Title: Treasurer

[Signature page to the Sixth Supplemental Indenture – 2021 Notes]

BETA TRANSFORMER TECHNOLOGY CORPORATION  
DATA DEVICE CORPORATION  
ILC HOLDINGS, INC.  
ILC INDUSTRIES, LLC

By: ILC Holdings, Inc., its sole member

By: /s/ Halle F. Terrion  
Name: Halle F. Terrion  
Title: Secretary

BETA TRANSFORMER TECHNOLOGY LLC

By: /s/ Vincent Buffa  
Name: Vincent Buffa  
Title: Manager

[Signature page to the Sixth Supplemental Indenture – 2021 Notes]

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., AS TRUSTEE

By: /s/ Lawrence M. Kusch  
Name: Lawrence M. Kusch  
Title: Vice President

[Signature page to the Sixth Supplemental Indenture – 2021 Notes]

**TRANSDIGM INC.,**  
**TRANSDIGM GROUP INCORPORATED,**  
**THE GUARANTORS NAMED HEREIN,**  
AND  
**THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.,**  
as Trustee

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**SEVENTH SUPPLEMENTAL INDENTURE**

Dated as of October 28, 2016  
to  
Indenture  
Dated as of July 1, 2013  
by and among  
**TRANSDIGM INC.,**  
**TRANSDIGM GROUP INCORPORATED,**  
**THE GUARANTORS NAMED THEREIN,**  
AND  
**THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.,**  
as Trustee

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**7.50% Senior Subordinated Notes due 2021**  
**of TransDigm Inc.**



This SEVENTH SUPPLEMENTAL INDENTURE (this “*Supplemental Indenture*”), dated as of October 28, 2016, by and among Young & Franklin Inc., a New York corporation (“*Young & Franklin*”), Tactair Fluid Controls, Inc., a New York corporation (“*Tactair*”), and Johnson Liverpool LLC, a Delaware limited liability company (together with Young & Franklin and Tactair, the “*Guaranteeing Subsidiaries*”), TransDigm Inc., a Delaware corporation (the “*Company*”), TransDigm Group Incorporated, a Delaware corporation (“*TD Group*”), Adams Rite Aerospace, Inc., a California corporation (“*Adams Rite*”), MarathonNorco Aerospace, Inc., a Delaware corporation (“*Marathon*”), Champion Aerospace LLC, a Delaware limited liability company (“*Champion*”), Avionic Instruments LLC, a Delaware limited liability company (“*Avionic*”), Skurka Aerospace Inc., a Delaware corporation (“*Skurka*”), CDA InterCorp LLC, a Florida limited liability company (“*CDA*”), Aviation Technologies, Inc., a Delaware corporation (“*ATP*”), AvtechTyee, Inc., a Washington corporation (“*Avtech*”), Transicoil LLC, a Delaware limited liability company (“*Transicoil*”), AeroControlex Group, Inc., a Delaware corporation (“*AeroControlex*”), Bruce Aerospace Inc., a Delaware corporation (“*Bruce Aerospace*”), CEF Industries, LLC, a Delaware limited liability company (“*CEF*”), Acme Aerospace, Inc., a Delaware corporation (“*Acme*”), Dukes Aerospace, Inc., a Delaware corporation (“*Dukes*”), Semco Instruments, Inc., a Delaware corporation (“*Semco*”), Hartwell Corporation, a California corporation (“*Hartwell*”), McKechnie Aerospace DE, Inc., a Delaware corporation (“*McKechnie Aerospace DE*”), McKechnie Aerospace Holdings, Inc., a Delaware corporation (“*McKechnie Aerospace Holdings*”), McKechnie Aerospace Investments, Inc., a Delaware corporation (“*McKechnie Aerospace Investments*”), McKechnie Aerospace US LLC, a Delaware limited liability company (“*McKechnie Aerospace US*”), Texas Rotronics, Inc., a Texas corporation (“*Rotronics*”), Electromech Technologies LLC (formerly Western Sky Industries, LLC), a Delaware limited liability company (“*Electromech*”), Schneller LLC, a Delaware limited liability company (“*Schneller*”), HARCO LLC (formerly Harco Laboratories, Incorporated), a Connecticut limited liability company (“*HARCO*”), AmSafe Global Holdings, Inc., a Delaware corporation (“*AmSafe Global*”), Bridport Holdings, Inc., a Delaware corporation (“*Bridport Holdings*”), AmSafe, Inc., a Delaware corporation (“*AmSafe Inc.*”), Shield Restraint Systems, Inc. (formerly AmSafe Commercial Products, Inc.), a Delaware corporation (“*Shield*”), Bridport-Air Carrier, Inc., a Washington corporation (“*Bridport-Air*”), Bridport Erie Aviation, Inc., a Delaware corporation (“*Bridport Erie*”), Arkwin Industries, Inc., a New York corporation (“*Arkwin*”), Whippany Actuation Systems, LLC, a Delaware limited liability company (“*Whippany*”), Aerosonic LLC, a Delaware limited liability company (“*Aerosonic*”), Avionics Specialties, Inc., a Virginia corporation (“*Avionics Specialties*”), Airborne Global, Inc., a Delaware corporation (“*Airborne Global*”), Airborne Holdings, Inc., a Delaware Corporation (“*Airborne Holdings*”), Airborne Acquisition, Inc., a Delaware corporation (“*Airborne Acquisitions*”), Airborne Systems NA Inc., a Delaware corporation (“*Airborne Systems NA*”), Airborne Systems North America Inc., a Delaware corporation (“*Airborne Systems North America*”), Airborne Systems North America of CA Inc., a Delaware corporation (“*Airborne Systems North America CA*”), Airborne Systems North America of NJ Inc., a New Jersey corporation (“*Airborne Systems North America NJ*”), Telair US LLC, a Delaware limited liability company (“*Telair US*”), Telair International LLC, a Delaware limited liability company (“*Telair International*”), Pexco Aerospace, Inc., a Delaware corporation (“*Pexco Aerospace*”), PneuDraulics, Inc., a California corporation (“*PneuDraulics*”), Breeze-Eastern LLC, a Delaware limited liability company (“*Breeze-Eastern*”), ILC Holdings, Inc., a Delaware corporation (“*ILC Holdings*”), ILC Industries, LLC, a Delaware limited liability company (“*ILC Industries*”), Data Device Corporation, a Delaware corporation (“*DDC*”), Beta Transformer Technology Corporation, a New York corporation (“*Beta Corporation*”), and Beta Transformer Technology LLC, a Delaware limited liability company (collectively with TD Group, Adams Rite, Marathon, Champion, Avionic, Skurka, CDA, ATI, Avtech, Transicoil, AeroControlex, Bruce Aerospace, CEF, Acme, Dukes, Semco, Hartwell, McKechnie Aerospace DE, McKechnie Aerospace Holdings, McKechnie Aerospace Investments, McKechnie Aerospace US, Rotronics, Electromech, Schneller, HARCO, AmSafe Global, Bridport Holdings, AmSafe Inc., Shield, Bridport-Air, Bridport Erie, Arkwin, Whippany, Aerosonic, Avionics Specialties, Airborne Global, Airborne Holdings, Airborne Acquisitions, Airborne Systems NA, Airborne Systems North America, Airborne Systems North America CA, Airborne Systems North America NJ, Telair US, Telair International, Pexco Aerospace, PneuDraulics, Breeze-Eastern, ILC Holdings, ILC Industries, DDC and Beta Corporation, the “*Existing Guarantors*”), and The Bank of New York Mellon Trust Company, N.A., as trustee (the “*Trustee*”) under the Indenture referred to below. Capitalized terms used herein and not otherwise defined shall have the meaning assigned to them in the Indenture.

**WITNESSETH:**

**WHEREAS**, the Company and the Existing Guarantors have heretofore executed and delivered to the Trustee an indenture, dated as of July 1, 2013 (as supplemented by the First Supplemental Indenture thereto, dated as of December 19, 2013, the Second Supplemental Indenture thereto, dated as of April 9, 2015, the Third Supplemental Indenture thereto, dated as of May 29, 2015, the Fourth Supplemental Indenture thereto, dated as of August 28, 2015, the Fifth Supplemental Indenture thereto, dated as of April 1, 2016, and the Sixth Supplemental Indenture thereto, dated as of July 8, 2016, the "**Indenture**"), providing for the issuance by the Company of 7.50% Senior Subordinated Notes due 2021 (the "**Notes**") and the guarantees thereof by each of the Existing Guarantors;

**WHEREAS**, the Indenture provides that under certain circumstances described therein, newly created or acquired Domestic Restricted Subsidiaries shall execute and deliver to the Trustee a supplemental indenture to the Indenture providing for a senior subordinated guarantee of payment of the Notes by such Domestic Restricted Subsidiary (the "**Guarantee**");

**WHEREAS**, all things necessary to make this Supplemental Indenture the legal, valid and binding obligation of the Company, the Existing Guarantors and the Guaranteeing Subsidiaries have been done; and

**WHEREAS**, pursuant to Section 9.01(g) of the Indenture, the Trustee is authorized to execute and deliver this Supplemental Indenture without the consent of the Holders of the Notes.

**NOW, THEREFORE**, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, each of the Guaranteeing Subsidiaries covenants and agrees for the equal and ratable benefit of the Holders of the Notes as follows:

1. **CAPITALIZED TERMS.** Capitalized terms used herein without definition shall have the meanings assigned to them in the Indenture.
2. **GUARANTEE, ETC.** Each of the Guaranteeing Subsidiaries hereby agrees that from and after the date hereof it shall be a Guarantor under the Indenture and be bound by the terms thereof applicable to Guarantors and shall be entitled to all of the rights and subject to all the obligations of a Guarantor thereunder.
3. **RATIFICATION OF INDENTURE; SUPPLEMENTAL INDENTURE PART OF INDENTURE.** The Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every holder of Notes heretofore or hereafter authenticated and delivered shall be bound hereby.
4. **EXECUTION AND DELIVERY.** Each of the Guaranteeing Subsidiaries agrees that the Guarantee granted by it pursuant to the terms hereof shall remain in full force and effect notwithstanding any failure to endorse on each Note a notation of such Guarantee.
5. **NO RECOURSE AGAINST OTHERS.** No past, present or future director, officer, employee, incorporator, stockholder or agent of any of the Guaranteeing Subsidiaries (or any successor entity) (other than the Company or the Existing Guarantors), as such, shall have any liability for any obligations of the Company, TD Group, the Guaranteeing Subsidiaries or any other Guarantor under the Notes, any Guarantee, the Indenture or this Supplemental Indenture or for any claim based on, in respect of, or by reason of, such obligations or their creation. Each Holder of the Notes by accepting a Note waives and releases all such liability. The waiver and release are part of the consideration for issuance of the Notes.
6. **NEW YORK LAW TO GOVERN.** THE INTERNAL LAW OF THE STATE OF NEW YORK SHALL GOVERN AND BE USED TO CONSTRUE THIS SUPPLEMENTAL INDENTURE AND THE GUARANTEE GRANTED HEREUNDER WITHOUT GIVING EFFECT TO APPLICABLE

PRINCIPLES OF CONFLICTS OF LAW TO THE EXTENT THAT THE APPLICATION OF THE LAWS OF ANOTHER JURISDICTION WOULD BE REQUIRED THEREBY.

7. **COUNTERPART ORIGINALS.** The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.
8. **EFFECT OF HEADINGS.** The Section headings have been inserted for convenience of reference only, are not to be considered part of this Supplemental Indenture and shall in no way modify or restrict any of the terms or provisions hereof.
9. **THE TRUSTEE.** The Trustee shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Supplemental Indenture or for or in respect of the recitals contained herein, all of which recitals are made solely by the Guaranteeing Subsidiaries, the Existing Guarantors and the Company.

*[Signature pages follow.]*

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed as of the date hereof.

TRANSDIGM INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Executive Vice President and Chief Financial Officer

TRANSDIGM GROUP INCORPORATED

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Executive Vice President and Chief Financial Officer

ACME AEROSPACE, INC.  
ADAMS RITE AEROSPACE, INC.  
AIRBORNE SYSTEMS NORTH AMERICA OF NJ INC.  
AMSAFE GLOBAL HOLDINGS, INC.  
AMSAFE, INC.  
ARKWIN INDUSTRIES, INC.  
AVTECHTYEE, INC.  
BRUCE AEROSPACE INC.  
DUKES AEROSPACE, INC.  
ELECTROMECH TECHNOLOGIES LLC

member

HARTWELL CORPORATION  
JOHNSON LIVERPOOL LLC

By: McKechnie Aerospace Investments, Inc., its sole

By: Young & Franklin Inc., its sole member

MARATHONNORCO AEROSPACE, INC.  
MCKECHNIE AEROSPACE INVESTMENTS, INC.  
PEXCO AEROSPACE, INC.  
PNEUDRAULICS, INC.  
SHIELD RESTRAINT SYSTEMS, INC.  
SEMCO INSTRUMENTS, INC.  
SKURKA AEROSPACE INC.  
TACTAIR FLUID CONTROLS, INC.  
TEXAS ROTRONICS, INC.  
YOUNG & FRANKLIN INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Chief Executive Officer

[Signature page to the Seventh Supplemental Indenture – 2021 Notes]

AEROCONTROLEX GROUP, INC.  
AIRBORNE ACQUISITION, INC.  
AIRBORNE GLOBAL, INC.  
AIRBORNE HOLDINGS, INC.  
AVIATION TECHNOLOGIES, INC.  
BRIDPORT HOLDINGS, INC.  
BRIDPORT-AIR CARRIER, INC.  
MCKECHNIE AEROSPACE DE, INC.  
MCKECHNIE AEROSPACE US LLC

By: McKechnie Aerospace DE, Inc., its sole member

TRANSICOIL LLC

By: Aviation Technologies, Inc., its sole member

By: /s/ Terrance M. Paradie

Name: Terrance M. Paradie

Title: President and Chief Executive Officer

AEROSONIC LLC  
AVIONIC INSTRUMENTS LLC  
BREEZE-EASTERN LLC  
CDA INTERCORP LLC  
CEF INDUSTRIES, LLC  
CHAMPION AEROSPACE LLC  
HARCO LLC  
SCHNELLER LLC  
TELAIR US LLC  
WHIPPANY ACTUATION SYSTEMS, LLC

By: TransDigm Inc., its sole member

TELAIR INTERNATIONAL LLC

By: Telair US LLC, its sole member

By: /s/ Terrance M. Paradie

Name: Terrance M. Paradie

Title: Executive Vice President and Chief Financial Officer

AIRBORNE SYSTEMS NA INC.  
AIRBORNE SYSTEMS NORTH AMERICA INC.  
AVIONICS SPECIALTIES, INC.  
MCKECHNIE AEROSPACE HOLDINGS, INC.

By: /s/ Terrance M. Paradie

Name: Terrance M. Paradie

Title: President

BRIDPORT ERIE AVIATION, INC.

By: /s/ Terrance M. Paradie

Name: Terrance M. Paradie

Title: Vice President and Treasurer

AIRBORNE SYSTEMS NORTH AMERICA OF CA INC.

By: /s/ Sean P. Maroney

Name: Sean P. Maroney

Title: Treasurer

[Signature page to the Seventh Supplemental Indenture – 2021 Notes]

BETA TRANSFORMER TECHNOLOGY CORPORATION  
BETA TRANSFORMER TECHNOLOGY LLC

By: Beta Transformer Technology Corporation, its

sole

member  
DATA DEVICE CORPORATION  
ILC HOLDINGS, INC.  
ILC INDUSTRIES, LLC

By: ILC Holdings, Inc., its sole member

By: /s/ Halle F. Terrion  
Name: Halle F. Terrion  
Title: Secretary

[Signature page to the Seventh Supplemental Indenture – 2021 Notes]

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., AS TRUSTEE

By: /s/ Lawrence M. Kusch  
Name: Lawrence M. Kusch  
Title: Vice President

[Signature page to the Seventh Supplemental Indenture – 2021 Notes]

**TRANSDIGM INC.,**  
**TRANSDIGM GROUP INCORPORATED,**  
**THE GUARANTORS NAMED HEREIN,**  
AND  
**THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.,**  
as Trustee

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**FOURTH SUPPLEMENTAL INDENTURE**

Dated as of April 1, 2016  
to  
Indenture  
Dated as of June 4, 2014  
by and among  
**TRANSDIGM INC.,**  
**TRANSDIGM GROUP INCORPORATED,**  
**THE GUARANTORS NAMED THEREIN,**  
AND  
**THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.,**  
as Trustee

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**6.000% Senior Subordinated Notes due 2022**  
**of TransDigm Inc.**



This **FOURTH SUPPLEMENTAL INDENTURE** (this “**Supplemental Indenture**”), dated as of April 1, 2016, by and among Breeze-Eastern LLC, a Delaware limited liability company (the “**Guaranteeing Subsidiary**”), TransDigm Inc., a Delaware corporation (the “**Company**”), TransDigm Group Incorporated, a Delaware corporation (“**TD Group**”), Adams Rite Aerospace, Inc., a California corporation (“**Adams Rite**”), MarathonNorco Aerospace, Inc., a Delaware corporation (“**Marathon**”), Champion Aerospace LLC, a Delaware limited liability company (“**Champion**”), Avionic Instruments LLC, a Delaware limited liability company (“**Avionic**”), Skurka Aerospace Inc., a Delaware corporation (“**Skurka**”), CDA InterCorp LLC, a Florida limited liability company (“**CDA**”), Aviation Technologies, Inc., a Delaware corporation (“**ATF**”), AvtechTyee, Inc., a Washington corporation (“**Avtech**”), Transicoil LLC, a Delaware limited liability company (“**Transicoil**”), AeroControlex Group, Inc., a Delaware corporation (“**AeroControlex**”), Bruce Aerospace Inc., a Delaware corporation (“**Bruce Aerospace**”), CEF Industries, LLC, a Delaware limited liability company (“**CEF**”), Acme Aerospace, Inc., a Delaware corporation (“**Acme**”), Dukes Aerospace, Inc., a Delaware corporation (“**Dukes**”), Semco Instruments, Inc., a Delaware corporation (“**Semco**”), Hartwell Corporation, a California corporation (“**Hartwell**”), McKechnie Aerospace DE, Inc., a Delaware corporation (“**McKechnie Aerospace DE**”), McKechnie Aerospace Holdings, Inc., a Delaware corporation (“**McKechnie Aerospace Holdings**”), McKechnie Aerospace Investments, Inc., a Delaware corporation (“**McKechnie Aerospace Investments**”), McKechnie Aerospace US LLC, a Delaware limited liability company (“**McKechnie Aerospace US**”), Texas Rotronics, Inc., a Texas corporation (“**Rotronics**”), Electromech Technologies LLC (formerly Western Sky Industries, LLC), a Delaware limited liability company (“**Electromech**”), Schneller LLC, a Delaware limited liability company (“**Schneller**”), HARCO LLC (formerly Harco Laboratories, Incorporated), a Connecticut limited liability company (“**HARCO**”), AmSafe Global Holdings, Inc., a Delaware corporation (“**AmSafe Global**”), Bridport Holdings, Inc., a Delaware corporation (“**Bridport Holdings**”), AmSafe, Inc., a Delaware corporation (“**AmSafe Inc.**”), Shield Restraint Systems, Inc. (formerly AmSafe Commercial Products, Inc.), a Delaware corporation (“**Shield**”), Bridport-Air Carrier, Inc., a Washington corporation (“**Bridport-Air**”), Bridport Erie Aviation, Inc., a Delaware corporation (“**Bridport Erie**”), Arkwin Industries, Inc., a New York corporation (“**Arkwin**”), Whippany Actuation Systems, LLC, a Delaware limited liability company (“**Whippany**”), Aerosonic LLC, a Delaware limited liability company (“**Aerosonic**”), Avionics Specialties, Inc., a Virginia corporation (“**Avionics Specialties**”), Airborne Global, Inc., a Delaware corporation (“**Airborne Global**”), Airborne Holdings, Inc., a Delaware Corporation (“**Airborne Holdings**”), Airborne Acquisition, Inc., a Delaware corporation (“**Airborne Acquisitions**”), Airborne Systems NA Inc., a Delaware corporation (“**Airborne Systems NA**”), Airborne Systems North America Inc., a Delaware corporation (“**Airborne Systems North America**”), Airborne Systems North America of CA Inc., a Delaware corporation (“**Airborne Systems North America CA**”), Airborne Systems North America of NJ Inc., a New Jersey corporation (“**Airborne Systems North America NJ**”), Telair US LLC, a Delaware limited liability company (“**Telair US**”), Telair International LLC, a Delaware limited liability company (“**Telair International**”), Pexco Aerospace, Inc., a Delaware corporation (“**Pexco Aerospace**”) and PneuDrualics, Inc., a California corporation (collectively with TD Group, Adams Rite, Marathon, Champion, Avionic, Skurka, CDA, ATI, Avtech, Transicoil, AeroControlex, Bruce Aerospace, CEF, Acme, Dukes, Semco, Hartwell, McKechnie Aerospace DE, McKechnie Aerospace Holdings, McKechnie Aerospace Investments, McKechnie Aerospace US, Rotronics, Electromech, Schneller, HARCO, AmSafe Global, Bridport Holdings, AmSafe Inc., Shield, Bridport-Air, Bridport Erie, Arkwin, Whippany, Aerosonic, Avionics Specialties, Airborne Global, Airborne Holdings, Airborne Acquisitions, Airborne Systems NA, Airborne Systems North America, Airborne Systems North America CA, Airborne Systems North America NJ, Telair US, Telair International and Pexco Aerospace, the “**Existing Guarantors**”), and The Bank of New York Mellon Trust Company, N.A., as trustee (the “**Trustee**”) under the Indenture referred to below. Capitalized terms used herein and not otherwise defined shall have the meaning assigned to them in the Indenture.

**WITNESSETH:**

**WHEREAS**, the Company and the Existing Guarantors have heretofore executed and delivered to the Trustee an indenture, dated as of June 4, 2014 (as supplemented by the First Supplemental Indenture thereto, dated as of April 9, 2015, the Second Supplemental Indenture thereto, dated as of June 12, 2015 and the Third Supplemental Indenture thereto, dated August 28, 2015, the "**Indenture**"), providing for the issuance by the Company of 6.000% Senior Subordinated Notes due 2022 (the "**Notes**") and the guarantees thereof by each of the Existing Guarantors;

**WHEREAS**, the Indenture provides that under certain circumstances described therein, newly created or acquired Domestic Restricted Subsidiaries shall execute and deliver to the Trustee a supplemental indenture to the Indenture providing for a senior subordinated guarantee of payment of the Notes by such Domestic Restricted Subsidiary (the "**Guarantee**");

**WHEREAS**, all things necessary to make this Supplemental Indenture the legal, valid and binding obligation of the Company, the Existing Guarantors and the Guaranteeing Subsidiary have been done; and

**WHEREAS**, pursuant to Section 9.01(g) of the Indenture, the Trustee is authorized to execute and deliver this Supplemental Indenture without the consent of the Holders of the Notes.

**NOW, THEREFORE**, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, the Guaranteeing Subsidiary covenants and agrees for the equal and ratable benefit of the Holders of the Notes as follows:

1. **CAPITALIZED TERMS.** Capitalized terms used herein without definition shall have the meanings assigned to them in the Indenture.
2. **GUARANTEE, ETC.** The Guaranteeing Subsidiary hereby agrees that from and after the date hereof it shall be a Guarantor under the Indenture and be bound by the terms thereof applicable to Guarantors and shall be entitled to all of the rights and subject to all the obligations of a Guarantor thereunder.
3. **RATIFICATION OF INDENTURE; SUPPLEMENTAL INDENTURE PART OF INDENTURE.** The Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every holder of Notes heretofore or hereafter authenticated and delivered shall be bound hereby.
4. **EXECUTION AND DELIVERY.** The Guaranteeing Subsidiary agrees that the Guarantee granted by it pursuant to the terms hereof shall remain in full force and effect notwithstanding any failure to endorse on each Note a notation of such Guarantee.
5. **NO RECOURSE AGAINST OTHERS.** No past, present or future director, officer, employee, incorporator, stockholder or agent of the Guaranteeing Subsidiary (or any successor entity) (other than the Company or the Existing Guarantors), as such, shall have any liability for any obligations of the Company, TD Group, the Guaranteeing Subsidiary or any other Guarantor under the Notes, any Guarantee, the Indenture or this Supplemental Indenture or for any claim based on, in respect of, or by reason of, such obligations or their creation. Each Holder of the Notes by accepting a Note waives and releases all such liability. The waiver and release are part of the consideration for issuance of the Notes.
6. **NEW YORK LAW TO GOVERN.** THE INTERNAL LAW OF THE STATE OF NEW YORK SHALL GOVERN AND BE USED TO CONSTRUE THIS SUPPLEMENTAL INDENTURE AND THE GUARANTEE GRANTED HEREUNDER WITHOUT GIVING EFFECT TO APPLICABLE PRINCIPLES OF CONFLICTS OF LAW TO THE EXTENT THAT THE APPLICATION OF THE LAWS OF ANOTHER JURISDICTION WOULD BE REQUIRED THEREBY.

7. **COUNTERPART ORIGINALS.** The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.
8. **EFFECT OF HEADINGS.** The Section headings have been inserted for convenience of reference only, are not to be considered part of this Supplemental Indenture and shall in no way modify or restrict any of the terms or provisions hereof.
9. **THE TRUSTEE.** The Trustee shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Supplemental Indenture or for or in respect of the recitals contained herein, all of which recitals are made solely by the Guaranteeing Subsidiary, the Existing Guarantors and the Company.

*[Signature page follows.]*

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed as of the date hereof.

TRANSDIGM INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Executive Vice President and Chief Financial Officer

TRANSDIGM GROUP INCORPORATED

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Executive Vice President and Chief  
Financial Officer

ACME AEROSPACE, INC.  
ADAMS RITE AEROSPACE, INC.  
AEROCONTROLEX GROUP, INC.  
AIRBORNE ACQUISITION, INC.  
AIRBORNE GLOBAL, INC.  
AIRBORNE HOLDINGS, INC.  
AIRBORNE SYSTEMS NORTH AMERICA OF CA INC.  
AIRBORNE SYSTEMS NORTH AMERICA OF NJ INC.  
AMSAFE GLOBAL HOLDINGS, INC.  
AMSAFE, INC.  
ARKWIN INDUSTRIES, INC.  
AVIATION TECHNOLOGIES, INC.  
AVTECHTYEE, INC.  
BRIDPORT-AIR CARRIER, INC.  
BRIDPORT HOLDINGS, INC.  
BRUCE AEROSPACE INC.  
HARTWELL CORPORATION  
MARATHONNORCO AEROSPACE, INC.  
MCKECHNIE AEROSPACE DE, INC.  
MCKECHNIE AEROSPACE US LLC  
By: McKechnie Aerospace DE, Inc., its sole member  
SHIELD RESTRAINT SYSTEMS, INC.  
SEMCO INSTRUMENTS, INC.  
SKURKA AEROSPACE INC.

[Signature page to the Fourth Supplemental Indenture – 2022 Notes]

TEXAS ROTRONICS, INC.  
TRANSICOIL LLC

By: Aviation Technologies, Inc., its sole member

By: /s/ Gregory Rufus

Name: Gregory Rufus

Title: Chief Executive Officer

AEROSONIC LLC  
AVIONIC INSTRUMENTS LLC  
BREEZE-EASTERN LLC  
CDA INTERCORP LLC  
CEF INDUSTRIES, LLC  
CHAMPION AEROSPACE LLC  
HARCO LLC  
SCHNELLER LLC  
TELAIR INTERNATIONAL LLC  
TELAIR US LLC

WHIPPANY ACTUATION SYSTEMS, LLC

By: TransDigm Inc., its sole member

By: /s/ Terrance M. Paradie

Name: Terrance M. Paradie

Title: Executive Vice President and Chief Financial Officer

AIRBORNE SYSTEMS NA INC.  
AIRBORNE SYSTEMS NORTH AMERICA INC.  
AVIONICS SPECIALTIES, INC.  
ELECTROMECH TECHNOLOGIES LLC

By: McKechnie Aerospace Investments, Inc., its sole member

MCKECHNIE AEROSPACE HOLDINGS, INC.

MCKECHNIE AEROSPACE INVESTMENTS, INC.

By: /s/ Gregory Rufus

Name: Gregory Rufus

Title: President

BRIDPORT ERIE AVIATION, INC.

By: /s/ Gregory Rufus

Name: Gregory Rufus

Title: Vice President and Treasurer

DUKES AEROSPACE, INC.

By: /s/ Gregory Rufus

Name: Gregory Rufus

Title: Chairman of the Board

PEXCO AEROSPACE, INC.

By: /s/ Terrance M. Paradie

Name: Terrance M. Paradie

Title: President

[Signature page to the Fourth Supplemental Indenture – 2022 Notes]

PNEUDRAULICS, INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Chief Executive Officer

[Signature page to the Fourth Supplemental Indenture – 2022 Notes]

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., AS TRUSTEE

By: /s/ Lawrence M. Kusch  
Name: Lawrence M. Kusch  
Title: Vice President

[Signature page to the Fourth Supplemental Indenture – 2022 Notes]

**TRANSDIGM INC.,**  
**TRANSDIGM GROUP INCORPORATED,**  
**THE GUARANTORS NAMED HEREIN,**  
AND  
**THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.,**  
as Trustee

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**FIFTH SUPPLEMENTAL INDENTURE**

Dated as of July 8, 2016  
to  
Indenture  
Dated as of June 4, 2014  
by and among  
**TRANSDIGM INC.,**  
**TRANSDIGM GROUP INCORPORATED,**  
**THE GUARANTORS NAMED THEREIN,**  
AND  
**THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.,**  
as Trustee

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**6.000% Senior Subordinated Notes due 2022**  
**of TransDigm Inc.**



This **FIFTH SUPPLEMENTAL INDENTURE** (this “**Supplemental Indenture**”), dated as of July 8, 2016, by and among ILC Holdings, Inc., a Delaware corporation (“**ILC Holdings**”), ILC Industries, LLC, a Delaware limited liability company (“**ILC Industries**”), Data Device Corporation, a Delaware corporation (“**DDC**”), Beta Transformer Technology Corporation, a New York corporation (“**Beta Corporation**”), and Beta Transformer Technology LLC, a Delaware limited liability company (“**Beta LLC**” and, together with ILC Holdings, ILC Industries, DDC and Beta Corporation, the “**Guaranteeing Subsidiaries**”), TransDigm Inc., a Delaware corporation (the “**Company**”), TransDigm Group Incorporated, a Delaware corporation (“**TD Group**”), Adams Rite Aerospace, Inc., a California corporation (“**Adams Rite**”), MarathonNorco Aerospace, Inc., a Delaware corporation (“**Marathon**”), Champion Aerospace LLC, a Delaware limited liability company (“**Champion**”), Avionic Instruments LLC, a Delaware limited liability company (“**Avionic**”), Skurka Aerospace Inc., a Delaware corporation (“**Skurka**”), CDA InterCorp LLC, a Florida limited liability company (“**CDA**”), Aviation Technologies, Inc., a Delaware corporation (“**ATT**”), AvtechTyeec, Inc., a Washington corporation (“**Avtech**”), Transicoil LLC, a Delaware limited liability company (“**Transicoil**”), AeroControlex Group, Inc., a Delaware corporation (“**AeroControlex**”), Bruce Aerospace Inc., a Delaware corporation (“**Bruce Aerospace**”), CEF Industries, LLC, a Delaware limited liability company (“**CEF**”), Acme Aerospace, Inc., a Delaware corporation (“**Acme**”), Dukes Aerospace, Inc., a Delaware corporation (“**Dukes**”), Semco Instruments, Inc., a Delaware corporation, (“**Semco**”), Hartwell Corporation, a California corporation (“**Hartwell**”), McKechnie Aerospace DE, Inc., a Delaware corporation (“**McKechnie Aerospace DE**”), McKechnie Aerospace Holdings, Inc., a Delaware corporation (“**McKechnie Aerospace Holdings**”), McKechnie Aerospace Investments, Inc., a Delaware corporation (“**McKechnie Aerospace Investments**”), McKechnie Aerospace US LLC, a Delaware limited liability company (“**McKechnie Aerospace US**”), Texas Rotronics, Inc., a Texas corporation (“**Rotronics**”), Electromech Technologies LLC (formerly Western Sky Industries, LLC), a Delaware limited liability company (“**Electromech**”), Schneller LLC, a Delaware limited liability company (“**Schneller**”), HARCO LLC (formerly Harco Laboratories, Incorporated), a Connecticut limited liability company (“**HARCO**”), AmSafe Global Holdings, Inc., a Delaware corporation (“**AmSafe Global**”), Bridport Holdings, Inc., a Delaware corporation (“**Bridport Holdings**”), AmSafe, Inc., a Delaware corporation (“**AmSafe Inc.**”), Shield Restraint Systems, Inc. (formerly AmSafe Commercial Products, Inc.), a Delaware corporation (“**Shield**”), Bridport-Air Carrier, Inc., a Washington corporation (“**Bridport-Air**”), Bridport Erie Aviation, Inc., a Delaware corporation (“**Bridport Erie**”), Arkwin Industries, Inc., a New York corporation (“**Arkwin**”), Whippany Actuation Systems, LLC, a Delaware limited liability company (“**Whippany**”), Aerosonic LLC, a Delaware limited liability company (“**Aerosonic**”), Avionics Specialties, Inc., a Virginia corporation (“**Avionics Specialties**”), Airborne Global, Inc., a Delaware corporation (“**Airborne Global**”), Airborne Holdings, Inc., a Delaware Corporation (“**Airborne Holdings**”), Airborne Acquisition, Inc., a Delaware corporation (“**Airborne Acquisitions**”), Airborne Systems NA Inc., a Delaware corporation (“**Airborne Systems NA**”), Airborne Systems North America Inc., a Delaware corporation (“**Airborne Systems North America**”), Airborne Systems North America of CA Inc., a Delaware corporation (“**Airborne Systems North America CA**”), Airborne Systems North America of NJ Inc., a New Jersey corporation (“**Airborne Systems North America NJ**”), Telair US LLC, a Delaware limited liability company (“**Telair US**”), Telair International LLC, a Delaware limited liability company (“**Telair International**”), Pexco Aerospace, Inc., a Delaware corporation (“**Pexco Aerospace**”), PneuDrualics, Inc., a California corporation (“**PneuDrualics**”) and Breeze-Eastern LLC, a Delaware limited liability company (collectively with TD Group, Adams Rite, Marathon, Champion, Avionic, Skurka, CDA, ATI, Avtech, Transicoil, AeroControlex, Bruce Aerospace, CEF, Acme, Dukes, Semco, Hartwell, McKechnie Aerospace DE, McKechnie Aerospace Holdings, McKechnie Aerospace Investments, McKechnie Aerospace US, Rotronics, Electromech, Schneller, HARCO, AmSafe Global, Bridport Holdings, AmSafe Inc., Shield, Bridport-Air, Bridport Erie, Arkwin, Whippany, Aerosonic, Avionics Specialties, Airborne Global, Airborne Holdings, Airborne Acquisitions, Airborne Systems NA, Airborne Systems North America, Airborne Systems North America CA, Airborne Systems North America NJ, Telair US, Telair International, Pexco Aerospace and PneuDrualics, the “**Existing Guarantors**”), and The Bank of New York Mellon Trust Company, N.A., as trustee (the “**Trustee**”) under the Indenture referred to below. Capitalized terms used herein and not otherwise defined shall have the meaning assigned to them in the Indenture.

**WITNESSETH:**

**WHEREAS**, the Company and the Existing Guarantors have heretofore executed and delivered to the Trustee an indenture, dated as of June 4, 2014 (as supplemented by the First Supplemental Indenture thereto, dated as of April 9, 2015, the Second Supplemental Indenture thereto, dated as of June 12, 2015, the Third Supplemental Indenture thereto, dated August 28, 2015 and the Fourth Supplemental Indenture thereto, dated April 1, 2016, the "**Indenture**"), providing for the issuance by the Company of 6.000% Senior Subordinated Notes due 2022 (the "**Notes**") and the guarantees thereof by each of the Existing Guarantors;

**WHEREAS**, the Indenture provides that under certain circumstances described therein, newly created or acquired Domestic Restricted Subsidiaries shall execute and deliver to the Trustee a supplemental indenture to the Indenture providing for a senior subordinated guarantee of payment of the Notes by such Domestic Restricted Subsidiary (the "**Guarantee**");

**WHEREAS**, all things necessary to make this Supplemental Indenture the legal, valid and binding obligation of the Company, the Existing Guarantors and the Guarantoring Subsidiaries have been done; and

**WHEREAS**, pursuant to Section 9.01(g) of the Indenture, the Trustee is authorized to execute and deliver this Supplemental Indenture without the consent of the Holders of the Notes.

**NOW, THEREFORE**, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, each of the Guarantoring Subsidiaries covenants and agrees for the equal and ratable benefit of the Holders of the Notes as follows:

1. **CAPITALIZED TERMS.** Capitalized terms used herein without definition shall have the meanings assigned to them in the Indenture.
2. **GUARANTEE, ETC.** Each of the Guarantoring Subsidiaries hereby agrees that from and after the date hereof it shall be a Guarantor under the Indenture and be bound by the terms thereof applicable to Guarantors and shall be entitled to all of the rights and subject to all the obligations of a Guarantor thereunder.
3. **RATIFICATION OF INDENTURE; SUPPLEMENTAL INDENTURE PART OF INDENTURE.** The Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every holder of Notes heretofore or hereafter authenticated and delivered shall be bound hereby.
4. **EXECUTION AND DELIVERY.** Each of the Guarantoring Subsidiaries agrees that the Guarantee granted by it pursuant to the terms hereof shall remain in full force and effect notwithstanding any failure to endorse on each Note a notation of such Guarantee.
5. **NO RECOURSE AGAINST OTHERS.** No past, present or future director, officer, employee, incorporator, stockholder or agent of any of the Guarantoring Subsidiaries (or any successor entity) (other than the Company or the Existing Guarantors), as such, shall have any liability for any obligations of the Company, TD Group, the Guarantoring Subsidiaries or any other Guarantor under the Notes, any Guarantee, the Indenture or this Supplemental Indenture or for any claim based on, in respect of, or by reason of, such obligations or their creation. Each Holder of the Notes by accepting a Note waives and releases all such liability. The waiver and release are part of the consideration for issuance of the Notes.
6. **NEW YORK LAW TO GOVERN.** THE INTERNAL LAW OF THE STATE OF NEW YORK SHALL GOVERN AND BE USED TO CONSTRUE THIS SUPPLEMENTAL INDENTURE AND THE GUARANTEE GRANTED HEREUNDER WITHOUT GIVING EFFECT TO APPLICABLE PRINCIPLES OF CONFLICTS OF LAW TO THE EXTENT THAT THE APPLICATION OF THE LAWS OF ANOTHER JURISDICTION WOULD BE REQUIRED THEREBY.

7. **COUNTERPART ORIGINALS.** The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.
8. **EFFECT OF HEADINGS.** The Section headings have been inserted for convenience of reference only, are not to be considered part of this Supplemental Indenture and shall in no way modify or restrict any of the terms or provisions hereof.
9. **THE TRUSTEE.** The Trustee shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Supplemental Indenture or for or in respect of the recitals contained herein, all of which recitals are made solely by the Guaranteeing Subsidiaries, the Existing Guarantors and the Company.

*[Signature page follows.]*

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed as of the date hereof.

TRANSDIGM INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Executive Vice President and Chief Financial Officer

TRANSDIGM GROUP INCORPORATED

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Executive Vice President and Chief  
Financial Officer

ACME AEROSPACE, INC.  
ADAMS RITE AEROSPACE, INC.  
AIRBORNE SYSTEMS NORTH AMERICA OF NJ INC.  
AMSAFE GLOBAL HOLDINGS, INC.  
AMSAFE, INC.  
ARKWIN INDUSTRIES, INC.  
AVTECHTYEE, INC.  
BRUCE AEROSPACE INC.  
DUKES AEROSPACE, INC.  
ELECTROMECH TECHNOLOGIES LLC

By: McKechnie Aerospace Investments, Inc., its sole

member

HARTWELL CORPORATION  
MARATHONNORCO AEROSPACE, INC.  
MCKECHNIE AEROSPACE INVESTMENTS, INC.  
PEXCO AEROSPACE, INC.  
PNEUDRAULICS, INC.  
SHIELD RESTRAINT SYSTEMS, INC.  
SEMCO INSTRUMENTS, INC.  
SKURKA AEROSPACE INC.  
TEXAS ROTRONICS, INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Chief Executive Officer

[Signature page to the Fifth Supplemental Indenture – 2022 Notes]

AEROCONTROLEX GROUP, INC.  
AIRBORNE ACQUISITION, INC.  
AIRBORNE GLOBAL, INC.  
AIRBORNE HOLDINGS, INC.  
AVIATION TECHNOLOGIES, INC.  
BRIDPORT HOLDINGS, INC.  
BRIDPORT-AIR CARRIER, INC.  
MCKECHNIE AEROSPACE DE, INC.  
MCKECHNIE AEROSPACE US LLC

By: McKechnie Aerospace DE, Inc., its sole member

TRANSICOIL LLC

By: Aviation Technologies, Inc., its sole member

By: /s/ Terrance M. Paradie

Name: Terrance M. Paradie  
Title: President and Chief Executive Officer

AEROSONIC LLC  
AVIONIC INSTRUMENTS LLC  
BREEZE-EASTERN LLC  
CDA INTERCORP LLC  
CEF INDUSTRIES, LLC  
CHAMPION AEROSPACE LLC  
HARCO LLC  
SCHNELLER LLC  
TELAIR US LLC  
WHIPPANY ACTUATION SYSTEMS, LLC

By: TransDigm Inc., its sole member

TELAIR INTERNATIONAL LLC

By: Telair US LLC, its sole member

By: /s/ Terrance M. Paradie

Name: Terrance M. Paradie  
Title: Executive Vice President and Chief Financial Officer

AIRBORNE SYSTEMS NA INC.  
AIRBORNE SYSTEMS NORTH AMERICA INC.  
AVIONICS SPECIALTIES, INC.  
MCKECHNIE AEROSPACE HOLDINGS, INC.

By: /s/ Terrance M. Paradie

Name: Terrance M. Paradie  
Title: President

BRIDPORT ERIE AVIATION, INC.

By: /s/ Terrance M. Paradie

Name: Terrance M. Paradie  
Title: Vice President and Treasurer

AIRBORNE SYSTEMS NORTH AMERICA OF CA INC.

By: /s/ Sean P. Maroney

Name: Sean P. Maroney  
Title: Treasurer

[Signature page to the Fifth Supplemental Indenture – 2022 Notes]

BETA TRANSFORMER TECHNOLOGY CORPORATION  
DATA DEVICE CORPORATION  
ILC HOLDINGS, INC.  
ILC INDUSTRIES, LLC

By: ILC Holdings, Inc., its sole member

By: /s/ Halle F. Terrion  
Name: Halle F. Terrion  
Title: Secretary

BETA TRANSFORMER TECHNOLOGY LLC

By: /s/ Vincent Buffa  
Name: Vincent Buffa  
Title: Manager

[Signature page to the Fifth Supplemental Indenture – 2022 Notes]

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., AS TRUSTEE

By: /s/ Lawrence M. Kusch  
Name: Lawrence M. Kusch  
Title: Vice President

[Signature page to the Fifth Supplemental Indenture – 2022 Notes]

**TRANSDIGM INC.,**  
**TRANSDIGM GROUP INCORPORATED,**  
**THE GUARANTORS NAMED HEREIN,**  
**AND**  
**THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.,**  
as Trustee

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**SIXTH SUPPLEMENTAL INDENTURE**

Dated as of October 28, 2016

to

Indenture

Dated as of June 4, 2014

by and among

**TRANSDIGM INC.,**  
**TRANSDIGM GROUP INCORPORATED,**  
**THE GUARANTORS NAMED THEREIN,**  
**AND**  
**THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.,**  
as Trustee

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**6.000% Senior Subordinated Notes due 2022**  
**of TransDigm Inc.**



This **SIXTH SUPPLEMENTAL INDENTURE** (this “**Supplemental Indenture**”), dated as of October 28, 2016, by and among Young & Franklin Inc., a New York corporation (“**Young & Franklin**”), Tactair Fluid Controls, Inc., a New York corporation (“**Tactair**”), and Johnson Liverpool LLC, a Delaware limited liability company (together with Young & Franklin and Tactair, the “**Guaranteeing Subsidiaries**”), TransDigm Inc., a Delaware corporation (the “**Company**”), TransDigm Group Incorporated, a Delaware corporation (“**TD Group**”), Adams Rite Aerospace, Inc., a California corporation (“**Adams Rite**”), MarathonNorco Aerospace, Inc., a Delaware corporation (“**Marathon**”), Champion Aerospace LLC, a Delaware limited liability company (“**Champion**”), Avionic Instruments LLC, a Delaware limited liability company (“**Avionic**”), Skurka Aerospace Inc., a Delaware corporation (“**Skurka**”), CDA InterCorp LLC, a Florida limited liability company (“**CDA**”), Aviation Technologies, Inc., a Delaware corporation (“**ATI**”), AvtechTyee, Inc., a Washington corporation (“**Avtech**”), Transcoil LLC, a Delaware limited liability company (“**Transcoil**”), AeroControlex Group, Inc., a Delaware corporation (“**AeroControlex**”), Bruce Aerospace Inc., a Delaware corporation (“**Bruce Aerospace**”), CEF Industries, LLC, a Delaware limited liability company (“**CEF**”), Acme Aerospace, Inc., a Delaware corporation (“**Acme**”), Dukes Aerospace, Inc., a Delaware corporation (“**Dukes**”), Semco Instruments, Inc., a Delaware corporation (“**Semco**”), Hartwell Corporation, a California corporation (“**Hartwell**”), McKechnie Aerospace DE, Inc., a Delaware corporation (“**McKechnie Aerospace DE**”), McKechnie Aerospace Holdings, Inc., a Delaware corporation (“**McKechnie Aerospace Holdings**”), McKechnie Aerospace Investments, Inc., a Delaware corporation (“**McKechnie Aerospace Investments**”), McKechnie Aerospace US LLC, a Delaware limited liability company (“**McKechnie Aerospace US**”), Texas Rotronics, Inc., a Texas corporation (“**Rotronics**”), Electromech Technologies LLC (formerly Western Sky Industries, LLC), a Delaware limited liability company (“**Electromech**”), Schneller LLC, a Delaware limited liability company (“**Schneller**”), HARCO LLC (formerly Harco Laboratories, Incorporated), a Connecticut limited liability company (“**HARCO**”), AmSafe Global Holdings, Inc., a Delaware corporation (“**AmSafe Global**”), Bridport Holdings, Inc., a Delaware corporation (“**Bridport Holdings**”), AmSafe, Inc., a Delaware corporation (“**AmSafe Inc.**”), Shield Restraint Systems, Inc. (formerly AmSafe Commercial Products, Inc.), a Delaware corporation (“**Shield**”), Bridport-Air Carrier, Inc., a Washington corporation (“**Bridport-Air**”), Bridport Erie Aviation, Inc., a Delaware corporation (“**Bridport Erie**”), Arkwin Industries, Inc., a New York corporation (“**Arkwin**”), Whippany Actuation Systems, LLC, a Delaware limited liability company (“**Whippany**”), Aerosonic LLC, a Delaware limited liability company (“**Aerosonic**”), Avionics Specialties, Inc., a Virginia corporation (“**Avionics Specialties**”), Airborne Global, Inc., a Delaware corporation (“**Airborne Global**”), Airborne Holdings, Inc., a Delaware Corporation (“**Airborne Holdings**”), Airborne Acquisition, Inc., a Delaware corporation (“**Airborne Acquisitions**”), Airborne Systems NA Inc., a Delaware corporation (“**Airborne Systems NA**”), Airborne Systems North America Inc., a Delaware corporation (“**Airborne Systems North America**”), Airborne Systems North America of CA Inc., a Delaware corporation (“**Airborne Systems North America CA**”), Airborne Systems North America of NJ Inc., a New Jersey corporation (“**Airborne Systems North America NJ**”), Telair US LLC, a Delaware limited liability company (“**Telair US**”), Telair International LLC, a Delaware limited liability company (“**Telair International**”), Pexco Aerospace, Inc., a Delaware corporation (“**Pexco Aerospace**”), PneuDraulics, Inc., a California corporation (“**PneuDraulics**”), Breeze-Eastern LLC, a Delaware limited liability company (“**Breeze-Eastern**”), ILC Holdings, Inc., a Delaware corporation (“**ILC Holdings**”), ILC Industries, LLC, a Delaware limited liability company (“**ILC Industries**”), Data Device Corporation, a Delaware corporation (“**DDC**”), Beta Transformer Technology Corporation, a New York corporation (“**Beta Corporation**”), and Beta Transformer Technology LLC, a Delaware limited liability company (collectively with TD Group, Adams Rite, Marathon, Champion, Avionic, Skurka, CDA, ATI, Avtech, Transcoil, AeroControlex, Bruce Aerospace, CEF, Acme, Dukes, Semco, Hartwell, McKechnie Aerospace DE, McKechnie Aerospace Holdings, McKechnie Aerospace Investments, McKechnie Aerospace US, Rotronics, Electromech, Schneller, HARCO, AmSafe Global, Bridport Holdings, AmSafe Inc., Shield, Bridport-Air, Bridport Erie, Arkwin, Whippany, Aerosonic, Avionics Specialties, Airborne Global, Airborne Holdings, Airborne Acquisitions, Airborne Systems NA, Airborne Systems North America, Airborne Systems North America CA, Airborne Systems North America NJ, Telair US, Telair International, Pexco Aerospace, PneuDraulics, Breeze-Eastern, ILC Holdings, ILC Industries, DDC and Beta Corporation, the “**Existing Guarantors**”), and The Bank of New York Mellon Trust Company, N.A., as trustee (the “**Trustee**”) under the Indenture referred to below. Capitalized terms used herein and not otherwise defined shall have the meaning assigned to them in the Indenture.

**WITNESSETH:**

**WHEREAS**, the Company and the Existing Guarantors have heretofore executed and delivered to the Trustee an indenture, dated as of June 4, 2014 (as supplemented by the First Supplemental Indenture thereto, dated as of April 9, 2015, the Second Supplemental Indenture thereto, dated as of June 12, 2015, the Third Supplemental Indenture thereto, dated as of August 28, 2015, the Fourth Supplemental Indenture thereto, dated as of April 1, 2016, and the Fifth Supplemental Indenture thereto, dated as of July 8, 2016, the "**Indenture**"), providing for the issuance by the Company of 6.000% Senior Subordinated Notes due 2022 (the "**Notes**") and the guarantees thereof by each of the Existing Guarantors;

**WHEREAS**, the Indenture provides that under certain circumstances described therein, newly created or acquired Domestic Restricted Subsidiaries shall execute and deliver to the Trustee a supplemental indenture to the Indenture providing for a senior subordinated guarantee of payment of the Notes by such Domestic Restricted Subsidiary (the "**Guarantee**");

**WHEREAS**, all things necessary to make this Supplemental Indenture the legal, valid and binding obligation of the Company, the Existing Guarantors and the Guaranteeing Subsidiaries have been done; and

**WHEREAS**, pursuant to Section 9.01(g) of the Indenture, the Trustee is authorized to execute and deliver this Supplemental Indenture without the consent of the Holders of the Notes.

**NOW, THEREFORE**, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, each of the Guaranteeing Subsidiaries covenants and agrees for the equal and ratable benefit of the Holders of the Notes as follows:

1. **CAPITALIZED TERMS.** Capitalized terms used herein without definition shall have the meanings assigned to them in the Indenture.
2. **GUARANTEE, ETC.** Each of the Guaranteeing Subsidiaries hereby agrees that from and after the date hereof it shall be a Guarantor under the Indenture and be bound by the terms thereof applicable to Guarantors and shall be entitled to all of the rights and subject to all the obligations of a Guarantor thereunder.
3. **RATIFICATION OF INDENTURE; SUPPLEMENTAL INDENTURE PART OF INDENTURE.** The Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every holder of Notes heretofore or hereafter authenticated and delivered shall be bound hereby.
4. **EXECUTION AND DELIVERY.** Each of the Guaranteeing Subsidiaries agrees that the Guarantee granted by it pursuant to the terms hereof shall remain in full force and effect notwithstanding any failure to endorse on each Note a notation of such Guarantee.
5. **NO RECOURSE AGAINST OTHERS.** No past, present or future director, officer, employee, incorporator, stockholder or agent of any of the Guaranteeing Subsidiaries (or any successor entity) (other than the Company or the Existing Guarantors), as such, shall have any liability for any obligations of the Company, TD Group, the Guaranteeing Subsidiaries or any other Guarantor under the Notes, any Guarantee, the Indenture or this Supplemental Indenture or for any claim based on, in respect of, or by reason of, such obligations or their creation. Each Holder of the Notes by accepting a Note waives and releases all such liability. The waiver and release are part of the consideration for issuance of the Notes.
6. **NEW YORK LAW TO GOVERN.** THE INTERNAL LAW OF THE STATE OF NEW YORK SHALL GOVERN AND BE USED TO CONSTRUE THIS SUPPLEMENTAL INDENTURE AND THE GUARANTEE GRANTED HEREUNDER WITHOUT GIVING EFFECT TO APPLICABLE

PRINCIPLES OF CONFLICTS OF LAW TO THE EXTENT THAT THE APPLICATION OF THE LAWS OF ANOTHER JURISDICTION WOULD BE REQUIRED THEREBY.

7. **COUNTERPART ORIGINALS.** The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.
8. **EFFECT OF HEADINGS.** The Section headings have been inserted for convenience of reference only, are not to be considered part of this Supplemental Indenture and shall in no way modify or restrict any of the terms or provisions hereof.
9. **THE TRUSTEE.** The Trustee shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Supplemental Indenture or for or in respect of the recitals contained herein, all of which recitals are made solely by the Guaranteeing Subsidiaries, the Existing Guarantors and the Company.

*[Signature page follows.]*

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed as of the date hereof.

TRANSDIGM INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Executive Vice President and Chief Financial Officer

TRANSDIGM GROUP INCORPORATED

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Executive Vice President and Chief Financial Officer

ACME AEROSPACE, INC.  
ADAMS RITE AEROSPACE, INC.  
AIRBORNE SYSTEMS NORTH AMERICA OF NJ INC.  
AMSAFE GLOBAL HOLDINGS, INC.  
AMSAFE, INC.  
ARKWIN INDUSTRIES, INC.  
AVTECHTYEE, INC.  
BRUCE AEROSPACE INC.  
DUKES AEROSPACE, INC.  
ELECTROMECH TECHNOLOGIES LLC

member

HARTWELL CORPORATION  
JOHNSON LIVERPOOL LLC

By: McKechnie Aerospace Investments, Inc., its sole

By: Young & Franklin Inc., its sole member

MARATHONNORCO AEROSPACE, INC.  
MCKECHNIE AEROSPACE INVESTMENTS, INC.  
PEXCO AEROSPACE, INC.  
PNEUDRAULICS, INC.  
SHIELD RESTRAINT SYSTEMS, INC.  
SEMCO INSTRUMENTS, INC.  
SKURKA AEROSPACE INC.  
TACTAIR FLUID CONTROLS, INC.  
TEXAS ROTRONICS, INC.  
YOUNG & FRANKLIN INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Chief Executive Officer

[Signature page to the Sixth Supplemental Indenture – 2022 Notes]

AEROCONTROLEX GROUP, INC.  
AIRBORNE ACQUISITION, INC.  
AIRBORNE GLOBAL, INC.  
AIRBORNE HOLDINGS, INC.  
AVIATION TECHNOLOGIES, INC.  
BRIDPORT HOLDINGS, INC.  
BRIDPORT-AIR CARRIER, INC.  
MCKECHNIE AEROSPACE DE, INC.  
MCKECHNIE AEROSPACE US LLC

By: McKechnie Aerospace DE, Inc., its sole member

TRANSICOIL LLC

By: Aviation Technologies, Inc., its sole member

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: President and Chief Executive Officer

AEROSONIC LLC  
AVIONIC INSTRUMENTS LLC  
BREEZE-EASTERN LLC  
CDA INTERCORP LLC  
CEF INDUSTRIES, LLC  
CHAMPION AEROSPACE LLC  
HARCO LLC  
SCHNELLER LLC  
TELAIR US LLC  
WHIPPANY ACTUATION SYSTEMS, LLC

By: TransDigm Inc., its sole member

TELAIR INTERNATIONAL LLC

By: Telair US LLC, its sole member

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Executive Vice President and Chief Financial Officer

AIRBORNE SYSTEMS NA INC.  
AIRBORNE SYSTEMS NORTH AMERICA INC.  
AVIONICS SPECIALTIES, INC.  
MCKECHNIE AEROSPACE HOLDINGS, INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: President

BRIDPORT ERIE AVIATION, INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Vice President and Treasurer

AIRBORNE SYSTEMS NORTH AMERICA OF CA INC.

By: /s/ Sean P. Maroney  
Name: Sean P. Maroney

[Signature page to the Sixth Supplemental Indenture – 2022 Notes]

Title: Treasurer  
BETA TRANSFORMER TECHNOLOGY CORPORATION  
BETA TRANSFORMER TECHNOLOGY LLC

By: Beta Transformer Technology Corporation, its

sole

member  
DATA DEVICE CORPORATION  
ILC HOLDINGS, INC.  
ILC INDUSTRIES, LLC

By: ILC Holdings, Inc., its sole member

By: /s/ Halle F. Terrion  
Name: Halle F. Terrion  
Title: Secretary

[Signature page to the Sixth Supplemental Indenture – 2022 Notes]

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., AS TRUSTEE

By: /s/ Lawrence M. Kusch  
Name: Lawrence M. Kusch  
Title: Vice President

[Signature page to the Sixth Supplemental Indenture – 2022 Notes]

**TRANSDIGM INC.,**  
**TRANSDIGM GROUP INCORPORATED,**  
**THE GUARANTORS NAMED HEREIN,**  
AND  
**THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.,**  
as Trustee

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**FOURTH SUPPLEMENTAL INDENTURE**

Dated as of April 1, 2016  
to  
Indenture  
Dated as of June 4, 2014  
by and among  
**TRANSDIGM INC.,**  
**TRANSDIGM GROUP INCORPORATED,**  
**THE GUARANTORS NAMED THEREIN,**  
AND  
**THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.,**  
as Trustee

---

**6.500% Senior Subordinated Notes due 2024**  
**of TransDigm Inc.**



This **FOURTH SUPPLEMENTAL INDENTURE** (this “**Supplemental Indenture**”), dated as of April 1, 2016, by and among Breeze-Eastern LLC, a Delaware limited liability company, (the “**Guaranteeing Subsidiary**”), TransDigm Inc., a Delaware corporation (the “**Company**”), TransDigm Group Incorporated, a Delaware corporation (“**TD Group**”), Adams Rite Aerospace, Inc., a California corporation (“**Adams Rite**”), MarathonNorco Aerospace, Inc., a Delaware corporation (“**Marathon**”), Champion Aerospace LLC, a Delaware limited liability company (“**Champion**”), Avionic Instruments LLC, a Delaware limited liability company (“**Avionic**”), Skurka Aerospace Inc., a Delaware corporation (“**Skurka**”), CDA InterCorp LLC, a Florida limited liability company (“**CDA**”), Aviation Technologies, Inc., a Delaware corporation (“**ATF**”), AvtechTyee, Inc., a Washington corporation (“**Avtech**”), Transicoil LLC, a Delaware limited liability company (“**Transicoil**”), AeroControlex Group, Inc., a Delaware corporation (“**AeroControlex**”), Bruce Aerospace Inc., a Delaware corporation (“**Bruce Aerospace**”), CEF Industries, LLC, a Delaware limited liability company (“**CEF**”), Acme Aerospace, Inc., a Delaware corporation (“**Acme**”), Dukes Aerospace, Inc., a Delaware corporation (“**Dukes**”), Semco Instruments, Inc., a Delaware corporation, (“**Semco**”), Hartwell Corporation, a California corporation (“**Hartwell**”), McKechnie Aerospace DE, Inc., a Delaware corporation (“**McKechnie Aerospace DE**”), McKechnie Aerospace Holdings, Inc., a Delaware corporation (“**McKechnie Aerospace Holdings**”), McKechnie Aerospace Investments, Inc., a Delaware corporation (“**McKechnie Aerospace Investments**”), McKechnie Aerospace US LLC, a Delaware limited liability company (“**McKechnie Aerospace US**”), Texas Rotronics, Inc., a Texas corporation (“**Rotronics**”), Electromech Technologies LLC (formerly Western Sky Industries, LLC), a Delaware limited liability company (“**Electromech**”), Schneller LLC, a Delaware limited liability company (“**Schneller**”), HARCO LLC (formerly Harco Laboratories, Incorporated), a Connecticut limited liability company (“**HARCO**”), AmSafe Global Holdings, Inc., a Delaware corporation (“**AmSafe Global**”), Bridport Holdings, Inc., a Delaware corporation (“**Bridport Holdings**”), AmSafe, Inc., a Delaware corporation (“**AmSafe Inc.**”), Shield Restraint Systems, Inc. (formerly AmSafe Commercial Products, Inc.), a Delaware corporation (“**Shield**”), Bridport-Air Carrier, Inc., a Washington corporation (“**Bridport-Air**”), Bridport Erie Aviation, Inc., a Delaware corporation (“**Bridport Erie**”), Arkwin Industries, Inc., a New York corporation (“**Arkwin**”), Whippany Actuation Systems, LLC, a Delaware limited liability company (“**Whippany**”), Aerosonic LLC, a Delaware limited liability company (“**Aerosonic**”), Avionics Specialties, Inc., a Virginia corporation (“**Avionics Specialties**”), Airborne Global, Inc., a Delaware corporation (“**Airborne Global**”), Airborne Holdings, Inc., a Delaware Corporation (“**Airborne Holdings**”), Airborne Acquisition, Inc., a Delaware corporation (“**Airborne Acquisitions**”), Airborne Systems NA Inc., a Delaware corporation (“**Airborne Systems NA**”), Airborne Systems North America Inc., a Delaware corporation (“**Airborne Systems North America**”), Airborne Systems North America of CA Inc., a Delaware corporation (“**Airborne Systems North America CA**”), Airborne Systems North America of NJ Inc., a New Jersey corporation (“**Airborne Systems North America NJ**”), Telair US LLC, a Delaware limited liability company (“**Telair US**”), Telair International LLC, a Delaware limited liability company (“**Telair International**”), Pexco Aerospace, Inc., a Delaware corporation (“**Pexco Aerospace**”) and PneuDrualics, Inc., a California corporation (collectively with TD Group, Adams Rite, Marathon, Champion, Avionic, Skurka, CDA, ATI, Avtech, Transicoil, AeroControlex, Bruce Aerospace, CEF, Acme, Dukes, Semco, Hartwell, McKechnie Aerospace DE, McKechnie Aerospace Holdings, McKechnie Aerospace Investments, McKechnie Aerospace US, Rotronics, Electromech, Schneller, HARCO, AmSafe Global, Bridport Holdings, AmSafe Inc., Shield, Bridport-Air, Bridport Erie, Arkwin, Whippany, Aerosonic, Avionics Specialties, Airborne Global, Airborne Holdings, Airborne Acquisitions, Airborne Systems NA, Airborne Systems North America, Airborne Systems North America CA, Airborne Systems North America NJ, Telair US, Telair International and Pexco Aerospace, the “**Existing Guarantors**”), and The Bank of New York Mellon Trust Company, N.A., as trustee (the “**Trustee**”) under the Indenture referred to below. Capitalized terms used herein and not otherwise defined shall have the meaning assigned to them in the Indenture.

**WITNESSETH:**

**WHEREAS**, the Company and the Existing Guarantors have heretofore executed and delivered to the Trustee an indenture, dated as of June 4, 2014 (as supplemented by the First Supplemental Indenture thereto, dated as of April 9, 2015, the Second Supplemental Indenture thereto, dated as of June 12, 2015, and the Third Supplemental Indenture thereto, dated as of August 28, 2015, the "**Indenture**"), providing for the issuance by the Company of 6.500% Senior Subordinated Notes due 2024 (the "**Notes**") and the guarantees thereof by each of the Existing Guarantors;

**WHEREAS**, the Indenture provides that under certain circumstances described therein, newly created or acquired Domestic Restricted Subsidiaries shall execute and deliver to the Trustee a supplemental indenture to the Indenture providing for a senior subordinated guarantee of payment of the Notes by such Domestic Restricted Subsidiary (the "**Guarantee**");

**WHEREAS**, all things necessary to make this Supplemental Indenture the legal, valid and binding obligation of the Company, the Existing Guarantors and the Guaranteeing Subsidiary have been done; and

**WHEREAS**, pursuant to Section 9.01(g) of the Indenture, the Trustee is authorized to execute and deliver this Supplemental Indenture without the consent of the Holders of the Notes.

**NOW, THEREFORE**, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, the Guaranteeing Subsidiary covenants and agrees for the equal and ratable benefit of the Holders of the Notes as follows:

1. **CAPITALIZED TERMS.** Capitalized terms used herein without definition shall have the meanings assigned to them in the Indenture.
2. **GUARANTEE, ETC.** The Guaranteeing Subsidiary hereby agrees that from and after the date hereof it shall be a Guarantor under the Indenture and be bound by the terms thereof applicable to Guarantors and shall be entitled to all of the rights and subject to all the obligations of a Guarantor thereunder.
3. **RATIFICATION OF INDENTURE; SUPPLEMENTAL INDENTURE PART OF INDENTURE.** The Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every holder of Notes heretofore or hereafter authenticated and delivered shall be bound hereby.
4. **EXECUTION AND DELIVERY.** The Guaranteeing Subsidiary agrees that the Guarantee granted by it pursuant to the terms hereof shall remain in full force and effect notwithstanding any failure to endorse on each Note a notation of such Guarantee.
5. **NO RECOURSE AGAINST OTHERS.** No past, present or future director, officer, employee, incorporator, stockholder or agent of the Guaranteeing Subsidiary (or any successor entity) (other than the Company or the Existing Guarantors), as such, shall have any liability for any obligations of the Company, TD Group, the Guaranteeing Subsidiary or any other Guarantor under the Notes, any Guarantee, the Indenture or this Supplemental Indenture or for any claim based on, in respect of, or by reason of, such obligations or their creation. Each Holder of the Notes by accepting a Note waives and releases all such liability. The waiver and release are part of the consideration for issuance of the Notes.
6. **NEW YORK LAW TO GOVERN.** THE INTERNAL LAW OF THE STATE OF NEW YORK SHALL GOVERN AND BE USED TO CONSTRUE THIS SUPPLEMENTAL INDENTURE AND THE GUARANTEE GRANTED HEREUNDER WITHOUT GIVING EFFECT TO APPLICABLE PRINCIPLES OF CONFLICTS OF LAW TO THE EXTENT THAT THE APPLICATION OF THE LAWS OF ANOTHER JURISDICTION WOULD BE REQUIRED THEREBY.

7. **COUNTERPART ORIGINALS.** The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.
8. **EFFECT OF HEADINGS.** The Section headings have been inserted for convenience of reference only, are not to be considered part of this Supplemental Indenture and shall in no way modify or restrict any of the terms or provisions hereof.
9. **THE TRUSTEE.** The Trustee shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Supplemental Indenture or for or in respect of the recitals contained herein, all of which recitals are made solely by the Guaranteeing Subsidiary, the Existing Guarantors and the Company.

*[Signature page follows.]*

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed as of the date hereof.

TRANSDIGM INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Executive Vice President and Chief Financial Officer

TRANSDIGM GROUP INCORPORATED

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Executive Vice President and Chief  
Financial Officer

ACME AEROSPACE, INC.  
ADAMS RITE AEROSPACE, INC.  
AEROCONTROLEX GROUP, INC.  
AIRBORNE ACQUISITION, INC.  
AIRBORNE GLOBAL, INC.  
AIRBORNE HOLDINGS, INC.  
AIRBORNE SYSTEMS NORTH AMERICA OF CA INC.  
AIRBORNE SYSTEMS NORTH AMERICA OF NJ INC.  
AMSAFE GLOBAL HOLDINGS, INC.  
AMSAFE, INC.  
ARKWIN INDUSTRIES, INC.  
AVIATION TECHNOLOGIES, INC.  
AVTECHTYEE, INC.  
BRIDPORT-AIR CARRIER, INC.  
BRIDPORT HOLDINGS, INC.  
BRUCE AEROSPACE INC.  
HARTWELL CORPORATION  
MARATHONNORCO AEROSPACE, INC.  
MCKECHNIE AEROSPACE DE, INC.  
MCKECHNIE AEROSPACE US LLC  
By: McKechnie Aerospace DE, Inc., its sole member  
SHIELD RESTRAINT SYSTEMS, INC.  
SEMCO INSTRUMENTS, INC.  
SKURKA AEROSPACE INC.

[Signature page to the Fourth Supplemental Indenture – 2024 Notes]

TEXAS ROTRONICS, INC.  
TRANSICOIL LLC  
By: Aviation Technologies, Inc., its sole member  
By: /s/ Gregory Rufus  
Name: Gregory Rufus  
Title: Chief Executive Officer

AEROSONIC LLC  
AVIONIC INSTRUMENTS LLC  
BREEZE-EASTERN LLC  
CDA INTERCORP LLC  
CEF INDUSTRIES, LLC  
CHAMPION AEROSPACE LLC  
HARCO LLC  
SCHNELLER LLC  
TELAIR INTERNATIONAL LLC  
TELAIR US LLC  
WHIPPANY ACTUATION SYSTEMS, LLC  
By: TransDigm Inc., its sole member  
By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Executive Vice President and Chief Financial Officer

AIRBORNE SYSTEMS NA INC.  
AIRBORNE SYSTEMS NORTH AMERICA INC.  
AVIONICS SPECIALTIES, INC.  
ELECTROMECH TECHNOLOGIES LLC  
By: McKechnie Aerospace Investments, Inc., its sole member  
MCKECHNIE AEROSPACE HOLDINGS, INC.  
MCKECHNIE AEROSPACE INVESTMENTS, INC.  
By: /s/ Gregory Rufus  
Name: Gregory Rufus  
Title: President

BRIDPORT ERIE AVIATION, INC.  
By: /s/ Gregory Rufus  
Name: Gregory Rufus  
Title: Vice President and Treasurer

DUKES AEROSPACE, INC.  
By: /s/ Gregory Rufus  
Name: Gregory Rufus  
Title: Chairman of the Board

PEXCO AEROSPACE, INC.  
By: /s/ Terrance M. Paradie

[Signature page to the Fourth Supplemental Indenture – 2024 Notes]

Name: Terrance M. Paradie  
Title: President  
PNEUDRAULICS, INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Chief Executive Officer

[Signature page to the Fourth Supplemental Indenture – 2024 Notes]

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., AS TRUSTEE

By: /s/ Lawrence M. Kusch  
Name: Lawrence M. Kusch  
Title: Vice President

[Signature page to the Fourth Supplemental Indenture – 2024 Notes]

**TRANSDIGM INC.,**  
**TRANSDIGM GROUP INCORPORATED,**  
**THE GUARANTORS NAMED HEREIN,**  
AND  
**THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.,**  
as Trustee

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**FIFTH SUPPLEMENTAL INDENTURE**

Dated as of July 8, 2016  
to  
Indenture  
Dated as of June 4, 2014  
by and among  
**TRANSDIGM INC.,**  
**TRANSDIGM GROUP INCORPORATED,**  
**THE GUARANTORS NAMED THEREIN,**  
AND  
**THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.,**  
as Trustee

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**6.500% Senior Subordinated Notes due 2024**  
**of TransDigm Inc.**



This **FIFTH SUPPLEMENTAL INDENTURE** (this “**Supplemental Indenture**”), dated as of July 8, 2016, by and among ILC Holdings, Inc., a Delaware corporation (“**ILC Holdings**”), ILC Industries, LLC, a Delaware limited liability company (“**ILC Industries**”), Data Device Corporation, a Delaware corporation (“**DDC**”), Beta Transformer Technology Corporation, a New York corporation (“**Beta Corporation**”), and Beta Transformer Technology LLC, a Delaware limited liability company (“**Beta LLC**” and, together with ILC Holdings, ILC Industries, DDC and Beta LLC, the “**Guaranteeing Subsidiaries**”), TransDigm Inc., a Delaware corporation (the “**Company**”), TransDigm Group Incorporated, a Delaware corporation (“**TD Group**”), Adams Rite Aerospace, Inc., a California corporation (“**Adams Rite**”), MarathonNorco Aerospace, Inc., a Delaware corporation (“**Marathon**”), Champion Aerospace LLC, a Delaware limited liability company (“**Champion**”), Avionic Instruments LLC, a Delaware limited liability company (“**Avionic**”), Skurka Aerospace Inc., a Delaware corporation (“**Skurka**”), CDA InterCorp LLC, a Florida limited liability company (“**CDA**”), Aviation Technologies, Inc., a Delaware corporation (“**ATT**”), AvtechTyeec, Inc., a Washington corporation (“**Avtech**”), Transicoil LLC, a Delaware limited liability company (“**Transicoil**”), AeroControlex Group, Inc., a Delaware corporation (“**AeroControlex**”), Bruce Aerospace Inc., a Delaware corporation (“**Bruce Aerospace**”), CEF Industries, LLC, a Delaware limited liability company (“**CEF**”), Acme Aerospace, Inc., a Delaware corporation (“**Acme**”), Dukes Aerospace, Inc., a Delaware corporation (“**Dukes**”), Semco Instruments, Inc., a Delaware corporation, (“**Semco**”), Hartwell Corporation, a California corporation (“**Hartwell**”), McKechnie Aerospace DE, Inc., a Delaware corporation (“**McKechnie Aerospace DE**”), McKechnie Aerospace Holdings, Inc., a Delaware corporation (“**McKechnie Aerospace Holdings**”), McKechnie Aerospace Investments, Inc., a Delaware corporation (“**McKechnie Aerospace Investments**”), McKechnie Aerospace US LLC, a Delaware limited liability company (“**McKechnie Aerospace US**”), Texas Rotronics, Inc., a Texas corporation (“**Rotronics**”), Electromech Technologies LLC (formerly Western Sky Industries, LLC), a Delaware limited liability company (“**Electromech**”), Schneller LLC, a Delaware limited liability company (“**Schneller**”), HARCO LLC (formerly Harco Laboratories, Incorporated), a Connecticut limited liability company (“**HARCO**”), AmSafe Global Holdings, Inc., a Delaware corporation (“**AmSafe Global**”), Bridport Holdings, Inc., a Delaware corporation (“**Bridport Holdings**”), AmSafe, Inc., a Delaware corporation (“**AmSafe Inc.**”), Shield Restraint Systems, Inc. (formerly AmSafe Commercial Products, Inc.), a Delaware corporation (“**Shield**”), Bridport-Air Carrier, Inc., a Washington corporation (“**Bridport-Air**”), Bridport Erie Aviation, Inc., a Delaware corporation (“**Bridport Erie**”), Arkwin Industries, Inc., a New York corporation (“**Arkwin**”), Whippany Actuation Systems, LLC, a Delaware limited liability company (“**Whippany**”), Aerosonic LLC, a Delaware limited liability company (“**Aerosonic**”), Avionics Specialties, Inc., a Virginia corporation (“**Avionics Specialties**”), Airborne Global, Inc., a Delaware corporation (“**Airborne Global**”), Airborne Holdings, Inc., a Delaware Corporation (“**Airborne Holdings**”), Airborne Acquisition, Inc., a Delaware corporation (“**Airborne Acquisitions**”), Airborne Systems NA Inc., a Delaware corporation (“**Airborne Systems NA**”), Airborne Systems North America Inc., a Delaware corporation (“**Airborne Systems North America**”), Airborne Systems North America of CA Inc., a Delaware corporation (“**Airborne Systems North America CA**”), Airborne Systems North America of NJ Inc., a New Jersey corporation (“**Airborne Systems North America NJ**”), Telair US LLC, a Delaware limited liability company (“**Telair US**”), Telair International LLC, a Delaware limited liability company (“**Telair International**”), Pexco Aerospace, Inc., a Delaware corporation (“**Pexco Aerospace**”), PneuDraulics, Inc., a California corporation (“**PneuDraulics**”) and Breeze-Eastern LLC, a Delaware limited liability company (collectively with TD Group, Adams Rite, Marathon, Champion, Avionic, Skurka, CDA, ATI, Avtech, Transicoil, AeroControlex, Bruce Aerospace, CEF, Acme, Dukes, Semco, Hartwell, McKechnie Aerospace DE, McKechnie Aerospace Holdings, McKechnie Aerospace Investments, McKechnie Aerospace US, Rotronics, Electromech, Schneller, HARCO, AmSafe Global, Bridport Holdings, AmSafe Inc., Shield, Bridport-Air, Bridport Erie, Arkwin, Whippany, Aerosonic, Avionics Specialties, Airborne Global, Airborne Holdings, Airborne Acquisitions, Airborne Systems NA, Airborne Systems North America, Airborne Systems North America CA, Airborne Systems North America NJ, Telair US, Telair International, Pexco Aerospace and PneuDraulics, the “**Existing Guarantors**”), and The Bank of New York Mellon Trust Company, N.A., as trustee (the “**Trustee**”) under the Indenture referred to below. Capitalized terms used herein and not otherwise defined shall have the meaning assigned to them in the Indenture.

**WITNESSETH:**

**WHEREAS**, the Company and the Existing Guarantors have heretofore executed and delivered to the Trustee an indenture, dated as of June 4, 2014 (as supplemented by the First Supplemental Indenture thereto, dated as of April 9, 2015, the Second Supplemental Indenture thereto, dated as of June 12, 2015, the Third Supplemental Indenture thereto, dated as of August 28, 2015 and the Fourth Supplemental Indenture thereto, dated as of April 1, 2016, the "**Indenture**"), providing for the issuance by the Company of 6.500% Senior Subordinated Notes due 2024 (the "**Notes**") and the guarantees thereof by each of the Existing Guarantors;

**WHEREAS**, the Indenture provides that under certain circumstances described therein, newly created or acquired Domestic Restricted Subsidiaries shall execute and deliver to the Trustee a supplemental indenture to the Indenture providing for a senior subordinated guarantee of payment of the Notes by such Domestic Restricted Subsidiary (the "**Guarantee**");

**WHEREAS**, all things necessary to make this Supplemental Indenture the legal, valid and binding obligation of the Company, the Existing Guarantors and the Guaranteeing Subsidiaries have been done; and

**WHEREAS**, pursuant to Section 9.01(g) of the Indenture, the Trustee is authorized to execute and deliver this Supplemental Indenture without the consent of the Holders of the Notes.

**NOW, THEREFORE**, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, each of the Guaranteeing Subsidiaries covenants and agrees for the equal and ratable benefit of the Holders of the Notes as follows:

1. **CAPITALIZED TERMS.** Capitalized terms used herein without definition shall have the meanings assigned to them in the Indenture.
2. **GUARANTEE, ETC.** Each of the Guaranteeing Subsidiaries hereby agrees that from and after the date hereof it shall be a Guarantor under the Indenture and be bound by the terms thereof applicable to Guarantors and shall be entitled to all of the rights and subject to all the obligations of a Guarantor thereunder.
3. **RATIFICATION OF INDENTURE; SUPPLEMENTAL INDENTURE PART OF INDENTURE.** The Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every holder of Notes heretofore or hereafter authenticated and delivered shall be bound hereby.
4. **EXECUTION AND DELIVERY.** Each of the Guaranteeing Subsidiaries agrees that the Guarantee granted by it pursuant to the terms hereof shall remain in full force and effect notwithstanding any failure to endorse on each Note a notation of such Guarantee.
5. **NO RECOURSE AGAINST OTHERS.** No past, present or future director, officer, employee, incorporator, stockholder or agent of any of the Guaranteeing Subsidiaries (or any successor entity) (other than the Company or the Existing Guarantors), as such, shall have any liability for any obligations of the Company, TD Group, the Guaranteeing Subsidiaries or any other Guarantor under the Notes, any Guarantee, the Indenture or this Supplemental Indenture or for any claim based on, in respect of, or by reason of, such obligations or their creation. Each Holder of the Notes by accepting a Note waives and releases all such liability. The waiver and release are part of the consideration for issuance of the Notes.
6. **NEW YORK LAW TO GOVERN.** THE INTERNAL LAW OF THE STATE OF NEW YORK SHALL GOVERN AND BE USED TO CONSTRUE THIS SUPPLEMENTAL INDENTURE AND THE GUARANTEE GRANTED HEREUNDER WITHOUT GIVING EFFECT TO APPLICABLE PRINCIPLES OF CONFLICTS OF LAW TO THE EXTENT THAT THE APPLICATION OF THE LAWS OF ANOTHER JURISDICTION WOULD BE REQUIRED THEREBY.

7. **COUNTERPART ORIGINALS.** The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.
8. **EFFECT OF HEADINGS.** The Section headings have been inserted for convenience of reference only, are not to be considered part of this Supplemental Indenture and shall in no way modify or restrict any of the terms or provisions hereof.
9. **THE TRUSTEE.** The Trustee shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Supplemental Indenture or for or in respect of the recitals contained herein, all of which recitals are made solely by the Guaranteeing Subsidiaries, the Existing Guarantors and the Company.

*[Signature page follows.]*

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed as of the date hereof.

TRANSDIGM INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Executive Vice President and Chief Financial Officer

TRANSDIGM GROUP INCORPORATED

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Executive Vice President and Chief  
Financial Officer

ACME AEROSPACE, INC.  
ADAMS RITE AEROSPACE, INC.  
AIRBORNE SYSTEMS NORTH AMERICA OF NJ INC.  
AMSAFE GLOBAL HOLDINGS, INC.  
AMSAFE, INC.  
ARKWIN INDUSTRIES, INC.  
AVTECHTYEE, INC.  
BRUCE AEROSPACE INC.  
DUKES AEROSPACE, INC.  
ELECTROMECH TECHNOLOGIES LLC

By: McKechnie Aerospace Investments, Inc., its sole

member

HARTWELL CORPORATION  
MARATHONNORCO AEROSPACE, INC.  
MCKECHNIE AEROSPACE INVESTMENTS, INC.  
PEXCO AEROSPACE, INC.  
PNEUDRAULICS, INC.  
SHIELD RESTRAINT SYSTEMS, INC.  
SEMCO INSTRUMENTS, INC.  
SKURKA AEROSPACE INC.  
TEXAS ROTRONICS, INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Chief Executive Officer

[Signature page to the Fifth Supplemental Indenture – 2024 Notes]

AEROCONTROLEX GROUP, INC.  
AIRBORNE ACQUISITION, INC.  
AIRBORNE GLOBAL, INC.  
AIRBORNE HOLDINGS, INC.  
AVIATION TECHNOLOGIES, INC.  
BRIDPORT HOLDINGS, INC.  
BRIDPORT-AIR CARRIER, INC.  
MCKECHNIE AEROSPACE DE, INC.  
MCKECHNIE AEROSPACE US LLC

By: McKechnie Aerospace DE, Inc., its sole member

TRANSICOIL LLC

By: Aviation Technologies, Inc., its sole member

By: /s/ Terrance M. Paradie

Name: Terrance M. Paradie  
Title: President and Chief Executive Officer

AEROSONIC LLC  
AVIONIC INSTRUMENTS LLC  
BREEZE-EASTERN LLC  
CDA INTERCORP LLC  
CEF INDUSTRIES, LLC  
CHAMPION AEROSPACE LLC  
HARCO LLC  
SCHNELLER LLC  
TELAIR US LLC  
WHIPPANY ACTUATION SYSTEMS, LLC

By: TransDigm Inc., its sole member

TELAIR INTERNATIONAL LLC

By: Telair US LLC, its sole member

By: /s/ Terrance M. Paradie

Name: Terrance M. Paradie  
Title: Executive Vice President and Chief Financial Officer

AIRBORNE SYSTEMS NA INC.  
AIRBORNE SYSTEMS NORTH AMERICA INC.  
AVIONICS SPECIALTIES, INC.  
MCKECHNIE AEROSPACE HOLDINGS, INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: President

BRIDPORT ERIE AVIATION, INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Vice President and Treasurer

AIRBORNE SYSTEMS NORTH AMERICA OF CA INC.

By: /s/ Sean P. Maroney  
Name: Sean P. Maroney  
Title: Treasurer

[Signature page to the Fifth Supplemental Indenture – 2024 Notes]

BETA TRANSFORMER TECHNOLOGY CORPORATION  
DATA DEVICE CORPORATION  
ILC HOLDINGS, INC.  
ILC INDUSTRIES, LLC

By: ILC Holdings, Inc., its sole member

By: /s/ Halle F. Terrion  
Name: Halle F. Terrion  
Title: Secretary

BETA TRANSFORMER TECHNOLOGY LLC

By: /s/ Vincent Buffa  
Name: Vincent Buffa  
Title: Manager

[Signature page to the Fifth Supplemental Indenture – 2024 Notes]

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., AS TRUSTEE

By: /s/ Lawrence M. Kusch  
Name: Lawrence M. Kusch  
Title: Vice President

[Signature page to the Fifth Supplemental Indenture – 2024 Notes]

**TRANSDIGM INC.,**  
**TRANSDIGM GROUP INCORPORATED,**  
**THE GUARANTORS NAMED HEREIN,**  
AND  
**THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.,**  
as Trustee

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**SIXTH SUPPLEMENTAL INDENTURE**

Dated as of October 28, 2016

to

Indenture

Dated as of June 4, 2014

by and among

**TRANSDIGM INC.,**  
**TRANSDIGM GROUP INCORPORATED,**  
**THE GUARANTORS NAMED THEREIN,**  
AND  
**THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.,**  
as Trustee

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**6.500% Senior Subordinated Notes due 2024**  
**of TransDigm Inc.**



This **SIXTH SUPPLEMENTAL INDENTURE** (this “**Supplemental Indenture**”), dated as of October 28, 2016, by and among Young & Franklin Inc., a New York corporation (“**Young & Franklin**”), Tactair Fluid Controls, Inc., a New York corporation (“**Tactair**”), and Johnson Liverpool LLC, a Delaware limited liability company (together with Young & Franklin and Tactair, the “**Guaranteeing Subsidiaries**”), TransDigm Inc., a Delaware corporation (the “**Company**”), TransDigm Group Incorporated, a Delaware corporation (“**TD Group**”), Adams Rite Aerospace, Inc., a California corporation (“**Adams Rite**”), MarathonNorco Aerospace, Inc., a Delaware corporation (“**Marathon**”), Champion Aerospace LLC, a Delaware limited liability company (“**Champion**”), Avionic Instruments LLC, a Delaware limited liability company (“**Avionic**”), Skurka Aerospace Inc., a Delaware corporation (“**Skurka**”), CDA InterCorp LLC, a Florida limited liability company (“**CDA**”), Aviation Technologies, Inc., a Delaware corporation (“**ATI**”), AvtechTyee, Inc., a Washington corporation (“**Avtech**”), Transicoil LLC, a Delaware limited liability company (“**Transicoil**”), AeroControlex Group, Inc., a Delaware corporation (“**AeroControlex**”), Bruce Aerospace Inc., a Delaware corporation (“**Bruce Aerospace**”), CEF Industries, LLC, a Delaware limited liability company (“**CEF**”), Acme Aerospace, Inc., a Delaware corporation (“**Acme**”), Dukes Aerospace, Inc., a Delaware corporation (“**Dukes**”), Semco Instruments LLC, a Delaware corporation (“**Semco**”), Hartwell Corporation, a California corporation (“**Hartwell**”), McKechnie Aerospace DE, Inc., a Delaware corporation (“**McKechnie Aerospace DE**”), McKechnie Aerospace Holdings, Inc., a Delaware corporation (“**McKechnie Aerospace Holdings**”), McKechnie Aerospace Investments, Inc., a Delaware corporation (“**McKechnie Aerospace Investments**”), McKechnie Aerospace US LLC, a Delaware limited liability company (“**McKechnie Aerospace US**”), Texas Rotronics, Inc., a Texas corporation (“**Rotronics**”), Electromech Technologies LLC (formerly Western Sky Industries, LLC), a Delaware limited liability company (“**Electromech**”), Schneller LLC, a Delaware limited liability company (“**Schneller**”), HARCO LLC (formerly Harco Laboratories, Incorporated), a Connecticut limited liability company (“**HARCO**”), AmSafe Global Holdings, Inc., a Delaware corporation (“**AmSafe Global**”), Bridport Holdings, Inc., a Delaware corporation (“**Bridport Holdings**”), AmSafe, Inc., a Delaware corporation (“**AmSafe Inc.**”), Shield Restraint Systems, Inc. (formerly AmSafe Commercial Products, Inc.), a Delaware corporation (“**Shield**”), Bridport-Air Carrier, Inc., a Washington corporation (“**Bridport-Air**”), Bridport Erie Aviation, Inc., a Delaware corporation (“**Bridport Erie**”), Arkwin Industries, Inc., a New York corporation (“**Arkwin**”), Whippany Actuation Systems, LLC, a Delaware limited liability company (“**Whippany**”), Aerosonic LLC, a Delaware limited liability company (“**Aerosonic**”), Avionics Specialties, Inc., a Virginia corporation (“**Avionics Specialties**”), Airborne Global, Inc., a Delaware corporation (“**Airborne Global**”), Airborne Holdings, Inc., a Delaware Corporation (“**Airborne Holdings**”), Airborne Acquisition, Inc., a Delaware corporation (“**Airborne Acquisitions**”), Airborne Systems NA Inc., a Delaware corporation (“**Airborne Systems NA**”), Airborne Systems North America Inc., a Delaware corporation (“**Airborne Systems North America**”), Airborne Systems North America of CA Inc., a Delaware corporation (“**Airborne Systems North America CA**”), Airborne Systems North America of NJ Inc., a New Jersey corporation (“**Airborne Systems North America NJ**”), Telair US LLC, a Delaware limited liability company (“**Telair US**”), Telair International LLC, a Delaware limited liability company (“**Telair International**”), Pexco Aerospace, Inc., a Delaware corporation (“**Pexco Aerospace**”), PneuDraulics, Inc., a California corporation (“**PneuDraulics**”), Breeze-Eastern LLC, a Delaware limited liability company (“**Breeze-Eastern**”), ILC Holdings, Inc., a Delaware corporation (“**ILC Holdings**”), ILC Industries, LLC, a Delaware limited liability company (“**ILC Industries**”), Data Device Corporation, a Delaware corporation (“**DDC**”), Beta Transformer Technology Corporation, a New York corporation (“**Beta Corporation**”), and Beta Transformer Technology LLC, a Delaware limited liability company (collectively with TD Group, Adams Rite, Marathon, Champion, Avionic, Skurka, CDA, ATI, Avtech, Transicoil, AeroControlex, Bruce Aerospace, CEF, Acme, Dukes, Semco, Hartwell, McKechnie Aerospace DE, McKechnie Aerospace Holdings, McKechnie Aerospace Investments, McKechnie Aerospace US, Rotronics, Electromech, Schneller, HARCO, AmSafe Global, Bridport Holdings, AmSafe Inc., Shield, Bridport-Air, Bridport Erie, Arkwin, Whippany, Aerosonic, Avionics Specialties, Airborne Global, Airborne Holdings, Airborne Acquisitions, Airborne Systems NA, Airborne Systems North America, Airborne Systems North America CA, Airborne Systems North America NJ, Telair US, Telair International, Pexco Aerospace, PneuDraulics, Breeze-Eastern, ILC Holdings, ILC Industries, DDC and Beta Corporation, the “**Existing Guarantors**”), and The Bank of New York Mellon Trust Company, N.A., as trustee (the “**Trustee**”) under the Indenture referred to below. Capitalized terms used herein and not otherwise defined shall have the meaning assigned to them in the Indenture.

**WITNESSETH:**

**WHEREAS**, the Company and the Existing Guarantors have heretofore executed and delivered to the Trustee an indenture, dated as of June 4, 2014 (as supplemented by the First Supplemental Indenture thereto, dated as of April 9, 2015, the Second Supplemental Indenture thereto, dated as of June 12, 2015, the Third Supplemental Indenture thereto, dated as of August 28, 2015, the Fourth Supplemental Indenture thereto, dated as of April 1, 2016, and the Fifth Supplemental Indenture thereto, dated as of July 8, 2016, the "**Indenture**"), providing for the issuance by the Company of 6.500% Senior Subordinated Notes due 2024 (the "**Notes**") and the guarantees thereof by each of the Existing Guarantors;

**WHEREAS**, the Indenture provides that under certain circumstances described therein, newly created or acquired Domestic Restricted Subsidiaries shall execute and deliver to the Trustee a supplemental indenture to the Indenture providing for a senior subordinated guarantee of payment of the Notes by such Domestic Restricted Subsidiary (the "**Guarantee**");

**WHEREAS**, all things necessary to make this Supplemental Indenture the legal, valid and binding obligation of the Company, the Existing Guarantors and the Guaranteeing Subsidiaries have been done; and

**WHEREAS**, pursuant to Section 9.01(g) of the Indenture, the Trustee is authorized to execute and deliver this Supplemental Indenture without the consent of the Holders of the Notes.

**NOW, THEREFORE**, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, each of the Guaranteeing Subsidiaries covenants and agrees for the equal and ratable benefit of the Holders of the Notes as follows:

1. **CAPITALIZED TERMS.** Capitalized terms used herein without definition shall have the meanings assigned to them in the Indenture.
2. **GUARANTEE, ETC.** Each of the Guaranteeing Subsidiaries hereby agrees that from and after the date hereof it shall be a Guarantor under the Indenture and be bound by the terms thereof applicable to Guarantors and shall be entitled to all of the rights and subject to all the obligations of a Guarantor thereunder.
3. **RATIFICATION OF INDENTURE; SUPPLEMENTAL INDENTURE PART OF INDENTURE.** The Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every holder of Notes heretofore or hereafter authenticated and delivered shall be bound hereby.
4. **EXECUTION AND DELIVERY.** Each of the Guaranteeing Subsidiaries agrees that the Guarantee granted by it pursuant to the terms hereof shall remain in full force and effect notwithstanding any failure to endorse on each Note a notation of such Guarantee.
5. **NO RECOURSE AGAINST OTHERS.** No past, present or future director, officer, employee, incorporator, stockholder or agent of any of the Guaranteeing Subsidiaries (or any successor entity) (other than the Company or the Existing Guarantors), as such, shall have any liability for any obligations of the Company, TD Group, the Guaranteeing Subsidiaries or any other Guarantor under the Notes, any Guarantee, the Indenture or this Supplemental Indenture or for any claim based on, in respect of, or by reason of, such obligations or their creation. Each Holder of the Notes by accepting a Note waives and releases all such liability. The waiver and release are part of the consideration for issuance of the Notes.
6. **NEW YORK LAW TO GOVERN.** THE INTERNAL LAW OF THE STATE OF NEW YORK SHALL GOVERN AND BE USED TO CONSTRUE THIS SUPPLEMENTAL INDENTURE AND THE GUARANTEE GRANTED HEREUNDER WITHOUT GIVING EFFECT TO APPLICABLE

PRINCIPLES OF CONFLICTS OF LAW TO THE EXTENT THAT THE APPLICATION OF THE LAWS OF ANOTHER JURISDICTION WOULD BE REQUIRED THEREBY.

7. **COUNTERPART ORIGINALS.** The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.
8. **EFFECT OF HEADINGS.** The Section headings have been inserted for convenience of reference only, are not to be considered part of this Supplemental Indenture and shall in no way modify or restrict any of the terms or provisions hereof.
9. **THE TRUSTEE.** The Trustee shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Supplemental Indenture or for or in respect of the recitals contained herein, all of which recitals are made solely by the Guaranteeing Subsidiaries, the Existing Guarantors and the Company.

*[Signature page follows.]*

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed as of the date hereof.

TRANSDIGM INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Executive Vice President and Chief Financial Officer

TRANSDIGM GROUP INCORPORATED

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Executive Vice President and Chief Financial Officer

ACME AEROSPACE, INC.  
ADAMS RITE AEROSPACE, INC.  
AIRBORNE SYSTEMS NORTH AMERICA OF NJ INC.  
AMSAFE GLOBAL HOLDINGS, INC.  
AMSAFE, INC.  
ARKWIN INDUSTRIES, INC.  
AVTECHTYEE, INC.  
BRUCE AEROSPACE INC.  
DUKES AEROSPACE, INC.  
ELECTROMECH TECHNOLOGIES LLC

member

HARTWELL CORPORATION  
JOHNSON LIVERPOOL LLC

MARATHONNORCO AEROSPACE, INC.  
MCKECHNIE AEROSPACE INVESTMENTS, INC.  
PEXCO AEROSPACE, INC.  
PNEUDRAULICS, INC.  
SHIELD RESTRAINT SYSTEMS, INC.  
SEMCO INSTRUMENTS, INC.  
SKURKA AEROSPACE INC.  
TACTAIR FLUID CONTROLS, INC.  
TEXAS ROTRONICS, INC.  
YOUNG & FRANKLIN INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Chief Executive Officer

AEROCONTROLEX GROUP, INC.  
AIRBORNE ACQUISITION, INC.  
AIRBORNE GLOBAL, INC.  
AIRBORNE HOLDINGS, INC.  
AVIATION TECHNOLOGIES, INC.  
BRIDPORT HOLDINGS, INC.  
BRIDPORT-AIR CARRIER, INC.  
MCKECHNIE AEROSPACE DE, INC.  
MCKECHNIE AEROSPACE US LLC

TRANSICOIL LLC

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: President and Chief Executive Officer

AEROSONIC LLC  
AVIONIC INSTRUMENTS LLC  
BREEZE-EASTERN LLC  
CDA INTERCORP LLC  
CEF INDUSTRIES, LLC  
CHAMPION AEROSPACE LLC  
HARCO LLC  
SCHNELLER LLC  
TELAIR US LLC  
WHIPPANY ACTUATION SYSTEMS, LLC

TELAIR INTERNATIONAL LLC

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Executive Vice President and Chief Financial Officer

AIRBORNE SYSTEMS NA INC.  
AIRBORNE SYSTEMS NORTH AMERICA INC.

By: McKechnie Aerospace Investments, Inc., its sole

By: Young & Franklin Inc., its sole member

By: McKechnie Aerospace DE, Inc., its sole member

By: Aviation Technologies, Inc., its sole member

By: TransDigm Inc., its sole member

By: Telair US LLC, its sole member

AVIONICS SPECIALTIES, INC.  
MCKECHNIE AEROSPACE HOLDINGS, INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: President

BRIDPORT ERIE AVIATION, INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Vice President and Treasurer

AIRBORNE SYSTEMS NORTH AMERICA OF CA INC.

[Signature page to the Sixth Supplemental Indenture – 2024 Notes]

By: /s/ Sean P. Maroney

Name: Sean P. Maroney

Title: Treasurer

BETA TRANSFORMER TECHNOLOGY CORPORATION

BETA TRANSFORMER TECHNOLOGY LLC

By: Beta Transformer Technology Corporation, its

sole

member

DATA DEVICE CORPORATION

ILC HOLDINGS, INC.

ILC INDUSTRIES, LLC

By: ILC Holdings, Inc., its sole member

By: /s/ Halle F. Terrion

Name: Halle F. Terrion

Title: Secretary

[Signature page to the Sixth Supplemental Indenture – 2024 Notes]

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., AS TRUSTEE

By: /s/ Lawrence M. Kusch

Name: Lawrence M. Kusch

Title: Vice President

[Signature page to the Sixth Supplemental Indenture – 2024 Notes]

**TRANSDIGM INC.,**  
**TRANSDIGM GROUP INCORPORATED,**  
**THE GUARANTORS NAMED HEREIN,**  
AND  
**THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.,**  
as Trustee

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**THIRD SUPPLEMENTAL INDENTURE**

Dated as of April 1, 2016  
to  
Indenture  
Dated as of May 14, 2015  
by and among  
**TRANSDIGM INC.,**  
**TRANSDIGM GROUP INCORPORATED,**  
**THE GUARANTORS NAMED THEREIN,**  
AND  
**THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.,**  
as Trustee

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**6.500% Senior Subordinated Notes due 2025**  
**of TransDigm Inc.**



This **THIRD SUPPLEMENTAL INDENTURE** (this “**Supplemental Indenture**”), dated as of April 1, 2016, by and among Breeze-Eastern LLC, a Delaware limited liability company, (the “**Guaranteeing Subsidiary**”), TransDigm Inc., a Delaware corporation (the “**Company**”), TransDigm Group Incorporated, a Delaware corporation (“**TD Group**”), Adams Rite Aerospace, Inc., a California corporation (“**Adams Rite**”), MarathonNorco Aerospace, Inc., a Delaware corporation (“**Marathon**”), Champion Aerospace LLC, a Delaware limited liability company (“**Champion**”), Avionic Instruments LLC, a Delaware limited liability company (“**Avionic**”), Skurka Aerospace Inc., a Delaware corporation (“**Skurka**”), CDA InterCorp LLC, a Florida limited liability company (“**CDA**”), Aviation Technologies, Inc., a Delaware corporation (“**ATF**”), AvtechTyee, Inc., a Washington corporation (“**Avtech**”), Transicoil LLC, a Delaware limited liability company (“**Transicoil**”), AeroControlex Group, Inc., a Delaware corporation (“**AeroControlex**”), Bruce Aerospace Inc., a Delaware corporation (“**Bruce Aerospace**”), CEF Industries, LLC, a Delaware limited liability company (“**CEF**”), Acme Aerospace, Inc., a Delaware corporation (“**Acme**”), Dukes Aerospace, Inc., a Delaware corporation (“**Dukes**”), Semco Instruments, Inc., a Delaware corporation, (“**Semco**”), Hartwell Corporation, a California corporation (“**Hartwell**”), McKechnie Aerospace DE, Inc., a Delaware corporation (“**McKechnie Aerospace DE**”), McKechnie Aerospace Holdings, Inc., a Delaware corporation (“**McKechnie Aerospace Holdings**”), McKechnie Aerospace Investments, Inc., a Delaware corporation (“**McKechnie Aerospace Investments**”), McKechnie Aerospace US LLC, a Delaware limited liability company (“**McKechnie Aerospace US**”), Texas Rotronics, Inc., a Texas corporation (“**Rotronics**”), Electromech Technologies LLC (formerly Western Sky Industries, LLC), a Delaware limited liability company (“**Electromech**”), Schneller LLC, a Delaware limited liability company (“**Schneller**”), HARCO LLC (formerly Harco Laboratories, Incorporated), a Connecticut limited liability company (“**HARCO**”), AmSafe Global Holdings, Inc., a Delaware corporation (“**AmSafe Global**”), Bridport Holdings, Inc., a Delaware corporation (“**Bridport Holdings**”), AmSafe, Inc., a Delaware corporation (“**AmSafe Inc.**”), Shield Restraint Systems, Inc. (formerly AmSafe Commercial Products, Inc.), a Delaware corporation (“**Shield**”), Bridport-Air Carrier, Inc., a Washington corporation (“**Bridport-Air**”), Bridport Erie Aviation, Inc., a Delaware corporation (“**Bridport Erie**”), Arkwin Industries, Inc., a New York corporation (“**Arkwin**”), Whippany Actuation Systems, LLC, a Delaware limited liability company (“**Whippany**”), Aerosonic LLC, a Delaware limited liability company (“**Aerosonic**”), Avionics Specialties, Inc., a Virginia corporation (“**Avionics Specialties**”), Airborne Global, Inc., a Delaware corporation (“**Airborne Global**”), Airborne Holdings, Inc., a Delaware Corporation (“**Airborne Holdings**”), Airborne Acquisition, Inc., a Delaware corporation (“**Airborne Acquisitions**”), Airborne Systems NA Inc., a Delaware corporation (“**Airborne Systems NA**”), Airborne Systems North America Inc., a Delaware corporation (“**Airborne Systems North America**”), Airborne Systems North America of CA Inc., a Delaware corporation (“**Airborne Systems North America CA**”), Airborne Systems North America of NJ Inc., a New Jersey corporation (“**Airborne Systems North America NJ**”), Telair US LLC, a Delaware limited liability company (“**Telair US**”), Telair International LLC, a Delaware limited liability company (“**Telair International**”), Pexco Aerospace, Inc., a Delaware corporation (“**Pexco Aerospace**”) and PneuDrualics, Inc., a California corporation (collectively with TD Group, Adams Rite, Marathon, Champion, Avionic, Skurka, CDA, ATI, Avtech, Transicoil, AeroControlex, Bruce Aerospace, CEF, Acme, Dukes, Semco, Hartwell, McKechnie Aerospace DE, McKechnie Aerospace Holdings, McKechnie Aerospace Investments, McKechnie Aerospace US, Rotronics, Electromech, Schneller, HARCO, AmSafe Global, Bridport Holdings, AmSafe Inc., Shield, Bridport-Air, Bridport Erie, Arkwin, Whippany, Aerosonic, Avionics Specialties, Airborne Global, Airborne Holdings, Airborne Acquisitions, Airborne Systems NA, Airborne Systems North America, Airborne Systems North America CA, Airborne Systems North America NJ, Telair US, Telair International and Pexco Aerospace, the “**Existing Guarantors**”), and The Bank of New York Mellon Trust Company, N.A., as trustee (the “**Trustee**”) under the Indenture referred to below. Capitalized terms used herein and not otherwise defined shall have the meaning assigned to them in the Indenture.

**WITNESSETH:**

**WHEREAS**, the Company and the Existing Guarantors have heretofore executed and delivered to the Trustee an indenture, dated as of May 14, 2015 (as supplemented by the First Supplemental Indenture thereto, dated as of June 12, 2015, and the Second Supplemental Indenture thereto, dated as of August 28, 2015, the "**Indenture**"), providing for the issuance by the Company of 6.500% Senior Subordinated Notes due 2025 (the "**Notes**") and the guarantees thereof by each of the Existing Guarantors;

**WHEREAS**, the Indenture provides that under certain circumstances described therein, newly created or acquired Domestic Restricted Subsidiaries shall execute and deliver to the Trustee a supplemental indenture to the Indenture providing for a senior subordinated guarantee of payment of the Notes by such Domestic Restricted Subsidiary (the "**Guarantee**");

**WHEREAS**, all things necessary to make this Supplemental Indenture the legal, valid and binding obligation of the Company, the Existing Guarantors and the Guaranteeing Subsidiary have been done; and

**WHEREAS**, pursuant to Section 9.01(g) of the Indenture, the Trustee is authorized to execute and deliver this Supplemental Indenture without the consent of the Holders of the Notes.

**NOW, THEREFORE**, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, the Guaranteeing Subsidiary covenants and agrees for the equal and ratable benefit of the Holders of the Notes as follows:

1. **CAPITALIZED TERMS.** Capitalized terms used herein without definition shall have the meanings assigned to them in the Indenture.
2. **GUARANTEE, ETC.** The Guaranteeing Subsidiary hereby agrees that from and after the date hereof it shall be a Guarantor under the Indenture and be bound by the terms thereof applicable to Guarantors and shall be entitled to all of the rights and subject to all the obligations of a Guarantor thereunder.
3. **RATIFICATION OF INDENTURE; SUPPLEMENTAL INDENTURE PART OF INDENTURE.** The Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every holder of Notes heretofore or hereafter authenticated and delivered shall be bound hereby.
4. **EXECUTION AND DELIVERY.** The Guaranteeing Subsidiary agrees that the Guarantee granted by it pursuant to the terms hereof shall remain in full force and effect notwithstanding any failure to endorse on each Note a notation of such Guarantee.
5. **NO RECOURSE AGAINST OTHERS.** No past, present or future director, officer, employee, incorporator, stockholder or agent of the Guaranteeing Subsidiary (or any successor entity) (other than the Company or the Existing Guarantors), as such, shall have any liability for any obligations of the Company, TD Group, the Guaranteeing Subsidiary or any other Guarantor under the Notes, any Guarantee, the Indenture or this Supplemental Indenture or for any claim based on, in respect of, or by reason of, such obligations or their creation. Each Holder of the Notes by accepting a Note waives and releases all such liability. The waiver and release are part of the consideration for issuance of the Notes.
6. **NEW YORK LAW TO GOVERN.** THE INTERNAL LAW OF THE STATE OF NEW YORK SHALL GOVERN AND BE USED TO CONSTRUE THIS SUPPLEMENTAL INDENTURE AND THE GUARANTEE GRANTED HEREUNDER WITHOUT GIVING EFFECT TO APPLICABLE PRINCIPLES OF CONFLICTS OF LAW TO THE EXTENT THAT THE APPLICATION OF THE LAWS OF ANOTHER JURISDICTION WOULD BE REQUIRED THEREBY.

7. **COUNTERPART ORIGINALS.** The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.
8. **EFFECT OF HEADINGS.** The Section headings have been inserted for convenience of reference only, are not to be considered part of this Supplemental Indenture and shall in no way modify or restrict any of the terms or provisions hereof.
9. **THE TRUSTEE.** The Trustee shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Supplemental Indenture or for or in respect of the recitals contained herein, all of which recitals are made solely by the Guaranteeing Subsidiary, the Existing Guarantors and the Company.

*[Signature page follows.]*

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed as of the date hereof.

TRANSDIGM INC.

By: /s/ Terrance M. Paradie

Name: Terrance M. Paradie

Title: Executive Vice President and Chief Financial Officer

TRANSDIGM GROUP INCORPORATED

By: /s/ Terrance M. Paradie

Name: Terrance M. Paradie

Title: Executive Vice President and Chief  
Financial Officer

ACME AEROSPACE, INC.

ADAMS RITE AEROSPACE, INC.

AEROCONTROLEX GROUP, INC.

AIRBORNE ACQUISITION, INC.

AIRBORNE GLOBAL, INC.

AIRBORNE HOLDINGS, INC.

AIRBORNE SYSTEMS NORTH AMERICA OF CA INC.

AIRBORNE SYSTEMS NORTH AMERICA OF NJ INC.

AMSAFE GLOBAL HOLDINGS, INC.

AMSAFE, INC.

ARKWIN INDUSTRIES, INC.

AVIATION TECHNOLOGIES, INC.

AVTECHTYEE, INC.

BRIDPORT-AIR CARRIER, INC.

BRIDPORT HOLDINGS, INC.

BRUCE AEROSPACE INC.

HARTWELL CORPORATION

MARATHONNORCO AEROSPACE, INC.

MCKECHNIE AEROSPACE DE, INC.

MCKECHNIE AEROSPACE US LLC

By: McKechnie Aerospace DE, Inc., its sole member

SHIELD RESTRAINT SYSTEMS, INC.

SEMCO INSTRUMENTS, INC.

SKURKA AEROSPACE INC.

[Signature page to the Third Supplemental Indenture – 2025 Notes]

TEXAS ROTRONICS, INC.  
TRANSICOIL LLC  
By: Aviation Technologies, Inc., its sole member  
By: /s/ Gregory Rufus  
Name: Gregory Rufus  
Title: Chief Executive Officer

AEROSONIC LLC  
AVIONIC INSTRUMENTS LLC  
BREEZE-EASTERN LLC  
CDA INTERCORP LLC  
CEF INDUSTRIES, LLC  
CHAMPION AEROSPACE LLC  
HARCO LLC  
SCHNELLER LLC  
TELAIR INTERNATIONAL LLC  
TELAIR US LLC  
WHIPPANY ACTUATION SYSTEMS, LLC  
By: TransDigm Inc., its sole member  
By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Executive Vice President and Chief Financial Officer

AIRBORNE SYSTEMS NA INC.  
AIRBORNE SYSTEMS NORTH AMERICA INC.  
AVIONICS SPECIALTIES, INC.  
ELECTROMECH TECHNOLOGIES LLC  
By: McKechnie Aerospace Investments, Inc., its sole member  
MCKECHNIE AEROSPACE HOLDINGS, INC.  
MCKECHNIE AEROSPACE INVESTMENTS, INC.  
By: /s/ Gregory Rufus  
Name: Gregory Rufus  
Title: President

BRIDPORT ERIE AVIATION, INC.  
By: /s/ Gregory Rufus  
Name: Gregory Rufus  
Title: Vice President and Treasurer

DUKES AEROSPACE, INC.  
By: /s/ Gregory Rufus  
Name: Gregory Rufus  
Title: Chairman of the Board

PEXCO AEROSPACE, INC.  
By: /s/ Terrance M. Paradie

[Signature page to the Third Supplemental Indenture – 2025 Notes]

Name: Terrance M. Paradie  
Title: President  
PNEUDRAULICS, INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Chief Executive Officer

[Signature page to the Third Supplemental Indenture – 2025 Notes]

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., AS TRUSTEE

By: /s/ Lawrence M. Kusch  
Name: Lawrence M. Kusch  
Title: Vice President

[Signature page to the Third Supplemental Indenture – 2025 Notes]

**TRANSDIGM INC.,**  
**TRANSDIGM GROUP INCORPORATED,**  
**THE GUARANTORS NAMED HEREIN,**  
AND  
**THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.,**  
as Trustee

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**FOURTH SUPPLEMENTAL INDENTURE**

Dated as of July 8, 2016  
to  
Indenture  
Dated as of May 14, 2015  
by and among  
**TRANSDIGM INC.,**  
**TRANSDIGM GROUP INCORPORATED,**  
**THE GUARANTORS NAMED THEREIN,**  
AND  
**THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.,**  
as Trustee

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**6.500% Senior Subordinated Notes due 2025**  
**of TransDigm Inc.**



This **FOURTH SUPPLEMENTAL INDENTURE** (this “**Supplemental Indenture**”), dated as of July 8, 2016, by and among ILC Holdings, Inc., a Delaware corporation (“**ILC Holdings**”), ILC Industries, LLC, a Delaware limited liability company (“**ILC Industries**”), Data Device Corporation, a Delaware corporation (“**DDC**”), Beta Transformer Technology Corporation, a New York corporation (“**Beta Corporation**”), and Beta Transformer Technology LLC, a Delaware limited liability company (“**Beta LLC**”) and, together with ILC Holdings, ILC Industries, DDC and Beta Corporation, the “**Guaranteeing Subsidiaries**”), TransDigm Inc., a Delaware corporation (the “**Company**”), TransDigm Group Incorporated, a Delaware corporation (“**TD Group**”), Adams Rite Aerospace, Inc., a California corporation (“**Adams Rite**”), MarathonNorco Aerospace, Inc., a Delaware corporation (“**Marathon**”), Champion Aerospace LLC, a Delaware limited liability company (“**Champion**”), Avionic Instruments LLC, a Delaware limited liability company (“**Avionic**”), Skurka Aerospace Inc., a Delaware corporation (“**Skurka**”), CDA InterCorp LLC, a Florida limited liability company (“**CDA**”), Aviation Technologies, Inc., a Delaware corporation (“**ATI**”), AvtechTye, Inc., a Washington corporation (“**Avtech**”), Transicoil LLC, a Delaware limited liability company (“**Transicoil**”), AeroControlex Group, Inc., a Delaware corporation (“**AeroControlex**”), Bruce Aerospace Inc., a Delaware corporation (“**Bruce Aerospace**”), CEF Industries, LLC, a Delaware limited liability company (“**CEF**”), Acme Aerospace, Inc., a Delaware corporation (“**Acme**”), Dukes Aerospace, Inc., a Delaware corporation (“**Dukes**”), Semco Instruments, Inc., a Delaware corporation, (“**Semco**”), Hartwell Corporation, a California corporation (“**Hartwell**”), McKechnie Aerospace DE, Inc., a Delaware corporation (“**McKechnie Aerospace DE**”), McKechnie Aerospace Holdings, Inc., a Delaware corporation (“**McKechnie Aerospace Holdings**”), McKechnie Aerospace Investments, Inc., a Delaware corporation (“**McKechnie Aerospace Investments**”), McKechnie Aerospace US LLC, a Delaware limited liability company (“**McKechnie Aerospace US**”), Texas Rotronics, Inc., a Texas corporation (“**Rotronics**”), Electromech Technologies LLC (formerly Western Sky Industries, LLC), a Delaware limited liability company (“**Electromech**”), Schneller LLC, a Delaware limited liability company (“**Schneller**”), HARCO LLC (formerly Harco Laboratories, Incorporated), a Connecticut limited liability company (“**HARCO**”), AmSafe Global Holdings, Inc., a Delaware corporation (“**AmSafe Global**”), Bridport Holdings, Inc., a Delaware corporation (“**Bridport Holdings**”), AmSafe, Inc., a Delaware corporation (“**AmSafe Inc.**”), Shield Restraint Systems, Inc. (formerly AmSafe Commercial Products, Inc.), a Delaware corporation (“**Shield**”), Bridport-Air Carrier, Inc., a Washington corporation (“**Bridport-Air**”), Bridport Erie Aviation, Inc., a Delaware corporation (“**Bridport Erie**”), Arkwin Industries, Inc., a New York corporation (“**Arkwin**”), Whippany Actuation Systems, LLC, a Delaware limited liability company (“**Whippany**”), Aerosonic LLC, a Delaware limited liability company (“**Aerosonic**”), Avionics Specialties, Inc., a Virginia corporation (“**Avionics Specialties**”), Airborne Global, Inc., a Delaware corporation (“**Airborne Global**”), Airborne Holdings, Inc., a Delaware Corporation (“**Airborne Holdings**”), Airborne Acquisition, Inc., a Delaware corporation (“**Airborne Acquisitions**”), Airborne Systems NA Inc., a Delaware corporation (“**Airborne Systems NA**”), Airborne Systems North America Inc., a Delaware corporation (“**Airborne Systems North America**”), Airborne Systems North America of CA Inc., a Delaware corporation (“**Airborne Systems North America CA**”), Airborne Systems North America of NJ Inc., a New Jersey corporation (“**Airborne Systems North America NJ**”), Telair US LLC, a Delaware limited liability company (“**Telair US**”), Telair International LLC, a Delaware limited liability company (“**Telair International**”), Pexco Aerospace, Inc., a Delaware corporation (“**Pexco Aerospace**”), PneuDrualics, Inc., a California corporation (“**PneuDrualics**”) and Breeze-Eastern LLC, a Delaware limited liability company (collectively with TD Group, Adams Rite, Marathon, Champion, Avionic, Skurka, CDA, ATI, Avtech, Transicoil, AeroControlex, Bruce Aerospace, CEF, Acme, Dukes, Semco, Hartwell, McKechnie Aerospace DE, McKechnie Aerospace Holdings, McKechnie Aerospace Investments, McKechnie Aerospace US, Rotronics, Electromech, Schneller, HARCO, AmSafe Global, Bridport Holdings, AmSafe Inc., Shield, Bridport-Air, Bridport Erie, Arkwin, Whippany, Aerosonic, Avionics Specialties, Airborne Global, Airborne Holdings, Airborne Acquisitions, Airborne Systems NA, Airborne Systems North America, Airborne Systems North America CA, Airborne Systems North America NJ, Telair US, Telair International, Pexco Aerospace and PneuDrualics, the “**Existing Guarantors**”), and The Bank of New York Mellon Trust Company, N.A., as trustee (the “**Trustee**”) under the Indenture referred to below. Capitalized terms used herein and not otherwise defined shall have the meaning assigned to them in the Indenture.

**WITNESSETH:**

**WHEREAS**, the Company and the Existing Guarantors have heretofore executed and delivered to the Trustee an indenture, dated as of May 14, 2015 (as supplemented by the First Supplemental Indenture thereto, dated as of June 12, 2015, the Second Supplemental Indenture thereto, dated as of August 28, 2015 and the Third Supplemental Indenture thereto, dated as of April 1, 2016, the “*Indenture*”), providing for the issuance by the Company of 6.500% Senior Subordinated Notes due 2025 (the “*Notes*”) and the guarantees thereof by each of the Existing Guarantors;

**WHEREAS**, the Indenture provides that under certain circumstances described therein, newly created or acquired Domestic Restricted Subsidiaries shall execute and deliver to the Trustee a supplemental indenture to the Indenture providing for a senior subordinated guarantee of payment of the Notes by such Domestic Restricted Subsidiary (the “*Guarantee*”);

**WHEREAS**, all things necessary to make this Supplemental Indenture the legal, valid and binding obligation of the Company, the Existing Guarantors and the Guarantoring Subsidiaries have been done; and

**WHEREAS**, pursuant to Section 9.01(g) of the Indenture, the Trustee is authorized to execute and deliver this Supplemental Indenture without the consent of the Holders of the Notes.

**NOW, THEREFORE**, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, each of the Guarantoring Subsidiaries covenants and agrees for the equal and ratable benefit of the Holders of the Notes as follows:

1. **CAPITALIZED TERMS.** Capitalized terms used herein without definition shall have the meanings assigned to them in the Indenture.
2. **GUARANTEE, ETC.** Each of the Guarantoring Subsidiaries hereby agrees that from and after the date hereof it shall be a Guarantor under the Indenture and be bound by the terms thereof applicable to Guarantors and shall be entitled to all of the rights and subject to all the obligations of a Guarantor thereunder.
3. **RATIFICATION OF INDENTURE; SUPPLEMENTAL INDENTURE PART OF INDENTURE.** The Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every holder of Notes heretofore or hereafter authenticated and delivered shall be bound hereby.
4. **EXECUTION AND DELIVERY.** Each of the Guarantoring Subsidiaries agrees that the Guarantee granted by it pursuant to the terms hereof shall remain in full force and effect notwithstanding any failure to endorse on each Note a notation of such Guarantee.
5. **NO RECOURSE AGAINST OTHERS.** No past, present or future director, officer, employee, incorporator, stockholder or agent of any of the Guarantoring Subsidiaries (or any successor entity) (other than the Company or the Existing Guarantors), as such, shall have any liability for any obligations of the Company, TD Group, the Guarantoring Subsidiaries or any other Guarantor under the Notes, any Guarantee, the Indenture or this Supplemental Indenture or for any claim based on, in respect of, or by reason of, such obligations or their creation. Each Holder of the Notes by accepting a Note waives and releases all such liability. The waiver and release are part of the consideration for issuance of the Notes.
6. **NEW YORK LAW TO GOVERN.** THE INTERNAL LAW OF THE STATE OF NEW YORK SHALL GOVERN AND BE USED TO CONSTRUE THIS SUPPLEMENTAL INDENTURE AND THE GUARANTEE GRANTED HEREUNDER WITHOUT GIVING EFFECT TO APPLICABLE PRINCIPLES OF CONFLICTS OF LAW TO THE EXTENT THAT THE APPLICATION OF THE LAWS OF ANOTHER JURISDICTION WOULD BE REQUIRED THEREBY.

7. **COUNTERPART ORIGINALS.** The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.
8. **EFFECT OF HEADINGS.** The Section headings have been inserted for convenience of reference only, are not to be considered part of this Supplemental Indenture and shall in no way modify or restrict any of the terms or provisions hereof.
9. **THE TRUSTEE.** The Trustee shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Supplemental Indenture or for or in respect of the recitals contained herein, all of which recitals are made solely by the Guaranteeing Subsidiaries, the Existing Guarantors and the Company.

*[Signature page follows.]*

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed as of the date hereof.

TRANSDIGM INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Executive Vice President and Chief Financial Officer

TRANSDIGM GROUP INCORPORATED

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Executive Vice President and Chief  
Financial Officer

ACME AEROSPACE, INC.  
ADAMS RITE AEROSPACE, INC.  
AIRBORNE SYSTEMS NORTH AMERICA OF NJ INC.  
AMSAFE GLOBAL HOLDINGS, INC.  
AMSAFE, INC.  
ARKWIN INDUSTRIES, INC.  
AVTECHTYEE, INC.  
BRUCE AEROSPACE INC.  
DUKES AEROSPACE, INC.  
ELECTROMECH TECHNOLOGIES LLC

By: McKechnie Aerospace Investments, Inc., its sole

member

HARTWELL CORPORATION  
MARATHONNORCO AEROSPACE, INC.  
MCKECHNIE AEROSPACE INVESTMENTS, INC.  
PEXCO AEROSPACE, INC.  
PNEUDRAULICS, INC.  
SHIELD RESTRAINT SYSTEMS, INC.  
SEMCO INSTRUMENTS, INC.  
SKURKA AEROSPACE INC.  
TEXAS ROTRONICS, INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Chief Executive Officer

[Signature page to the Fourth Supplemental Indenture – 2025 Notes]

AEROCONTROLEX GROUP, INC.  
AIRBORNE ACQUISITION, INC.  
AIRBORNE GLOBAL, INC.  
AIRBORNE HOLDINGS, INC.  
AVIATION TECHNOLOGIES, INC.  
BRIDPORT HOLDINGS, INC.  
BRIDPORT-AIR CARRIER, INC.  
MCKECHNIE AEROSPACE DE, INC.  
MCKECHNIE AEROSPACE US LLC

By: McKechnie Aerospace DE, Inc., its sole member

TRANSICOIL LLC

By: Aviation Technologies, Inc., its sole member

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: President and Chief Executive Officer

AEROSONIC LLC  
AVIONIC INSTRUMENTS LLC  
BREEZE-EASTERN LLC  
CDA INTERCORP LLC  
CEF INDUSTRIES, LLC  
CHAMPION AEROSPACE LLC  
HARCO LLC  
SCHNELLER LLC  
TELAIR US LLC  
WHIPPANY ACTUATION SYSTEMS, LLC

By: TransDigm Inc., its sole member

TELAIR INTERNATIONAL LLC

By: Telair US LLC, its sole member

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Executive Vice President and Chief Financial Officer

AIRBORNE SYSTEMS NA INC.  
AIRBORNE SYSTEMS NORTH AMERICA INC.  
AVIONICS SPECIALTIES, INC.  
MCKECHNIE AEROSPACE HOLDINGS, INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: President

BRIDPORT ERIE AVIATION, INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Vice President and Treasurer

AIRBORNE SYSTEMS NORTH AMERICA OF CA INC.

By: /s/ Sean P. Maroney  
Name: Sean P. Maroney  
Title: Treasurer

[Signature page to the Fourth Supplemental Indenture – 2025 Notes]

BETA TRANSFORMER TECHNOLOGY CORPORATION  
DATA DEVICE CORPORATION  
ILC HOLDINGS, INC.  
ILC INDUSTRIES, LLC

By: ILC Holdings, Inc., its sole member

By: /s/ Halle F. Terrion  
Name: Halle F. Terrion  
Title: Secretary

BETA TRANSFORMER TECHNOLOGY LLC

By: /s/ Vincent Buffa  
Name: Vincent Buffa  
Title: Manager

[Signature page to the Fourth Supplemental Indenture – 2025 Notes]

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., AS TRUSTEE

By: /s/ Lawrence M. Kusch  
Name: Lawrence M. Kusch  
Title: Vice President

[Signature page to the Fourth Supplemental Indenture – 2025 Notes]

**TRANSDIGM INC.,**  
**TRANSDIGM GROUP INCORPORATED,**  
**THE GUARANTORS NAMED HEREIN,**  
AND  
**THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.,**  
as Trustee

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**FIFTH SUPPLEMENTAL INDENTURE**

Dated as of October 28, 2016

to

Indenture

Dated as of May 14, 2015

by and among

**TRANSDIGM INC.,**  
**TRANSDIGM GROUP INCORPORATED,**  
**THE GUARANTORS NAMED THEREIN,**  
AND  
**THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.,**  
as Trustee

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**6.500% Senior Subordinated Notes due 2025**  
**of TransDigm Inc.**



This **FIFTH SUPPLEMENTAL INDENTURE** (this “**Supplemental Indenture**”), dated as of October 28, 2016, by and among Young & Franklin Inc., a Delaware corporation (“**Young & Franklin**”), Tactair Fluid Controls, Inc., a New York corporation (“**Tactair**”), Johnson Liverpool LLC, a Delaware limited liability company (together with Young & Franklin and Tactair, the “**Guaranteeing Subsidiaries**”), TransDigm Inc., a Delaware corporation (the “**Company**”), TransDigm Group Incorporated, a Delaware corporation (“**TD Group**”), Adams Rite Aerospace, Inc., a California corporation (“**Adams Rite**”), MarathonNorco Aerospace, Inc., a Delaware corporation (“**Marathon**”), Champion Aerospace LLC, a Delaware limited liability company (“**Champion**”), Avionic Instruments LLC, a Delaware limited liability company (“**Avionic**”), Skurka Aerospace Inc., a Delaware corporation (“**Skurka**”), CDA InterCorp LLC, a Florida limited liability company (“**CDA**”), Aviation Technologies, Inc., a Delaware corporation (“**ATI**”), AvtechTyee, Inc., a Washington corporation (“**Avtech**”), Transicoil LLC, a Delaware limited liability company (“**Transicoil**”), AeroControlex Group, Inc., a Delaware corporation (“**AeroControlex**”), Bruce Aerospace Inc., a Delaware corporation (“**Bruce Aerospace**”), CEF Industries, LLC, a Delaware limited liability company (“**CEF**”), Acme Aerospace, Inc., a Delaware corporation (“**Acme**”), Dukes Aerospace, Inc., a Delaware corporation (“**Dukes**”), Semco Instruments, Inc., a Delaware corporation, (“**Semco**”), Hartwell Corporation, a California corporation (“**Hartwell**”), McKechnie Aerospace DE, Inc., a Delaware corporation (“**McKechnie Aerospace DE**”), McKechnie Aerospace Holdings, Inc., a Delaware corporation (“**McKechnie Aerospace Holdings**”), McKechnie Aerospace Investments, Inc., a Delaware corporation (“**McKechnie Aerospace Investments**”), McKechnie Aerospace US LLC, a Delaware limited liability company (“**McKechnie Aerospace US**”), Texas Rotronics, Inc., a Texas corporation (“**Rotronics**”), Electromech Technologies LLC (formerly Western Sky Industries, LLC), a Delaware limited liability company (“**Electromech**”), Schneller LLC, a Delaware limited liability company (“**Schneller**”), HARCO LLC (formerly Harco Laboratories, Incorporated), a Connecticut limited liability company (“**HARCO**”), AmSafe Global Holdings, Inc., a Delaware corporation (“**AmSafe Global**”), Bridport Holdings, Inc., a Delaware corporation (“**Bridport Holdings**”), AmSafe, Inc., a Delaware corporation (“**AmSafe Inc.**”), Shield Restraint Systems, Inc. (formerly AmSafe Commercial Products, Inc.), a Delaware corporation (“**Shield**”), Bridport-Air Carrier, Inc., a Washington corporation (“**Bridport-Air**”), Bridport Erie Aviation, Inc., a Delaware corporation (“**Bridport Erie**”), Arkwin Industries, Inc., a New York corporation (“**Arkwin**”), Whippany Actuation Systems, LLC, a Delaware limited liability company (“**Whippany**”), Aerosonic LLC, a Delaware limited liability company (“**Aerosonic**”), Avionics Specialties, Inc., a Virginia corporation (“**Avionics Specialties**”), Airborne Global, Inc., a Delaware corporation (“**Airborne Global**”), Airborne Holdings, Inc., a Delaware Corporation (“**Airborne Holdings**”), Airborne Acquisition, Inc., a Delaware corporation (“**Airborne Acquisitions**”), Airborne Systems NA Inc., a Delaware corporation (“**Airborne Systems NA**”), Airborne Systems North America Inc., a Delaware corporation (“**Airborne Systems North America**”), Airborne Systems North America of CA Inc., a Delaware corporation (“**Airborne Systems North America CA**”), Airborne Systems North America of NJ Inc., a New Jersey corporation (“**Airborne Systems North America NJ**”), Telair US LLC, a Delaware limited liability company (“**Telair US**”), Telair International LLC, a Delaware limited liability company (“**Telair International**”), Pexco Aerospace, Inc., a Delaware corporation (“**Pexco Aerospace**”), PneuDraulics, Inc., a California corporation (“**PneuDraulics**”), Breeze-Eastern LLC, a Delaware limited liability company (“**Breeze-Eastern**”), ILC Holdings, Inc., a Delaware corporation (“**ILC Holdings**”), ILC Industries, LLC, a Delaware limited liability company (“**ILC Industries**”), Data Device Corporation, a Delaware corporation (“**DDC**”), Beta Transformer Technology Corporation, a New York corporation (“**Beta Corporation**”), and Beta Transformer Technology LLC, a Delaware limited liability company (collectively with TD Group, Adams Rite, Marathon, Champion, Avionic, Skurka, CDA, ATI, Avtech, Transicoil, AeroControlex, Bruce Aerospace, CEF, Acme, Dukes, Semco, Hartwell, McKechnie Aerospace DE, McKechnie Aerospace Holdings, McKechnie Aerospace Investments, McKechnie Aerospace US, Rotronics, Electromech, Schneller, HARCO, AmSafe Global, Bridport Holdings, AmSafe Inc., Shield, Bridport-Air, Bridport Erie, Arkwin, Whippany, Aerosonic, Avionics Specialties, Airborne Global, Airborne Holdings, Airborne Acquisitions, Airborne Systems NA, Airborne Systems North America, Airborne Systems North America CA, Airborne Systems North America NJ, Telair US, Telair International, Pexco Aerospace, PneuDraulics, Breeze-Eastern, ILC Holdings, ILC Industries, DDC and Beta Corporation, the “**Existing Guarantors**”), and The Bank of New York Mellon Trust Company, N.A., as trustee (the “**Trustee**”) under the Indenture referred to below. Capitalized terms used herein and not otherwise defined shall have the meaning assigned to them in the Indenture.

**WITNESSETH:**

**WHEREAS**, the Company and the Existing Guarantors have heretofore executed and delivered to the Trustee an indenture, dated as of May 14, 2015 (as supplemented by the First Supplemental Indenture thereto, dated as of June 12, 2015, the Second Supplemental Indenture thereto, dated as of August 28, 2015, the Third Supplemental Indenture thereto, dated as of April 1, 2016, and the Fourth Supplemental Indenture thereto, dated as of July 8, 2016, the "**Indenture**"), providing for the issuance by the Company of 6.500% Senior Subordinated Notes due 2025 (the "**Notes**") and the guarantees thereof by each of the Existing Guarantors;

**WHEREAS**, the Indenture provides that under certain circumstances described therein, newly created or acquired Domestic Restricted Subsidiaries shall execute and deliver to the Trustee a supplemental indenture to the Indenture providing for a senior subordinated guarantee of payment of the Notes by such Domestic Restricted Subsidiary (the "**Guarantee**");

**WHEREAS**, all things necessary to make this Supplemental Indenture the legal, valid and binding obligation of the Company, the Existing Guarantors and the Guaranteeing Subsidiaries have been done; and

**WHEREAS**, pursuant to Section 9.01(g) of the Indenture, the Trustee is authorized to execute and deliver this Supplemental Indenture without the consent of the Holders of the Notes.

**NOW, THEREFORE**, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, each of the Guaranteeing Subsidiaries covenants and agrees for the equal and ratable benefit of the Holders of the Notes as follows:

1. **CAPITALIZED TERMS.** Capitalized terms used herein without definition shall have the meanings assigned to them in the Indenture.
2. **GUARANTEE, ETC.** Each of the Guaranteeing Subsidiaries hereby agrees that from and after the date hereof it shall be a Guarantor under the Indenture and be bound by the terms thereof applicable to Guarantors and shall be entitled to all of the rights and subject to all the obligations of a Guarantor thereunder.
3. **RATIFICATION OF INDENTURE; SUPPLEMENTAL INDENTURE PART OF INDENTURE.** The Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every holder of Notes heretofore or hereafter authenticated and delivered shall be bound hereby.
4. **EXECUTION AND DELIVERY.** Each of the Guaranteeing Subsidiaries agrees that the Guarantee granted by it pursuant to the terms hereof shall remain in full force and effect notwithstanding any failure to endorse on each Note a notation of such Guarantee.
5. **NO RECOURSE AGAINST OTHERS.** No past, present or future director, officer, employee, incorporator, stockholder or agent of any of the Guaranteeing Subsidiaries (or any successor entity) (other than the Company or the Existing Guarantors), as such, shall have any liability for any obligations of the Company, TD Group, the Guaranteeing Subsidiaries or any other Guarantor under the Notes, any Guarantee, the Indenture or this Supplemental Indenture or for any claim based on, in respect of, or by reason of, such obligations or their creation. Each Holder of the Notes by accepting a Note waives and releases all such liability. The waiver and release are part of the consideration for issuance of the Notes.
6. **NEW YORK LAW TO GOVERN.** THE INTERNAL LAW OF THE STATE OF NEW YORK SHALL GOVERN AND BE USED TO CONSTRUE THIS SUPPLEMENTAL INDENTURE AND THE GUARANTEE GRANTED HEREUNDER WITHOUT GIVING EFFECT TO APPLICABLE PRINCIPLES OF CONFLICTS OF LAW TO THE EXTENT THAT THE APPLICATION OF THE LAWS OF ANOTHER JURISDICTION WOULD BE REQUIRED THEREBY.

7. **COUNTERPART ORIGINALS.** The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.
8. **EFFECT OF HEADINGS.** The Section headings have been inserted for convenience of reference only, are not to be considered part of this Supplemental Indenture and shall in no way modify or restrict any of the terms or provisions hereof.
9. **THE TRUSTEE.** The Trustee shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Supplemental Indenture or for or in respect of the recitals contained herein, all of which recitals are made solely by the Guaranteeing Subsidiaries, the Existing Guarantors and the Company.

*[Signature page follows.]*

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed as of the date hereof.

TRANSDIGM INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Executive Vice President and Chief Financial Officer

TRANSDIGM GROUP INCORPORATED

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Executive Vice President and Chief Financial Officer

ACME AEROSPACE, INC.  
ADAMS RITE AEROSPACE, INC.  
AIRBORNE SYSTEMS NORTH AMERICA OF NJ INC.  
AMSAFE GLOBAL HOLDINGS, INC.  
AMSAFE, INC.  
ARKWIN INDUSTRIES, INC.  
AVTECHTYEE, INC.  
BRUCE AEROSPACE INC.  
DUKES AEROSPACE, INC.  
ELECTROMECH TECHNOLOGIES LLC

member

HARTWELL CORPORATION  
JOHNSON LIVERPOOL LLC

By: McKechnie Aerospace Investments, Inc., its sole

By: Young & Franklin Inc., its sole member

MARATHONNORCO AEROSPACE, INC.  
MCKECHNIE AEROSPACE INVESTMENTS, INC.  
PEXCO AEROSPACE, INC.  
PNEUDRAULICS, INC.  
SHIELD RESTRAINT SYSTEMS, INC.  
SEMCO INSTRUMENTS, INC.  
SKURKA AEROSPACE INC.  
TACTAIR FLUID CONTROLS, INC.  
TEXAS ROTRONICS, INC.  
YOUNG & FRANKLIN INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Chief Executive Officer

[Signature page to the Fifth Supplemental Indenture – 2025 Notes]

AEROCONTROLEX GROUP, INC.  
AIRBORNE ACQUISITION, INC.  
AIRBORNE GLOBAL, INC.  
AIRBORNE HOLDINGS, INC.  
AVIATION TECHNOLOGIES, INC.  
BRIDPORT HOLDINGS, INC.  
BRIDPORT-AIR CARRIER, INC.  
MCKECHNIE AEROSPACE DE, INC.  
MCKECHNIE AEROSPACE US LLC

By: McKechnie Aerospace DE, Inc., its sole member

TRANSICOIL LLC

By: Aviation Technologies, Inc., its sole member

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: President and Chief Executive Officer

AEROSONIC LLC  
AVIONIC INSTRUMENTS LLC  
BREEZE-EASTERN LLC  
CDA INTERCORP LLC  
CEF INDUSTRIES, LLC  
CHAMPION AEROSPACE LLC  
HARCO LLC  
SCHNELLER LLC  
TELAIR US LLC  
WHIPPANY ACTUATION SYSTEMS, LLC

By: TransDigm Inc., its sole member

TELAIR INTERNATIONAL LLC

By: Telair US LLC, its sole member

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Executive Vice President and Chief Financial Officer

AIRBORNE SYSTEMS NA INC.  
AIRBORNE SYSTEMS NORTH AMERICA INC.  
AVIONICS SPECIALTIES, INC.  
MCKECHNIE AEROSPACE HOLDINGS, INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: President

BRIDPORT ERIE AVIATION, INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Vice President and Treasurer

AIRBORNE SYSTEMS NORTH AMERICA OF CA INC.

By: /s/ Sean P. Maroney  
Name: Sean P. Maroney  
Title: Treasurer

[Signature page to the Fifth Supplemental Indenture – 2025 Notes]

BETA TRANSFORMER TECHNOLOGY CORPORATION  
BETA TRANSFORMER TECHNOLOGY LLC

By: Beta Transformer Technology Corporation, its

sole

member  
DATA DEVICE CORPORATION  
ILC HOLDINGS, INC.  
ILC INDUSTRIES, LLC

By: ILC Holdings, Inc., its sole member

By: /s/ Halle F. Terrior  
Name: Halle F. Terrior  
Title: Secretary

[Signature page to the Fifth Supplemental Indenture – 2025 Notes]

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., AS TRUSTEE

By: /s/ Lawrence M. Kusch  
Name: Lawrence M. Kusch  
Title: Vice President

[Signature page to the Fifth Supplemental Indenture – 2025 Notes]

**TRANSDIGM INC.,**  
**TRANSDIGM GROUP INCORPORATED,**  
**THE GUARANTORS NAMED HEREIN,**  
AND  
**THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.,**  
as Trustee

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**FIRST SUPPLEMENTAL INDENTURE**

Dated as of July 8, 2016  
to  
Indenture  
Dated as of June 9, 2016  
by and among  
**TRANSDIGM INC.,**  
**TRANSDIGM GROUP INCORPORATED,**  
**THE GUARANTORS NAMED THEREIN,**  
AND  
**THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.,**  
as Trustee

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**6.375% Senior Subordinated Notes due 2026**  
**of TransDigm Inc.**



This **FIRST SUPPLEMENTAL INDENTURE** (this “**Supplemental Indenture**”), dated as of July 8, 2016, by and among ILC Holdings, Inc., a Delaware corporation (“**ILC Holdings**”), ILC Industries, LLC, a Delaware limited liability company (“**ILC Industries**”), Data Device Corporation, a Delaware corporation (“**DDC**”), Beta Transformer Technology Corporation, a New York corporation (“**Beta Corporation**”), and Beta Transformer Technology LLC, a Delaware limited liability company (“**Beta LLC**” and, together with ILC Holdings, ILC Industries, DDC and Beta Corporation the “**Guaranteeing Subsidiaries**”), TransDigm Inc., a Delaware corporation (the “**Company**”), TransDigm Group Incorporated, a Delaware corporation (“**TD Group**”), Adams Rite Aerospace, Inc., a California corporation (“**Adams Rite**”), MarathonNorco Aerospace, Inc., a Delaware corporation (“**Marathon**”), Champion Aerospace LLC, a Delaware limited liability company (“**Champion**”), Avionic Instruments LLC, a Delaware limited liability company (“**Avionic**”), Skurka Aerospace Inc., a Delaware corporation (“**Skurka**”), CDA InterCorp LLC, a Florida limited liability company (“**CDA**”), Aviation Technologies, Inc., a Delaware corporation (“**ATT**”), AvtechTyeec, Inc., a Washington corporation (“**Avtech**”), Transicoil LLC, a Delaware limited liability company (“**Transicoil**”), AeroControlex Group, Inc., a Delaware corporation (“**AeroControlex**”), Bruce Aerospace Inc., a Delaware corporation (“**Bruce Aerospace**”), CEF Industries, LLC, a Delaware limited liability company (“**CEF**”), Acme Aerospace, Inc., a Delaware corporation (“**Acme**”), Dukes Aerospace, Inc., a Delaware corporation (“**Dukes**”), Semco Instruments, Inc., a Delaware corporation, (“**Semco**”), Hartwell Corporation, a California corporation (“**Hartwell**”), McKechnie Aerospace DE, Inc., a Delaware corporation (“**McKechnie Aerospace DE**”), McKechnie Aerospace Holdings, Inc., a Delaware corporation (“**McKechnie Aerospace Holdings**”), McKechnie Aerospace Investments, Inc., a Delaware corporation (“**McKechnie Aerospace Investments**”), McKechnie Aerospace US LLC, a Delaware limited liability company (“**McKechnie Aerospace US**”), Texas Rotronics, Inc., a Texas corporation (“**Rotronics**”), Electromech Technologies LLC (formerly Western Sky Industries, LLC), a Delaware limited liability company (“**Electromech**”), Schneller LLC, a Delaware limited liability company (“**Schneller**”), HARCO LLC (formerly Harco Laboratories, Incorporated), a Connecticut limited liability company (“**HARCO**”), AmSafe Global Holdings, Inc., a Delaware corporation (“**AmSafe Global**”), Bridport Holdings, Inc., a Delaware corporation (“**Bridport Holdings**”), AmSafe, Inc., a Delaware corporation (“**AmSafe Inc.**”), Shield Restraint Systems, Inc. (formerly AmSafe Commercial Products, Inc.), a Delaware corporation (“**Shield**”), Bridport-Air Carrier, Inc., a Washington corporation (“**Bridport-Air**”), Bridport Erie Aviation, Inc., a Delaware corporation (“**Bridport Erie**”), Arkwin Industries, Inc., a New York corporation (“**Arkwin**”), Whippany Actuation Systems, LLC, a Delaware limited liability company (“**Whippany**”), Aerosonic LLC, a Delaware limited liability company (“**Aerosonic**”), Avionics Specialties, Inc., a Virginia corporation (“**Avionics Specialties**”), Airborne Global, Inc., a Delaware corporation (“**Airborne Global**”), Airborne Holdings, Inc., a Delaware Corporation (“**Airborne Holdings**”), Airborne Acquisition, Inc., a Delaware corporation (“**Airborne Acquisitions**”), Airborne Systems NA Inc., a Delaware corporation (“**Airborne Systems NA**”), Airborne Systems North America Inc., a Delaware corporation (“**Airborne Systems North America**”), Airborne Systems North America of CA Inc., a Delaware corporation (“**Airborne Systems North America CA**”), Airborne Systems North America of NJ Inc., a New Jersey corporation (“**Airborne Systems North America NJ**”), Telair US LLC, a Delaware limited liability company (“**Telair US**”), Telair International LLC, a Delaware limited liability company (“**Telair International**”), Pexco Aerospace, Inc., a Delaware corporation (“**Pexco Aerospace**”), PneuDrualics, Inc., a California corporation (“**PneuDrualics**”) and Breeze-Eastern LLC, a Delaware limited liability company (collectively with TD Group, Adams Rite, Marathon, Champion, Avionic, Skurka, CDA, ATI, Avtech, Transicoil, AeroControlex, Bruce Aerospace, CEF, Acme, Dukes, Semco, Hartwell, McKechnie Aerospace DE, McKechnie Aerospace Holdings, McKechnie Aerospace Investments, McKechnie Aerospace US, Rotronics, Electromech, Schneller, HARCO, AmSafe Global, Bridport Holdings, AmSafe Inc., Shield, Bridport-Air, Bridport Erie, Arkwin, Whippany, Aerosonic, Avionics Specialties, Airborne Global, Airborne Holdings, Airborne Acquisitions, Airborne Systems NA, Airborne Systems North America, Airborne Systems North America CA, Airborne Systems North America NJ, Telair US, Telair International, Pexco Aerospace and PneuDrualics, the “**Existing Guarantors**”), and The Bank of New York Mellon Trust Company, N.A., as trustee (the “**Trustee**”) under the Indenture referred to below. Capitalized terms used herein and not otherwise defined shall have the meaning assigned to them in the Indenture.

**WITNESSETH:**

**WHEREAS**, the Company and the Existing Guarantors have heretofore executed and delivered to the Trustee an indenture, dated as of June 9, 2016 (the "**Indenture**"), providing for the issuance by the Company of 6.375% Senior Subordinated Notes due 2026 (the "**Notes**") and the guarantees thereof by each of the Existing Guarantors;

**WHEREAS**, the Indenture provides that under certain circumstances described therein, newly created or acquired Domestic Restricted Subsidiaries shall execute and deliver to the Trustee a supplemental indenture to the Indenture providing for a senior subordinated guarantee of payment of the Notes by such Domestic Restricted Subsidiary (the "**Guarantee**");

**WHEREAS**, all things necessary to make this Supplemental Indenture the legal, valid and binding obligation of the Company, the Existing Guarantors and the Guaranteeing Subsidiaries have been done; and

**WHEREAS**, pursuant to Section 9.01(g) of the Indenture, the Trustee is authorized to execute and deliver this Supplemental Indenture without the consent of the Holders of the Notes.

**NOW, THEREFORE**, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, each of the Guaranteeing Subsidiaries covenants and agrees for the equal and ratable benefit of the Holders of the Notes as follows:

1. **CAPITALIZED TERMS.** Capitalized terms used herein without definition shall have the meanings assigned to them in the Indenture.
2. **GUARANTEE, ETC.** Each of the Guaranteeing Subsidiaries hereby agrees that from and after the date hereof it shall be a Guarantor under the Indenture and be bound by the terms thereof applicable to Guarantors and shall be entitled to all of the rights and subject to all the obligations of a Guarantor thereunder.
3. **RATIFICATION OF INDENTURE; SUPPLEMENTAL INDENTURE PART OF INDENTURE.** The Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every holder of Notes heretofore or hereafter authenticated and delivered shall be bound hereby.
4. **EXECUTION AND DELIVERY.** Each of the Guaranteeing Subsidiaries agrees that the Guarantee granted by it pursuant to the terms hereof shall remain in full force and effect notwithstanding any failure to endorse on each Note a notation of such Guarantee.
5. **NO RECOURSE AGAINST OTHERS.** No past, present or future director, officer, employee, incorporator, stockholder or agent of any of the Guaranteeing Subsidiaries (or any successor entity) (other than the Company or the Existing Guarantors), as such, shall have any liability for any obligations of the Company, TD Group, the Guaranteeing Subsidiaries or any other Guarantor under the Notes, any Guarantee, the Indenture or this Supplemental Indenture or for any claim based on, in respect of, or by reason of, such obligations or their creation. Each Holder of the Notes by accepting a Note waives and releases all such liability. The waiver and release are part of the consideration for issuance of the Notes.
6. **NEW YORK LAW TO GOVERN.** THE INTERNAL LAW OF THE STATE OF NEW YORK SHALL GOVERN AND BE USED TO CONSTRUE THIS SUPPLEMENTAL INDENTURE AND THE GUARANTEE GRANTED HEREUNDER WITHOUT GIVING EFFECT TO APPLICABLE PRINCIPLES OF CONFLICTS OF LAW TO THE EXTENT THAT THE APPLICATION OF THE LAWS OF ANOTHER JURISDICTION WOULD BE REQUIRED THEREBY.

7. **COUNTERPART ORIGINALS.** The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.
8. **EFFECT OF HEADINGS.** The Section headings have been inserted for convenience of reference only, are not to be considered part of this Supplemental Indenture and shall in no way modify or restrict any of the terms or provisions hereof.
9. **THE TRUSTEE.** The Trustee shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Supplemental Indenture or for or in respect of the recitals contained herein, all of which recitals are made solely by the Guaranteeing Subsidiaries, the Existing Guarantors and the Company.

*[Signature page follows.]*

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed as of the date hereof.

TRANSDIGM INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Executive Vice President and Chief Financial Officer

TRANSDIGM GROUP INCORPORATED

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Executive Vice President and Chief  
Financial Officer

ACME AEROSPACE, INC.  
ADAMS RITE AEROSPACE, INC.  
AIRBORNE SYSTEMS NORTH AMERICA OF NJ INC.  
AMSAFE GLOBAL HOLDINGS, INC.  
AMSAFE, INC.  
ARKWIN INDUSTRIES, INC.  
AVTECHTYEE, INC.  
BRUCE AEROSPACE INC.  
DUKES AEROSPACE, INC.  
ELECTROMECH TECHNOLOGIES LLC

By: McKechnie Aerospace Investments, Inc., its sole

member

HARTWELL CORPORATION  
MARATHONNORCO AEROSPACE, INC.  
MCKECHNIE AEROSPACE INVESTMENTS, INC.  
PEXCO AEROSPACE, INC.  
PNEUDRAULICS, INC.  
SHIELD RESTRAINT SYSTEMS, INC.  
SEMCO INSTRUMENTS, INC.  
SKURKA AEROSPACE INC.  
TEXAS ROTRONICS, INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Chief Executive Officer

[Signature page to the First Supplemental Indenture – 2026 Notes]

AEROCONTROLEX GROUP, INC.  
AIRBORNE ACQUISITION, INC.  
AIRBORNE GLOBAL, INC.  
AIRBORNE HOLDINGS, INC.  
AVIATION TECHNOLOGIES, INC.  
BRIDPORT HOLDINGS, INC.  
BRIDPORT-AIR CARRIER, INC.  
MCKECHNIE AEROSPACE DE, INC.  
MCKECHNIE AEROSPACE US LLC

By: McKechnie Aerospace DE, Inc., its sole member

TRANSICOIL LLC

By: Aviation Technologies, Inc., its sole member

By: /s/ Terrance M. Paradie

Name: Terrance M. Paradie

Title: President and Chief Executive Officer

AEROSONIC LLC  
AVIONIC INSTRUMENTS LLC  
BREEZE-EASTERN LLC  
CDA INTERCORP LLC  
CEF INDUSTRIES, LLC  
CHAMPION AEROSPACE LLC  
HARCO LLC  
SCHNELLER LLC  
TELAIR US LLC  
WHIPPANY ACTUATION SYSTEMS, LLC

By: TransDigm Inc., its sole member

TELAIR INTERNATIONAL LLC

By: Telair US LLC, its sole member

By: /s/ Terrance M. Paradie

Name: Terrance M. Paradie

Title: Executive Vice President and Chief Financial Officer

AIRBORNE SYSTEMS NA INC.  
AIRBORNE SYSTEMS NORTH AMERICA INC.  
AVIONICS SPECIALTIES, INC.  
MCKECHNIE AEROSPACE HOLDINGS, INC.

By: /s/ Terrance M. Paradie

Name: Terrance M. Paradie

Title: President

BRIDPORT ERIE AVIATION, INC.

By: /s/ Terrance M. Paradie

Name: Terrance M. Paradie

Title: Vice President and Treasurer

AIRBORNE SYSTEMS NORTH AMERICA OF CA INC.

By: /s/ Sean P. Maroney

Name: Sean P. Maroney

Title: Treasurer

[Signature page to the First Supplemental Indenture – 2026 Notes]

BETA TRANSFORMER TECHNOLOGY CORPORATION  
DATA DEVICE CORPORATION  
ILC HOLDINGS, INC.  
ILC INDUSTRIES, LLC

By: ILC Holdings, Inc., its sole member

By: /s/ Halle F. Terrion  
Name: Halle F. Terrion  
Title: Secretary

BETA TRANSFORMER TECHNOLOGY LLC

By: /s/ Vincent Buffa  
Name: Vincent Buffa  
Title: Manager

[Signature page to the First Supplemental Indenture – 2026 Notes]

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., AS TRUSTEE

By: /s/ Lawrence M. Kusch  
Name: Lawrence M. Kusch  
Title: Vice President

[Signature page to the First Supplemental Indenture – 2026 Notes]

**TRANSDIGM INC.,**  
**TRANSDIGM GROUP INCORPORATED,**  
**THE GUARANTORS NAMED HEREIN,**  
AND  
**THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.,**  
as Trustee

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**SECOND SUPPLEMENTAL INDENTURE**

Dated as of October 28, 2016  
to  
Indenture  
Dated as of June 9, 2016  
by and among  
**TRANSDIGM INC.,**  
**TRANSDIGM GROUP INCORPORATED,**  
**THE GUARANTORS NAMED THEREIN,**  
AND  
**THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.,**  
as Trustee

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**6.375% Senior Subordinated Notes due 2026**  
**of TransDigm Inc.**



This **SECOND SUPPLEMENTAL INDENTURE** (this “**Supplemental Indenture**”), dated as of October 28, 2016, by and among Young & Franklin Inc., a New York corporation (“**Young & Franklin**”), Tactair Fluid Controls, Inc., a New York corporation (“**Tactair**”), and Johnson Liverpool LLC, a Delaware limited liability company (together with Young & Franklin and Tactair, the “**Guaranteeing Subsidiaries**”), TransDigm Inc., a Delaware corporation (the “**Company**”), TransDigm Group Incorporated, a Delaware corporation (“**TD Group**”), Adams Rite Aerospace, Inc., a California corporation (“**Adams Rite**”), MarathonNorco Aerospace, Inc., a Delaware corporation (“**Marathon**”), Champion Aerospace LLC, a Delaware limited liability company (“**Champion**”), Avionic Instruments LLC, a Delaware limited liability company (“**Avionic**”), Skurka Aerospace Inc., a Delaware corporation (“**Skurka**”), CDA InterCorp LLC, a Florida limited liability company (“**CDA**”), Aviation Technologies, Inc., a Delaware corporation (“**ATP**”), AvtechTyee, Inc., a Washington corporation (“**Avtech**”), Transcoil LLC, a Delaware limited liability company (“**Transcoil**”), AeroControlex Group, Inc., a Delaware corporation (“**AeroControlex**”), Bruce Aerospace Inc., a Delaware corporation (“**Bruce Aerospace**”), CEF Industries, LLC, a Delaware limited liability company (“**CEF**”), Acme Aerospace, Inc., a Delaware corporation (“**Acme**”), Dukes Aerospace, Inc., a Delaware corporation (“**Dukes**”), Semco Instruments, Inc., a Delaware corporation (“**Semco**”), Hartwell Corporation, a California corporation (“**Hartwell**”), McKechnie Aerospace DE, Inc., a Delaware corporation (“**McKechnie Aerospace DE**”), McKechnie Aerospace Holdings, Inc., a Delaware corporation (“**McKechnie Aerospace Holdings**”), McKechnie Aerospace Investments, Inc., a Delaware corporation (“**McKechnie Aerospace Investments**”), McKechnie Aerospace US LLC, a Delaware limited liability company (“**McKechnie Aerospace US**”), Texas Rotronics, Inc., a Texas corporation (“**Rotronics**”), Electromech Technologies LLC (formerly Western Sky Industries, LLC), a Delaware limited liability company (“**Electromech**”), Schneller LLC, a Delaware limited liability company (“**Schneller**”), HARCO LLC (formerly Harco Laboratories, Incorporated), a Connecticut limited liability company (“**HARCO**”), AmSafe Global Holdings, Inc., a Delaware corporation (“**AmSafe Global**”), Bridport Holdings, Inc., a Delaware corporation (“**Bridport Holdings**”), AmSafe, Inc., a Delaware corporation (“**AmSafe Inc.**”), Shield Restraint Systems, Inc. (formerly AmSafe Commercial Products, Inc.), a Delaware corporation (“**Shield**”), Bridport-Air Carrier, Inc., a Washington corporation (“**Bridport-Air**”), Bridport Erie Aviation, Inc., a Delaware corporation (“**Bridport Erie**”), Arkwin Industries, Inc., a New York corporation (“**Arkwin**”), Whippany Actuation Systems, LLC, a Delaware limited liability company (“**Whippany**”), Aerosonic LLC, a Delaware limited liability company (“**Aerosonic**”), Avionics Specialties, Inc., a Virginia corporation (“**Avionics Specialties**”), Airborne Global, Inc., a Delaware corporation (“**Airborne Global**”), Airborne Holdings, Inc., a Delaware Corporation (“**Airborne Holdings**”), Airborne Acquisition, Inc., a Delaware corporation (“**Airborne Acquisitions**”), Airborne Systems NA Inc., a Delaware corporation (“**Airborne Systems NA**”), Airborne Systems North America Inc., a Delaware corporation (“**Airborne Systems North America**”), Airborne Systems North America of CA Inc., a Delaware corporation (“**Airborne Systems North America CA**”), Airborne Systems North America of NJ Inc., a New Jersey corporation (“**Airborne Systems North America NJ**”), Telair US LLC, a Delaware limited liability company (“**Telair US**”), Telair International LLC, a Delaware limited liability company (“**Telair International**”), Pexco Aerospace, Inc., a Delaware corporation (“**Pexco Aerospace**”), PneuDraulics, Inc., a California corporation (“**PneuDraulics**”), Breeze-Eastern LLC, a Delaware limited liability company (“**Breeze-Eastern**”), ILC Holdings, Inc., a Delaware corporation (“**ILC Holdings**”), ILC Industries, LLC, a Delaware limited liability company (“**ILC Industries**”), Data Device Corporation, a Delaware corporation (“**DDC**”), Beta Transformer Technology Corporation, a New York corporation (“**Beta Corporation**”), and Beta Transformer Technology LLC, a Delaware limited liability company (collectively with TD Group, Adams Rite, Marathon, Champion, Avionic, Skurka, CDA, ATI, Avtech, Transcoil, AeroControlex, Bruce Aerospace, CEF, Acme, Dukes, Semco, Hartwell, McKechnie Aerospace DE, McKechnie Aerospace Holdings, McKechnie Aerospace Investments, McKechnie Aerospace US, Rotronics, Electromech, Schneller, HARCO, AmSafe Global, Bridport Holdings, AmSafe Inc., Shield, Bridport-Air, Bridport Erie, Arkwin, Whippany, Aerosonic, Avionics Specialties, Airborne Global, Airborne Holdings, Airborne Acquisitions, Airborne Systems NA, Airborne Systems North America, Airborne Systems North America CA, Airborne Systems North America NJ, Telair US, Telair International, Pexco Aerospace, PneuDraulics, Breeze-Eastern, ILC Holdings, ILC Industries, DDC and Beta Corporation, the “**Existing Guarantors**”), and The Bank of New York Mellon Trust Company, N.A., as trustee (the “**Trustee**”) under the Indenture referred to below. Capitalized terms used herein and not otherwise defined shall have the meaning assigned to them in the Indenture.

**WITNESSETH:**

**WHEREAS**, the Company and the Existing Guarantors have heretofore executed and delivered to the Trustee an indenture, dated as of June 9, 2016 (as supplemented by the First Supplemental Indenture thereto, dated as of July 8, 2016, the “**Indenture**”), providing for the issuance by the Company of 6.375% Senior Subordinated Notes due 2026 (the “**Notes**”) and the guarantees thereof by each of the Existing Guarantors;

**WHEREAS**, the Indenture provides that under certain circumstances described therein, newly created or acquired Domestic Restricted Subsidiaries shall execute and deliver to the Trustee a supplemental indenture to the Indenture providing for a senior subordinated guarantee of payment of the Notes by such Domestic Restricted Subsidiary (the “**Guarantee**”);

**WHEREAS**, all things necessary to make this Supplemental Indenture the legal, valid and binding obligation of the Company, the Existing Guarantors and the Guaranteeing Subsidiaries have been done; and

**WHEREAS**, pursuant to Section 9.01(g) of the Indenture, the Trustee is authorized to execute and deliver this Supplemental Indenture without the consent of the Holders of the Notes.

**NOW, THEREFORE**, in consideration of the foregoing and for other good and valuable consideration, the receipt of which is hereby acknowledged, each of the Guaranteeing Subsidiaries covenants and agrees for the equal and ratable benefit of the Holders of the Notes as follows:

1. **CAPITALIZED TERMS.** Capitalized terms used herein without definition shall have the meanings assigned to them in the Indenture.
2. **GUARANTEE, ETC.** Each of the Guaranteeing Subsidiaries hereby agrees that from and after the date hereof it shall be a Guarantor under the Indenture and be bound by the terms thereof applicable to Guarantors and shall be entitled to all of the rights and subject to all the obligations of a Guarantor thereunder.
3. **RATIFICATION OF INDENTURE; SUPPLEMENTAL INDENTURE PART OF INDENTURE.** The Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every holder of Notes heretofore or hereafter authenticated and delivered shall be bound hereby.
4. **EXECUTION AND DELIVERY.** Each of the Guaranteeing Subsidiaries agrees that the Guarantee granted by it pursuant to the terms hereof shall remain in full force and effect notwithstanding any failure to endorse on each Note a notation of such Guarantee.
5. **NO RECOURSE AGAINST OTHERS.** No past, present or future director, officer, employee, incorporator, stockholder or agent of any of the Guaranteeing Subsidiaries (or any successor entity) (other than the Company or the Existing Guarantors), as such, shall have any liability for any obligations of the Company, TD Group, the Guaranteeing Subsidiaries or any other Guarantor under the Notes, any Guarantee, the Indenture or this Supplemental Indenture or for any claim based on, in respect of, or by reason of, such obligations or their creation. Each Holder of the Notes by accepting a Note waives and releases all such liability. The waiver and release are part of the consideration for issuance of the Notes.
6. **NEW YORK LAW TO GOVERN.** THE INTERNAL LAW OF THE STATE OF NEW YORK SHALL GOVERN AND BE USED TO CONSTRUE THIS SUPPLEMENTAL INDENTURE AND THE GUARANTEE GRANTED HEREUNDER WITHOUT GIVING EFFECT TO APPLICABLE PRINCIPLES OF CONFLICTS OF LAW TO THE EXTENT THAT THE APPLICATION OF THE LAWS OF ANOTHER JURISDICTION WOULD BE REQUIRED THEREBY.

7. **COUNTERPART ORIGINALS.** The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.
8. **EFFECT OF HEADINGS.** The Section headings have been inserted for convenience of reference only, are not to be considered part of this Supplemental Indenture and shall in no way modify or restrict any of the terms or provisions hereof.
9. **THE TRUSTEE.** The Trustee shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Supplemental Indenture or for or in respect of the recitals contained herein, all of which recitals are made solely by the Guaranteeing Subsidiaries, the Existing Guarantors and the Company.

*[Signature page follows.]*

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed as of the date hereof.

TRANSDIGM INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Executive Vice President and Chief Financial Officer

TRANSDIGM GROUP INCORPORATED

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Executive Vice President and Chief Financial Officer

ACME AEROSPACE, INC.  
ADAMS RITE AEROSPACE, INC.  
AIRBORNE SYSTEMS NORTH AMERICA OF NJ INC.  
AMSAFE GLOBAL HOLDINGS, INC.  
AMSAFE, INC.  
ARKWIN INDUSTRIES, INC.  
AVTECHTYEE, INC.  
BRUCE AEROSPACE INC.  
DUKES AEROSPACE, INC.  
ELECTROMECH TECHNOLOGIES LLC

member

HARTWELL CORPORATION  
JOHNSON LIVERPOOL LLC

By: McKechnie Aerospace Investments, Inc., its sole

By: Young & Franklin Inc., its sole member

MARATHONNORCO AEROSPACE, INC.  
MCKECHNIE AEROSPACE INVESTMENTS, INC.  
PEXCO AEROSPACE, INC.  
PNEUDRAULICS, INC.  
SHIELD RESTRAINT SYSTEMS, INC.  
SEMCO INSTRUMENTS, INC.  
SKURKA AEROSPACE INC.  
TACTAIR FLUID CONTROLS, INC.  
TEXAS ROTRONICS, INC.  
YOUNG & FRANKLIN INC.

By: /s/ Terrance M. Paradie  
Name: Terrance M. Paradie  
Title: Chief Executive Officer

[Signature page to the Second Supplemental Indenture – 2026 Notes]

AEROCONTROLEX GROUP, INC.  
AIRBORNE ACQUISITION, INC.  
AIRBORNE GLOBAL, INC.  
AIRBORNE HOLDINGS, INC.  
AVIATION TECHNOLOGIES, INC.  
BRIDPORT HOLDINGS, INC.  
BRIDPORT-AIR CARRIER, INC.  
MCKECHNIE AEROSPACE DE, INC.  
MCKECHNIE AEROSPACE US LLC

By: McKechnie Aerospace DE, Inc., its sole member

TRANSICOIL LLC

By: Aviation Technologies, Inc., its sole member

By: /s/ Terrance M. Paradie

Name: Terrance M. Paradie  
Title: President and Chief Executive Officer

AEROSONIC LLC  
AVIONIC INSTRUMENTS LLC  
BREEZE-EASTERN LLC  
CDA INTERCORP LLC  
CEF INDUSTRIES, LLC  
CHAMPION AEROSPACE LLC  
HARCO LLC  
SCHNELLER LLC  
TELAIR US LLC  
WHIPPANY ACTUATION SYSTEMS, LLC

By: TransDigm Inc., its sole member

TELAIR INTERNATIONAL LLC

By: Telair US LLC, its sole member

By: /s/ Terrance M. Paradie

Name: Terrance M. Paradie  
Title: Executive Vice President and Chief Financial Officer

AIRBORNE SYSTEMS NA INC.  
AIRBORNE SYSTEMS NORTH AMERICA INC.  
AVIONICS SPECIALTIES, INC.  
MCKECHNIE AEROSPACE HOLDINGS, INC.

By: /s/ Terrance M. Paradie

Name: Terrance M. Paradie  
Title: President

BRIDPORT ERIE AVIATION, INC.

By: /s/ Terrance M. Paradie

Name: Terrance M. Paradie  
Title: Vice President and Treasurer

AIRBORNE SYSTEMS NORTH AMERICA OF CA INC.

By: /s/ Sean P. Maroney

Name: Sean P. Maroney  
Title: Treasurer

[Signature page to the Second Supplemental Indenture – 2026 Notes]

BETA TRANSFORMER TECHNOLOGY CORPORATION  
BETA TRANSFORMER TECHNOLOGY LLC

By: Beta Transformer Technology Corporation, its

sole

member  
DATA DEVICE CORPORATION  
ILC HOLDINGS, INC.  
ILC INDUSTRIES, LLC

By: ILC Holdings, Inc., its sole member

By: /s/ Halle F. Terrion  
Name: Halle F. Terrion  
Title: Secretary

[Signature page to the Second Supplemental Indenture – 2026 Notes]

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., AS TRUSTEE

By: /s/ Lawrence M. Kusch  
Name: Lawrence M. Kusch  
Title: Vice President

[Signature page to the Second Supplemental Indenture – 2026 Notes]

**SUBSIDIARIES OF TRANSDIGM GROUP INCORPORATED**

TransDigm Inc. is a 100% owned subsidiary of TransDigm Group Incorporated  
 TransDigm Inc. owns directly or indirectly the following subsidiaries:

<b>Name of Subsidiary</b>	<b>State of Jurisdiction of Incorporation or Organization</b>
Abbott Electronics Ltd.	England
Acme Aerospace, Inc.	Delaware
Adams Rite Aerospace, Inc.	California
Adams Rite Aerospace GmbH	Germany
Advanced Inflatable Products Limited	England
AeroControlex Group, Inc.	Delaware
Aerosonic LLC	Delaware
Air-Sea Survival Equipment Trustee Limited	England
Airborne Acquisition, Inc.	Delaware
Airborne Global, Inc.	Delaware
Airborne Holdings, Inc.	Delaware
Airborne Systems Canada Ltd.	Ontario, Canada
Airborne Systems France	France
Airborne Systems Group Limited	England
Airborne Systems Holdings Limited	England
Airborne Systems Limited	England
Airborne Systems NA, Inc.	Delaware
Airborne Systems North America Inc.	Delaware
Airborne Systems North America of CA Inc.	Delaware
Airborne Systems North America of NJ Inc.	New Jersey
Airborne Systems Pension Trust Limited	England
Airborne UK Acquisition Limited	England
Airborne UK Parent Limited	England
Aircraft Materials Limited	England
AmSafe, Inc.	Delaware
AmSafe Aviation (Chongqing), Ltd.	China
AmSafe Bridport Ltd.	England
AmSafe Bridport (Kunshan) Co., Ltd.	China
AmSafe Bridport (Private) Ltd.	Sri Lanka
AmSafe Global Holdings, Inc.	Delaware
AmSafe Global Services (Private) Limited	Sri Lanka
ARA Deutschland GmbH	Germany
ARA Holding GmbH	Germany
Arkwin Industries, Inc.	New York
Aviation Technologies, Inc.	Delaware
Avionic Instruments LLC	Delaware
Avionics Specialties, Inc.	Virginia



<b>Name of Subsidiary</b>	<b>State of Jurisdiction of Incorporation or Organization</b>
AvtechTye, Inc.	Washington
Beta Transformer Mexico, S. de R.L. de C.V.	Mexico
Beta Transformer Technology Corporation	New York
Beta Transformer Technology LLC	Delaware
Breeze-Eastern LLC	Delaware
Bridport—Air Carrier, Inc.	Washington
Bridport Erie Aviation, Inc.	Delaware
Bridport Holdings, Inc.	Delaware
Bridport Ltd.	England
Bruce Aerospace, Inc.	Delaware
CDA InterCorp LLC	Florida
CEF Industries, LLC	Delaware
Champion Aerospace LLC	Delaware
Data Device Corporation	Delaware
DDC Electronics K.K.	Japan
DDC Electronics Ltd.	England
DDC Elektronik, GmbH	Germany
DDC Electronique, S.A.R.L.	France
DDC Holdings (UK) Limited	England
DDC (United Kingdom) Ltd.	England
DDL195 Limited	England
Dukes Aerospace, Inc.	Delaware
Edlaw Limited	England
Electromech Technologies LLC	Delaware
Elektro-Metall Export GmbH	Germany
Elektro-Metall Paks KFT	Hungary
GC Parachutes Limited	England
HARCO LLC	Connecticut
Hartwell Corporation	California
ILC Holdings, Inc.	Delaware
ILC Industries, LLC	Delaware
Irvin Aerospace Limited	England
Irvin-GQ Limited	England
Johnson Liverpool LLC	Delaware
Kunshan Shield Restraint Systems, Ltd.	China
MarathonNorco Aerospace, Inc.	Delaware
McKechnie Aerospace DE, Inc.	Delaware
McKechnie Aerospace (Europe) Ltd.	England
McKechnie Aerospace Holdings, Inc.	Delaware
McKechnie Aerospace Investments, Inc.	Delaware
McKechnie Aerospace US LLC	Delaware
Mecanismos de Matamoros S.A. de C.V.	Mexico
Militair Aviation, Ltd.	England

<b>Name of Subsidiary</b>	<b>State of Jurisdiction of Incorporation or Organization</b>
Nordisk Asia Pacific Limited	Hong Kong
Nordisk Asia Pacific Pte Ltd	Singapore
Nordisk Aviation Products AS	Norway
Nordisk Aviation Products (Kunshan) Ltd.	China
Pascall Electronics (Holdings) Ltd.	England
Pascall Electronics Limited	England
Pexco Aerospace, Inc.	Delaware
PneuDraulics, Inc.	California
Rancho TransTechnology Corporation	California
Retainers, Inc.	New Jersey
Schneller Asia Pte. Ltd.	Singapore
Schneller LLC	Delaware
Schneller S.A.R.L.	France
Semco Instruments, Inc.	Delaware
Shield Restraint Systems, Inc.	Delaware
Shield Restraint Systems Ltd.	England
Skurka Aerospace, Inc.	Delaware
SSP Industries	California
Tactair Fluid Controls, Inc.	New York
TDG Cayman Limited	Cayman Islands
TDG Germany GmbH	Germany
TDG Netherlands BV	Netherlands
Technical Airborne Components Limited	England
Technical Airborne Components Industries SPRL	Belgium
Telair US LLC	Delaware
Telair International AB	Sweden
Telair International GmbH	Germany
Telair International LLC	Delaware
Telair International Services PTE Ltd (JV 70.5%)	Singapore
Texas Rotronics, Inc.	Texas
TransDigm Holdings UK Limited	UK
TransDigm Ireland Ltd.	Ireland
TransDigm Receivables LLC	Delaware
Transicoil (Malaysia) Sendirian Berhad	Malaysia
Transicoil LLC	Delaware
TransTechnology Germany GmbH	Germany
TransTechnology International Corporation	Delaware
TT Connecticut Corporation	Connecticut
TTERUSA, Inc.	New Jersey
Whippany Actuation Systems, LLC	Delaware
XCEL Power Systems Ltd.	England
Young & Franklin Inc.	New York

## CERTIFICATION

I, W. Nicholas Howley, certify that:

1. I have reviewed this annual report on Form 10-K of TransDigm Group Incorporated;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - (a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - (c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's fourth fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's Board of Directors:
  - (a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - (b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 15, 2016

/s/ W. Nicholas Howley

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Name: W. Nicholas Howley

Title: Chairman of the Board of Directors, President and Chief  
Executive Officer (Principal Executive Officer)

## CERTIFICATION

I, Terrance M. Paradie, certify that:

1. I have reviewed this annual report on Form 10-K of TransDigm Group Incorporated;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - (a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - (c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's fourth fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's Board of Directors:
  - (a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - (b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 15, 2016

/s/ Terrance M. Paradie

Name: Terrance M. Paradie

Title: Executive Vice President and Chief

Financial Officer (Principal Financial and Accounting Officer)

**CERTIFICATION PURSUANT TO  
18 U.S.C. SECTION 1350,  
AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report on Form 10-K of TransDigm Group Incorporated (the "Company") for the fiscal year ended September 30, 2016 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, W. Nicholas Howley, Chairman of the Board of Directors, President and Chief Executive Officer (Principal Executive Officer), certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities and Exchange Act of 1934; and
2. The information contained in the Report fairly presents in all material respects, the financial condition of the Company as of the dates indicated and results of operations of the Company for the periods indicated.

Date: November 15, 2016

/s/ W. Nicholas Howley

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Name: W. Nicholas Howley

Title: Chairman of the Board of Directors, President and Chief  
Executive Officer (Principal Executive Officer)

**CERTIFICATION PURSUANT TO  
18 U.S.C. SECTION 1350,  
AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report on Form 10-K of TransDigm Group Incorporated (the "Company") for the fiscal year ended September 30, 2016 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Terrance M. Paradie, Executive Vice President and Chief Financial Officer (Principal Financial and Accounting Officer) certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities and Exchange Act of 1934; and
2. The information contained in the Report fairly presents in all material respects, the financial condition of the Company as of the dates indicated and results of operations of the Company for the periods indicated.

Date: November 15, 2016

/s/ Terrance M. Paradie

Name: Terrance M. Paradie

Title: Executive Vice President and Chief

Financial Officer (Principal Financial and Accounting Officer)