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, 2021

☐ **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 9th Street, Suite 3000, Cleveland, Ohio	**44114**
(Address of principal executive offices)	**(Zip Code)**

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

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

Title of each class	Trading symbol	Name of exchange on which registered
Common Stock, $0.01 par value	TDG	New York Stock Exchange

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 x 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 x

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 x No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted 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 such files). Yes x No ☐

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

Large Accelerated Filer	☒	Accelerated Filer	☐
Non-Accelerated Filer	☐	Smaller Reporting Company	☐
Emerging Growth Company	☐		

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒

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

The aggregate market value of the voting and non-voting common stock held by non-affiliates of the registrant as of March 31, 2021, based upon the last sale price of such voting and non-voting common stock on that date, was $32,940,645,808.

The number of shares outstanding of TransDigm Group Incorporated's common stock, par value $.01 per share, was 55,248,901 as of November 3, 2021.

Documents incorporated by reference: Certain sections of the registrant's definitive Proxy Statement to be filed in connection with its 2022 Annual Meeting of Shareholders expected to be held in March 2022 are incorporated by reference into Part III of this Annual Report on Form 10-K.

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Special Note Regarding Forward-Looking Statements

This Annual Report on Form 10-K contains both historical and "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. All statements other than statements of historical fact included that address activities, events or developments that we expect, believe or anticipate will or may occur in the future are forward-looking statements, including, in particular, the statements about our plans, objectives, strategies and prospects regarding, among other things, our financial condition, results of operations and business. We have identified some of these forward-looking statements with words like "believe," "may," "will," "should," "expect," "intend," "plan," "predict," "anticipate," "estimate" or "continue" and other words and terms of similar meaning. These forward-looking statements may be contained throughout this Annual Report on Form 10-K. These forward-looking statements are based on current expectations about future events affecting us and are subject to uncertainties and factors relating to, among other things, our operations and business environment, all of which are difficult to predict and many of which are beyond our control. Many factors mentioned in our discussion in this Annual Report on Form 10-K, including the risks outlined under "Risk Factors," will be important in determining future results. Although we believe that the expectations reflected in these forward-looking statements are reasonable, we do not know whether our expectations will prove correct. They can be affected by inaccurate assumptions we might make or by known or unknown risks and uncertainties, including those described under "Risk Factors" in this Annual Report on Form 10-K. Since our actual results, performance or achievements could differ materially from those expressed in, or implied by, these forward-looking statements, we cannot give any assurance that any of the events anticipated by these forward-looking statements will occur or, if any of them does occur, what impact they will have on our business, results of operations and financial condition. You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date they are made. We do not undertake any obligation to update these forward-looking statements or the risk factors contained in this Annual Report on Form 10-K to reflect new information, future events or otherwise, except as may be required under federal securities laws.

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 impact that the COVID-19 pandemic has on our business, results of operations, financial condition and liquidity; 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, natural disasters and climate change-related events; our reliance on certain customers; the United States ("U.S.") defense budget and risks associated with being a government supplier including government audits and investigations; failure to maintain government or industry approvals; failure to complete or successfully integrate acquisitions; our indebtedness; potential environmental liabilities; liabilities arising in connection with litigation; climate-related regulations; 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, unless the context otherwise requires, refer to TD Group, together with TransDigm Inc. and its wholly-owned and majority-owned subsidiaries for which it has a controlling interest. References to "fiscal year" mean the year ending or ended September 30. For example, "fiscal year 2021" or "fiscal 2021" means the period from October 1, 2020 to September 30, 2021.

PART I

ITEM 1. BUSINESS

The Company

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. Our business is well diversified due to the broad range of products we offer to our customers. We estimate that approximately 90% of our net sales for fiscal year 2021 were generated by proprietary products. For fiscal year 2021, we estimate that we generated approximately 80% of our net sales from products in 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 50% of our net sales in fiscal year 2021 were generated from aftermarket net sales, the vast majority of which come from the commercial and military aftermarkets. Historically, these aftermarket revenues have produced a higher gross profit and have been more stable than net sales to original equipment manufacturers ("OEMs").

Products

We primarily design, produce and supply highly engineered proprietary aerospace components 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 strong customer support.

Our business is well diversified due to the broad range of products that we offer to our customers. Our 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, batteries and chargers, engineered latching and locking devices, engineered rods, engineered connectors and elastomer sealing solutions, databus and power controls, cockpit security components and systems, specialized and advanced cockpit displays, engineered audio, radio and antenna systems, specialized lavatory components, seat belts and safety restraints, engineered and customized interior surfaces and related components, advanced sensor products, switches and relay panels, thermal protection and insulation, lighting and control technology, parachutes, high performance hoists, winches and lifting devices, and cargo loading, handling and delivery systems. Each of these product offerings is composed of many individual products that are typically customized to meet the needs of a particular aircraft platform or customer.

COVID-19 Pandemic

The COVID-19 pandemic has continued to cause a significant adverse impact on our net sales, net income and EBITDA As Defined when compared to pre-pandemic levels. COVID-19 was first reported in December 2019 and, since being declared as a pandemic by the World Health Organization in March 2020, has dramatically impacted the global health and economic environment, including millions of confirmed cases, business slowdowns or shutdowns, government challenges and market volatility. The commercial aerospace industry, in particular, has been significantly disrupted, both domestically and internationally, by the pandemic. The pandemic has resulted in governments around the world implementing stringent measures to help control the spread of the virus, including quarantines, “shelter in place” and “stay at home” orders, travel restrictions, business curtailments and other measures. As a result, demand for travel declined at a rapid pace beginning in the second half of fiscal 2020 and has remained depressed compared to pre-pandemic levels. However, commercial air travel has increasingly shown signs of recovery in recent months with increasing air traffic, primarily in certain domestic markets. The recovery in international commercial air travel has been slower with international travel only slightly recovered from COVID-19 pandemic lows. The exact pace and timing of the commercial air travel recovery remains uncertain and is expected to continue to be uneven depending on factors such as trends in the number of COVID-19 infections (e.g., impact of new variants of COVID-19 resurfacing), the continued efficacy of vaccines (particularly against any newly-emerging variants of COVID-19) and easing of quarantines and travel restrictions, among other factors. We currently expect COVID-19 to continue to cause an adverse impact on our net sales, net income and EBITDA as Defined compared to pre-pandemic levels into fiscal 2022.

Within the United States, our business has been designated as “essential,” which has allowed us to continue to serve our customers throughout the COVID-19 pandemic; nonetheless, the pandemic has disrupted our operations. Our ability to continue to manufacture products is highly dependent on our ability to maintain the safety and health of our factory employees. The ability of our employees to work has been, and may again, be significantly impacted by individuals contracting or being exposed to COVID-19. While we are following the requirements of governmental authorities and taking preventative and protective measures to prioritize the safety of our employees, these measures are not always successful, and we have been required at times to temporarily close facilities or take other partial shutdown measures. Furthermore, in light of enacted and any additional reductions in our workforce as a result of declines in our business caused by the COVID-19 pandemic, we cannot assure that we will be able to rehire our workforce as our business continues to recover. Finally, though this appears to be lower risk at the present time, our acquisition strategy, which is a key element of our overall business strategy, may be impacted by our efforts to maintain the Company’s cash liquidity position in response to the COVID-19 pandemic depending on the duration of the pandemic and its impact on our cash flows.

Although we remain cautiously optimistic that the global vaccination efforts will continue to progress and positively influence the markets we serve, the magnitude of the impact of COVID-19 remains unpredictable and we continue to anticipate potential supply chain disruptions, employee absenteeism and short-term suspensions of manufacturing facilities, and additional health and safety costs related to the COVID-19 pandemic that could unfavorably impact our business. Longer-term, because of these factors, it is difficult to forecast a precise impact on the Company’s future results.

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, batteries and chargers, databus and power controls, advanced sensor products, switches and relay panels, high performance hoists, winches and lifting devices, and cargo loading, handling and delivery 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, engineered rods, engineered connectors and elastomer sealing solutions, cockpit security components and systems, specialized and advanced cockpit displays, engineered audio, radio and antenna systems, specialized lavatory components, seat belts and safety restraints, engineered and customized interior surfaces and related components, thermal protection and insulation, lighting and control technology and parachutes. 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, hydraulic/electromechanical actuators and fuel valves for land-based gas turbines, and refueling systems for heavy equipment used in mining, construction and other industries and turbine controls for the energy and oil and gas markets. Primary customers of this segment are off-road vehicle suppliers and subsystem suppliers, child restraint system suppliers, satellite and space system suppliers, manufacturers of heavy equipment used in mining, construction and other industries and turbine original equipment manufacturers, gas pipeline builders and electric utilities.

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 non-cash compensation charges incurred in connection with the Company’s stock incentive plans, restructuring costs related to the Company's cost reduction measures in response to the COVID-19 pandemic, foreign currency gains and losses, acquisition-integration costs, acquisition and divestiture transaction-related expenses, and refinancing costs. COVID-19 restructuring costs represent actions taken by the Company to reduce its workforce to align with customer demand, as well as incremental costs related to the pandemic that are not expected to recur once the pandemic has subsided and are clearly separable from normal operations (e.g., additional cleaning and disinfecting of facilities by contractors above and beyond normal requirements, personal protective equipment). Acquisition and divestiture-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 for both acquisitions and divestitures 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.

For financial information about our segments, refer to Note 17, “Segments,” in the notes to the 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, net 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 for 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. Boeing Distribution Services, Inc., Satair A/S (a subsidiary of Airbus S.A.S.) and Seal Dynamics (a subsidiary of HEICO Corporation), among others, are our major distributors.

Manufacturing and Engineering

We maintain approximately 100 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 within our consolidated statements of income. Research and development costs are recorded in selling and administrative expenses within our consolidated statements of income. The aggregate of engineering expense and research and development expense represents approximately 11% of our operating units' aggregate costs, or approximately 6% of our consolidated net sales for fiscal year 2021. 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, flammability testing, 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," in the notes to the consolidated financial statements included herein with respect to the total costs of research and development.

Customers

We predominantly serve customers in the commercial, regional, business jet and general aviation aftermarket, which accounted for approximately 23% of our net sales for fiscal year 2021; the commercial aerospace OEM market, comprising large commercial transport manufacturers and regional and business jet manufacturers, which accounted for approximately 20% of our net sales for fiscal year 2021; and the defense market, which accounted for approximately 50% of our net sales for fiscal year 2021. Non-aerospace net sales comprised approximately 7% of our net sales for fiscal year 2021.

As a result of the COVID-19 pandemic and its adverse impact on air travel worldwide, the commercial aerospace industry has been significantly disrupted. The defense aerospace market has been impacted by the COVID-19 pandemic to a lesser extent than the commercial aerospace market due to certain supply chain disruptions as well as "stay at home" orders, quarantines, etc. impacting the government procurement workforce which has slowed production and/or orders. The significant adverse impact of the COVID-19 pandemic on the commercial aerospace market channels has led to the defense market comprising a greater percentage of our net sales in fiscal years 2021 and 2020 compared to pre-pandemic historical levels. In fiscal years 2015 through 2019, representing the five fiscal years prior to the pandemic, defense market net sales ranged from 29% to 37% of total net sales. As the commercial aerospace industry recovers from the disruption caused by the COVID-19 pandemic, we would expect defense market net sales to account for a percentage of total net sales that is relatively in line with our historical levels prior to the COVID-19 pandemic.

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. Our top ten customers for fiscal year 2021 accounted for approximately 42% of our net sales. Products supplied to many of our customers are used on multiple platforms. None of our customers individually accounted for greater than 10% of our net sales for fiscal year 2021.

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, the percentage of the worldwide fleet that is in warranty, and 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 may create disincentives for potential new competitors for certain products. If 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 United States Government ("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; (2) terminate existing contracts; (3) reduce the value of existing contracts; (4) audit our contract-related costs and fees, including allocated indirect costs; (5) control and potentially prohibit the export of our products; and (6) seek repayment of contract related payments under certain circumstances. Violations of government procurement laws could result in civil or criminal penalties.

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 markets, is impacted by the health of the global economy and geopolitical events around the world. The commercial aerospace industry, in particular, has been significantly disrupted, both domestically and internationally, by the pandemic. The commercial aerospace industry experienced a steep decline in RPMs beginning in the second half of our fiscal 2020 due to the pandemic's impact on worldwide air travel demand and RPMs remained depressed in fiscal 2021 when compared to pre-pandemic levels. Also, as a result of the pandemic and decreased demand in commercial air travel, the commercial OEM sector has experienced reductions in commercial OEM production rates, including reductions at the two largest commercial OEMs, The Boeing Company ("Boeing") and Airbus S.A.S. ("Airbus"). Although the commercial aerospace industry has shown signs of recovery in recent months, with increasing commercial air travel demand and both Boeing and Airbus disclosing potential OEM production rate increases for calendar 2022, the impact of COVID-19 continues to be fluid and the shape and speed of the recovery for the commercial aerospace industry remains uncertain.

The defense aerospace market is dependent on government budget constraints, the timing of orders, political pressures and the extent of global conflicts. It is not necessarily affected by general economic conditions that affect the commercial aerospace industry. The defense aerospace market has been impacted by the COVID-19 pandemic to a lesser extent than the commercial aerospace market due to certain supply chain disruptions as well as "stay at home" orders, quarantines, etc. impacting the government procurement workforce which has slowed production and/or orders. Also, government funding reprioritization such as shifting funds to efforts to combat the impact of the pandemic provides for uncertainty.

Historically, our presence in both the commercial aerospace and military sectors of the aerospace industry has served to 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 net sales in one channel have been offset by increased net sales in another channel. 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 profit.

Outside of the significant market disruption caused by COVID-19, there are many short-term factors (including customer inventory level adjustments, unannounced changes in order patterns, strikes, facility shutdowns caused by fires, hurricanes, health crises or other incidents 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 since commercial aftermarket net sales have historically produced a higher gross profit than net 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 market factors in the commercial aftermarket include worldwide RPMs and the size and activity level of the worldwide fleet of aircraft and the percentage of the fleet that is in warranty. As a result of the COVID-19 pandemic and the stringent measures implemented to help control the spread of the virus, demand for air travel declined at a rapid pace and has remained depressed compared to pre-pandemic levels. The reduced demand has led to a significant reduction in flights and an increase in parked aircraft. Certain airlines have also retired a portion of their fleets. Certain markets have reopened, some of which have experienced a resurgence of COVID-19 cases, while others, particularly international markets, remain closed or are enforcing extended quarantines. Although worldwide RPMs are still significantly lower than pre-pandemic levels, worldwide RPMs have been steadily recovering. Commercial air travel has increasingly shown signs of recovery in recent months with increasing air traffic, primarily in certain domestic markets, and parked aircraft returning to service. The pace of the international air travel traffic recovery has been slower and international RPMs have only slightly recovered from pandemic lows. There is potential for improved international recovery moving forward as vaccinations increase worldwide and government-imposed travel restrictions are eased. Current industry consensus indicates that worldwide RPMs will continue to recover in 2022. However, the impact of COVID-19 on the commercial aerospace market is fluid and continues to evolve. Overall, the timing and pace of the commercial aftermarket recovery remains uncertain and may not return to pre-pandemic levels until 2023 or beyond.

Commercial OEM Market

The commercial OEM market declined in fiscal 2021 primarily due to the continued impact of the COVID-19 pandemic. Our commercial transport OEM shipments and revenues generally run ahead of Boeing and Airbus airframe delivery schedules. As a result, and consistent with prior years, our fiscal 2022 shipments will be a function of, among other things, the estimated 2022 and 2023 commercial airframe production rates. We have been experiencing decreased net sales across the commercial OEM sector driven primarily by the decrease in production rates by Boeing and Airbus related to reduced demand in the commercial air travel from the COVID-19 pandemic. We expect demand for our commercial OEM products to continue to be reduced in the short-term. However, the commercial OEM market is showing initial signs of recovery with airlines returning to the commercial OEMs to take planes or place orders, along with Boeing and Airbus disclosing potential OEM production rate increases for calendar 2022. Current industry consensus indicates production rates will continue to be lower than pre-pandemic historic levels but are expected to gradually increase over the next several years. However, the duration of the pandemic is unclear and the pace of the recovery of the commercial OEM market remains uncertain and continues to evolve.

Our businesses continually seek to provide solutions for our customers and others in the commercial aerospace industry. For example, as a result of the COVID-19 pandemic, many of our businesses have taken the opportunity to explore new business opportunities by working on developing highly engineered solutions for emerging needs arising from the pandemic and providing product offerings that could help the industry recover. Product solutions currently developed or being explored include anti-viral or antimicrobial technology, air purification, and touchless technologies, among others.

Defense

Our military business fluctuates from year-to-year, and is dependent, to a degree, on government budget constraints, the timing of orders, macro and micro dynamics with respect to the U.S. Department of Defense ("DOD") procurement policy and the extent of global conflicts. Also, government funding reprioritization such as shifting funds to efforts to combat the impact of the pandemic provides for further unpredictability in the military spending outlook. The defense aerospace market has been impacted by the COVID-19 pandemic to a lesser extent than the commercial aerospace market. Any unfavorable impact on our defense aerospace business related to the COVID-19 pandemic was primarily during fiscal 2020 due to certain supply chain disruptions as well as "stay at home" orders, quarantines, etc. impacting the government procurement workforce which slowed production and/or orders. Uncertainty remains in the COVID-19 pandemic recovery, but we do not currently expect any significant unfavorable impact on our defense aerospace business related to the COVID-19 pandemic. For a variety of reasons, the military spending outlook is very uncertain. For planning purposes, we assume that military-related net sales of our types of products to be flatter in future years over the recent higher levels.

In fiscal years 2021 and 2020, the defense market channel comprises a greater percentage of net sales than historical comparisons due to the significant adverse impact of the COVID-19 pandemic on our commercial aftermarket channel and commercial OEM market channel. In fiscal years 2015 through 2019, representing the five fiscal years prior to the pandemic, defense market net sales ranged from 29% to 37% of total net sales. As the commercial aerospace industry recovers from the disruption caused by the COVID-19 pandemic, we would expect defense market net sales to account for a percentage of total net sales that is relatively in line with our historical levels prior to the COVID-19 pandemic.

Raw Materials

We require the use of various raw materials in our manufacturing processes. We purchase a variety of manufactured component parts from various suppliers. We also purchase replacement parts, which are utilized in our various repair and overhaul operations. 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.

The COVID-19 pandemic has disrupted the global supply chain to a certain extent and availability of raw materials, particularly electronic parts. Because we strive to limit the volume of raw materials and component parts on hand, 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.

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. The Company's products are manufactured, marketed and sold using a portfolio of patents, trademarks, licenses, and other forms of intellectual property, some of which expire in the future. The Company develops and acquires new intellectual property on an ongoing basis. Based on the broad scope of the Company's product lines, management believes that the loss or expiration of any single intellectual property right would not have a material effect on our consolidated financial statements.

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.

For information regarding environmental accruals, refer to Note 15, "Commitments and Contingencies," in the notes to the consolidated financial statements included herein. Compliance with federal, state, local and foreign environmental laws during fiscal 2021 had no material impact on our capital expenditures or results of operations. Based upon consideration of currently available information, we believe liabilities for environmental matters will not have a material adverse impact on our consolidated financial statements, but we cannot assure that material environmental liabilities may not arise in the future. For further information on environmental-related risks, including climate change, refer to Item 1A. "Risk Factors."

Employees

As of September 30, 2021, we had approximately 13,300 full-time, part-time and temporary employees. Approximately 16% of our full-time and part-time employees are represented by labor unions. Collective bargaining agreements between us and these labor unions expire at various dates ranging from December 2021 to December 2024.

Talent Development

We consider our employees to be our most valuable asset. The development, attraction and retention of employees is a critical success factor for TransDigm and its operating units for succession planning and sustaining our three core value drivers (obtaining profitable new business, continually improving our cost structure and providing highly engineered value-added products to customers). To support the advancement of our employees, we offer training and development programs encouraging advancement from within and continue to fill our team with strong and experienced management talent. We leverage both formal and informal programs to identify, foster, and retain top talent at both the corporate and operating unit level.

We have established TransDigm University, a formal mentoring and education program with a curated curriculum and established leadership serving as mentors. Participants in the program learn and develop more advanced skills leading to higher contribution and satisfaction within their roles, while mentors enhance their leadership capabilities by helping others progress. This program helps identify top performers, improving employee performance and retention, increasing our organizational learning and supporting the promotion of our current employees.

The Company's Management Development Program ("MDP") identifies new talent and prepares them for success within our organization. The Company actively recruits for MDP candidates at colleges and universities across the U.S. to ensure we are reaching a large and diverse pool of candidates. The program hires recent Master of Business Administration graduates who work for three eight-month stints at a selection of operating units. Program participants gain experience in developing, manufacturing, and selling aerospace components with the intent of becoming fully immersed in the operations of our business. Once the program is complete, MDP participants are better equipped with the knowledge and experience needed to excel as a manager at the Company. Our goal for successful MDP participants is to hire them on a full-time basis at an operating unit upon completion of the program.

TransDigm's executive team also mentors rising talent on a more informal basis. This informal mentorship achieves a number of goals, including accelerating the development of top performers, increasing organizational learning, and improving employee performance and retention. The executive team also commits substantial time to evaluating the bench strength of our leadership and working with our leadership to improve their performance.

TransDigm University, MDP, various internship programs and informal mentoring demonstrates the Company's ongoing commitment and initiatives towards accelerating the development of our future leaders.

Benefits

We are proud to offer attractive benefits packages that attract, retain, motivate and reward our talent, and we are committed to providing our employees and their families with programs that support their health and overall well-being. To assist employees with financial empowerment, we offer 401(k) programs and various legacy defined benefit pension plans. We also offer members the ability to save money on a tax-free basis through flexible spending accounts and health savings accounts. TransDigm offers competitive compensation programs to our employees that includes base pay, bonus programs and equity programs. TransDigm employees also receive paid time off and holidays.

We understand the value in furthering the knowledge and education of our current employee base. In addition to formal and informal employee development programs within TransDigm and our operating units, employees can expand their careers by accessing tuition reimbursement programs. Some operating units also partner with local colleges to provide training courses to TransDigm employees. Access to programs such as these enhance our employees' value to the Company, our customers and our communities.

TransDigm's equity compensation plans are designed to assist in attracting, retaining, motivating and rewarding key employees and directors, and promoting the creation of long-term value for our stockholders by closely aligning the interests of these individuals with those of our stockholders. TransDigm's equity compensation plans provide for the granting of performance-based stock options. Equity compensation, and specifically stock options, is a significant component of TransDigm's equity-based compensation strategy and value-based culture. Our approach to equity has a track record of success and we believe that the continued use of performance-based stock options will help retain the Company's key employees and recruit the talented minds of the future.

Diversity

At TransDigm, we value new ideas, different experiences and fresh perspectives, and we firmly believe this is enhanced by a more diverse workforce throughout all levels of our organization. Diversity and inclusion make us stronger as a company – it is critical to innovation, provides a competitive advantage, yields better outcomes, and in turn, enables us to better deliver for all of our stakeholders.

We are committed to diversity at all levels of management and leadership, and our leadership team and Board of Directors are committed to improving diversity throughout the Company and fostering a more inclusive and open environment. We recognize that a company's commitment to diversity and inclusion must come from the top, and we are focused on continuing to improve diversity within our leadership team, and at the Board of Directors level. Diversity and inclusion make us stronger as a business so we can effectively serve all our stakeholders. Our workforce includes talented people from many backgrounds.

Discrimination is not tolerated at TransDigm. We are committed to high ethical standards and equal employment opportunities in all personnel actions without regard to race, color, religion, gender, national origin, citizenship status, age, marital status, gender identity or expression, sexual orientation, physical or mental disability, or veteran status.

Health and Safety

Our commitment to manufacturing the safest, highest quality products is matched by our commitment to keeping our employees healthy and safe as they work to produce these products. We are dedicated to building, designing, maintaining, and operating our facilities to effectively manage process safety and other hazards, and to minimize risks. We also seek to empower and support our employees to prevent accidents and promote a safe environment. We expect personnel to report and communicate risks, potential hazards, incidents and near hits so that they can be investigated, and appropriate action can be taken to prevent future issues. To elevate the importance of this, we began to require our operating units to individually report on Environmental Health and Safety matters monthly to the executive team.

Since the early days of the COVID-19 pandemic, we have been following guidance from the World Health Organization and the U.S. Center for Disease Control to protect employees and prevent the spread of the virus within all of our facilities globally. The Company has taken various steps to facilitate access to vaccines for our employees in accordance with federal guidelines and state and local vaccination plans.

Seasonality

We do not believe our net sales are subject to significant seasonal variation; however, our net sales have generally been lower in the first quarter of our fiscal year compared to the subsequent quarters due to fewer working days resulting from the observance of various holidays.

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*, as soon as reasonably practicable, following the filing of the reports with the Securities and Exchange Commission ("SEC"). In addition, the Company's website allows investors and other interested persons to sign up to automatically receive e-mail alerts when news releases and financial information is posted on the website. The SEC also maintains a website, *www.sec.gov*, that contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC. The information on or obtainable through our website is not incorporated into this Annual Report on Form 10-K.

ITEM 1A. RISK FACTORS

Set forth below are material 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. Additional risks and uncertainties not presently known to us or that we currently deem immaterial also may impair our business operations and financial condition.

Risks Related to our Strategy

We face risks related to the current COVID-19 pandemic and other health pandemics, epidemics and outbreaks.

The COVID-19 pandemic is continuing to cause an adverse impact on our employees, operations, supply chain and distribution system and the long-term impact to our business remains unknown. This is due to the numerous uncertainties that have risen from the pandemic, including the severity of the disease, the duration of the outbreak, the likelihood of resurgences of the outbreak, including due to the emergence and spread of variants, actions that may be taken by governmental authorities in response to the disease, the timing, distribution, efficacy and public acceptance of vaccines, and unintended consequences of the foregoing.

The commercial aerospace industry, in particular, has been significantly disrupted, both domestically and internationally, by the pandemic. The pandemic has resulted in governments around the world implementing stringent measures to help control the spread of the virus, including quarantines, "shelter in place" and "stay at home" orders, travel restrictions, business curtailments and other measures. As a result, demand for travel declined at a rapid pace beginning in the second half of fiscal 2020 and has remained depressed compared to pre-pandemic levels. However, commercial air travel has increasingly shown signs of recovery in recent quarters with increasing air traffic, primarily in certain domestic markets. The recovery in international commercial air travel has been slower with international travel only slightly recovered from COVID-19 pandemic lows. The exact pace and timing of the commercial air travel recovery remains uncertain and is expected to continue to be uneven depending on factors such as trends in the number of COVID-19 infections (e.g., impact of new variants of COVID-19 resurfacing), the timing, distribution, efficacy, and public acceptance of vaccines and easing of quarantines and travel restrictions, among other factors. We currently expect COVID-19 to continue to cause an adverse impact on our net sales, net income and EBITDA as Defined compared to pre-pandemic levels into fiscal 2022. Longer-term, because the duration of the pandemic is unclear, it is difficult to forecast a precise impact on the Company's future results.

The COVID-19 pandemic has disrupted the global supply chain to a certain extent and availability of raw materials, particularly electronic parts. Because we strive to limit the volume of raw materials and component parts on hand, 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 ability to continue to manufacture products is highly dependent on our ability to maintain the safety and health of our factory employees. The ability of our employees to work has been, and may again be significantly impacted by individuals contracting or being exposed to COVID-19. While we are following the requirements of governmental authorities and taking preventative and protective measures to prioritize the safety of our employees, these measures are not always successful and we have been required to temporarily close facilities or take other measures. Furthermore, in light of enacted and any additional reductions in our workforce as a result of declines in our business caused by the COVID-19 pandemic, we cannot assure that we will be able to rehire our workforce as our business continues to recover. We believe the COVID-19 pandemic has had, and may in the future again have, a material and adverse impact on our consolidated financial position, results of operations and cash flows. In addition, the impact of the COVID-19 pandemic and any future public health crises that arise could exacerbate the other risks we face.

Our business focuses almost exclusively on the aerospace and defense industry.

During a prolonged period of significant market disruption in the aerospace and defense industry, such as the adverse impact that the COVID-19 pandemic has had and is expected to continue to have on the commercial aerospace market, our business may be disproportionately impacted compared to peer companies that are more diversified in the industries they serve. In which case, a more diversified company may be able to recover more quickly from significant market disruptions such as the COVID-19 pandemic.

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

In fiscal year 2021, no customer individually accounted for 10% or more of the Company's net sales; however, our top ten customers for fiscal year 2021 accounted for approximately 42% of our net sales. In fiscal year 2020, no customer individually accounted for 10% or more of the Company's net sales. In fiscal year 2019, one customer individually accounted for approximately 11% of the Company's net sales. A material reduction in purchasing by one of our larger customers for any reason, including but not limited to the COVID-19 pandemic, general economic or aerospace downturn, decreased production, strike or resourcing, could have a material adverse effect on results of operations, financial position and cash flows.

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.

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 or may be unable to receive necessary regulatory approvals or support. 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, with the most significant recent acquisition being the Cobham Aero Connectivity (“CAC”) acquisition in the second quarter of fiscal 2021, 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.

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, 2021, our total indebtedness, excluding approximately $31 million of letters of credit outstanding, was approximately $20 billion, which was 117.1% of our total book capitalization.

In addition, we may be able to incur substantial additional indebtedness in the future. As of September 30, 2021, we had approximately $529 million of unused commitments under our revolving credit facility. On October 6, 2021, the Company repaid $200 million of the revolving credit facility drawn, increasing the borrowings available under the revolving commitments to $729 million. Although our senior secured credit facility and the indentures governing the various senior secured and 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. 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.

An increase in our indebtedness 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 flows 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.

All of our debt under the senior secured credit facility, which includes $7.4 billion in term loans and a revolving credit facility of $760 million, bears interest at variable rates primarily based on the London interbank offered rate (“LIBOR”) for deposits of U.S. dollars. Accordingly, if LIBOR or other variable interest rates increase, our debt service expense will also increase. In order to mitigate the interest rate risk of these variable rate borrowings, we entered into interest rate swap and cap agreements that covers a significant portion of the existing variable rate debt. The Company's objective is to maintain an allocation of at least 75% fixed rate and 25% variable rate debt thereby limiting its exposure to changes in near-term interest rates. As of September 30, 2021, approximately 86% of our total debt was fixed rate debt. For information about our interest rate swap and cap agreements, refer to Note 21, “Derivatives and Hedging Instruments,” in the notes to the consolidated financial statements included herein.

In 2017, the United Kingdom's Financial Conduct Authority announced that after 2021 it would no longer compel banks to submit the rates required to calculate LIBOR and other interbank offered rates, which have been widely used as reference rates for various securities and financial contracts, including loans, debt and derivatives. However, for U.S dollar LIBOR, the relevant date has been deferred to at least June 30, 2023 for certain tenors, at which time the LIBOR administrator has indicated that it intends to cease publication of U.S. dollar LIBOR. Despite this deferral, the LIBOR administrator has advised that no new contracts using U.S. dollar LIBOR should be entered into after December 31, 2021. These actions indicate that the continuation of U.S. dollar LIBOR on the current basis cannot and will not be guaranteed after June 30, 2023. Moreover, it is possible that U.S. dollar LIBOR will be discontinued or modified prior to June 30, 2023. In February 2020, in connection with Amendment No. 7 to the Credit Agreement, we amended our Credit Agreement to include a provision for the determination of an alternative reference interest rate. The discontinuation of LIBOR will also require our derivative agreements to be amended. Once the alternative interest rate has replaced LIBOR, our future interest expense could be impacted.

Our 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 trade receivable securitization facility ("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 secured and 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 secured or subordinated notes were to be accelerated, we cannot assure that our assets would be sufficient to repay in full our debt.

We are dependent on our executive officers, senior management team and highly trained employees and any work stoppage, difficulty hiring similar employees, or ineffective succession planning could adversely affect our business.

Because our products are complicated and highly engineered, we depend on an educated and trained workforce. Historically, there has been substantial competition for skilled personnel in the aerospace and defense 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.

Reduction in force actions, such as the actions taken to reduce our workforce to align operations with customer demand as a result of the COVID-19 pandemic, could result in difficulty in rehiring capable employees to refill the positions eliminated as needed once business recovers.

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 strive to limit the volume of finished goods inventory, any work stoppage could materially and adversely affect our ability to provide products to our customers.

In addition, our success depends in part on our ability to attract and motivate our senior management and key employees. Achieving this objective may be difficult due to a variety of factors, including fluctuations in economic and industry conditions, competitors' hiring practices, and the effectiveness of our compensation programs. Competition for qualified personnel can be intense. If we are unable to effectively provide for the succession of key personnel, senior management and our executive officers, including our President, Chief Executive Officer and Director, our business, results of operations, cash flows and financial condition may be adversely affected. The Company's Board of Directors continually monitors this risk and we believe that the Company's succession plan, together with our straightforward strategy, clear value drivers, decentralized nature and the quality of managers running our operating units helps to mitigate this risk.

Risks Related to our Operations

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 Boeing, Airbus, and related OEM suppliers, as well as manufacturers of business jets 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, interest rates, 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. In recent years, we have been experiencing decreased sales across the commercial OEM sector driven primarily by the decrease in production by Boeing and Airbus related to reduced demand in the commercial aerospace industry from the COVID-19 pandemic, and also in Boeing's case, the 737 MAX's grounding and subsequent production slowdown, and airlines deferring or cancelling orders. Downturns adversely affect our results of operations, financial position and cash flows.

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.

The COVID-19 pandemic has continued to disrupt the global supply chain. We currently are experiencing supply shortages and inflationary pressures for certain components and raw materials that are important to our manufacturing process, particularly electronic parts. Expected growth in the global economy may exacerbate these pressures on us and our suppliers, and we expect these supply chain challenges and cost impacts to continue for the foreseeable future. Because we strive to limit the volume of raw materials and component parts on hand, 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.

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.

Climate-related regulations designed to address climate change may result in additional compliance costs.

Our operations and the products we sell are currently subject to rules limiting emissions and to other climate-related regulations in certain jurisdictions where we operate. The increased prevalence of global climate change concerns may result in new regulations that may negatively impact us, our suppliers and customers. We are continuing to evaluate short-, medium- and long-term risks related to climate change. We cannot predict what environmental legislation or regulations will be enacted in the future, how existing or future laws or regulations will be administered or interpreted, or what environmental conditions may be found to exist. Compliance with any new or more stringent laws or regulations, or stricter interpretations of existing laws, could require additional expenditures by us or our suppliers, in which case, the costs of raw materials and component parts could increase.

As a whole, because our manufacturing facilities primarily engage in assembly and light manufacturing and because we do not maintain any transportation infrastructure, our emissions primarily fall into Scope 2 and Scope 3 emissions. Accordingly, we do not anticipate any material adverse impact from increased carbon regulation. Further, because of our wide portfolio of hundreds of thousands of products, we do not anticipate any material adverse impact from the reliance on a supplier or group of suppliers that may be subject to climate risks. However, given the political significance and uncertainty around these issues, we cannot predict how legislation, regulation, and increased awareness of these issues will affect our operations and financial condition. We continue to evaluate ways to reduce our energy and water consumption and lower our greenhouse gas emissions through energy efficiency measures, the purchase of green power and other actions.

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

Our operations and those of our customers and suppliers have been and may again be subject to natural disasters, climate change-related events, pandemics or other business disruptions, which could seriously harm our results of operation and increase our costs and expenses. Some of our manufacturing facilities are located in regions that may be impacted by severe weather events, such as increased storm frequency or severity in the Atlantic and fires in hotter and drier climates. These could result in potential damage to our physical assets as well as disruptions in manufacturing activities. Some of our manufacturing facilities are located in areas that may be at risk due to rising sea levels. Moreover, some of our manufacturing facilities are located in areas that could experience decreased access to water due to climate issues.

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 health-related outbreaks and crises, cyber-attacks, computer or equipment malfunction (accidental or intentional), operator error or process failures. Should insurance or other risk transfer mechanisms, such as our existing disaster recovery and business continuity plans, be insufficient to recover all costs, we could experience a material adverse effect on our business, results of operations, financial position and cash flows.

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

Our net sales to foreign customers were approximately $1.7 billion for the fiscal years ended September 30, 2021 and 2020, respectively. A number of risks inherent in international operations could have a material adverse effect on our results of operations, including global health crises, Brexit, currency fluctuations, difficulties in staffing and managing multinational 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. Issues with the global supply chain can also rise due to some of the aforementioned risks as well as global health crises, such as the COVID-19 pandemic. 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, financial position and cash flows.

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, whether through direct contracts with the U.S. Government or as a subcontractor to customers contracting with the U.S. Government, 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;
- revoke required security clearances;
- 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 at 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 pricing reviews and government buying agencies that purchase some of our subsidiaries' products are periodically subject to audits by the DOD Office of Inspector General ("OIG") with respect to prices paid for such products. In the third quarter of fiscal 2019, we voluntarily refunded $16 million to the U.S. Government following an OIG audit, and another OIG audit is underway. In addition, our defense-related business has been the subject of an ongoing Congressional inquiry by the House Oversight Committee and release of the current OIG audit report may prompt further Congressional inquiries. Pricing reviews and government audits, including the audit underway, and the Congressional inquiries are costly and time consuming for our management and could distract from our ability to effectively manage the business. As a result of these reviews, audits and inquiries, we could be subject to providing further refunds to the U.S. Government, we could be asked to enter into an arrangement whereby our prices would be based on cost, the DOD could seek to pursue alternative sources of supply for our parts, or the U.S. Government could take other adverse actions with respect to our contracts. 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. Further, negative publicity relating to the results of any audit, inquiry or subsequent hearing or the like could negatively impact our stock price.

If a government inquiry or investigation uncovers improper or illegal activities, we could be subject to civil or criminal penalties or administrative sanctions, including contract termination, fines, forfeiture of fees, suspension of payment and suspension or debarment from doing business with U.S. Government agencies, any of which could materially adversely affect our reputation, business, financial condition, results of operations and cash flows.

Moreover, U.S. Government purchasing regulations contain a number of additional operational 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 U.S. and in other countries. In order to sell our products, we and the products 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. U.S. laws and regulations applicable to us include the Arms Export Control Act, the International Traffic in Arms Regulations ("ITAR"), the Export Administration Regulations ("EAR") and the trade sanctions laws and regulations administered by the United States Department of the Treasury's Office of Foreign Assets Control ("OFAC"). EAR restricts the export of dual-use products and technical data to certain countries, while ITAR restricts the export of defense products, technical data and defense services.

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.

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, including but not limited to the General Data Protection Regulation (the “GDPR”) and the California Consumer Privacy Act (the “CCPA”), 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. Complying with these various laws is difficult and could cause us to incur substantial costs or require us to change our business practices in a manner adverse to our business. Further, although we have implemented internal controls and procedures designed to ensure compliance with the GDPR, CCPA and other privacy-related laws, rules and regulations (collectively, the “Data Protection Laws”), there can be no assurance that our controls and procedures will enable us to be fully compliant with all Data Protection Laws.

Despite our efforts to protect sensitive information and confidential and personal data, comply with applicable laws, rules and regulations and implement data security measures, our facilities, and systems may be vulnerable to security breaches and other data loss, including cyber-attacks and, in fact, we have experienced data security incidents that have not had a material impact on our financial results. In addition, it is not possible to predict the impact on our business of the future loss, alteration or misappropriation of information in our possession related to us, our employees, former employees, customers, suppliers or others. This could lead to negative publicity, legal claims, theft, modification or destruction of proprietary information 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, results of operations, financial condition and cash flows.

Risks Related to Legal and Regulatory Matters

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 investigations and remediations 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 may be subject to periodic litigation and regulatory proceedings, including Fair Labor Standards Act and state wage and hour class action lawsuits, which may adversely affect our business and financial performance.

From time to time, we are involved in lawsuits and regulatory actions brought or threatened against us in the ordinary course of business. These actions and proceedings may involve claims for, among other things, compensation for alleged personal injury, workers' compensation, employment discrimination, or breach of contract. In addition, we may be subject to class action lawsuits, including those involving allegations of violations of consumer product statutes or the Fair Labor Standards Act and state wage and hour laws. Due to the inherent uncertainties of litigation, we cannot accurately predict the ultimate outcome of any such actions or proceedings. The outcome of litigation, particularly class action lawsuits and regulatory actions, is difficult to assess or quantify, as plaintiffs may seek recovery of very large or indeterminate amounts in these types of lawsuits, and the magnitude of the potential loss may remain unknown for substantial periods of time. In addition, plaintiffs in many types of actions may seek punitive damages, civil penalties, consequential damages or other losses, or injunctive or declaratory relief. These proceedings could result in substantial cost and may require us to devote substantial resources to defend ourselves. The ultimate resolution of these matters through settlement, mediation, or court judgment could have a material impact on our financial condition, results of operations, and cash flows.

We could be adversely affected if one of our products cause 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 product 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 products could damage our reputation for quality products. We believe our customers consider safety and reliability as key criteria in selecting a provider of aircraft products. If a crash were to be caused by one of our products, 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.

Risks Related to Financial Matters

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, customer relationships, and technology, were approximately $2.8 billion at September 30, 2021, representing approximately 14% of our total assets. Goodwill recognized in accounting for the mergers and acquisitions was approximately $8.6 billion at September 30, 2021, representing approximately 44% 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.

We may be subject to risks relating to changes in our tax rates or exposure to additional income tax liabilities.

We are subject to income taxes in the U.S. 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.

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

Notwithstanding special cash dividends, of which the most recent declaration by the Company's Board of Directors occurred on December 20, 2019 in the amount of $32.50 per outstanding share of common stock and cash dividend equivalent payments on options granted under its equity compensation plans, 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.

General Risks

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 RPMs, the size and age of the worldwide aircraft fleet, the percentage of the fleet that is out-of-warranty and 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 addition to the current COVID-19 pandemic and the adverse impact it has had on the airline industry, past examples in which the airline industry has been negatively affected include downturns in the global economy, higher fuel prices, increased security concerns among airline customers following the events of September 11, 2001, the Severe Acute Respiratory Syndrome ("SARS") epidemic, and conflicts abroad. Additional examples include future geopolitical or other worldwide events, such as war, terrorist acts, or additional worldwide infectious disease outbreaks.

In addition, global market and economic conditions have been challenging due to 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 the aforementioned 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, and delay refurbishments and discretionary spending. If demand for 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.

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 DOD budget. In addition to normal business risks, our supply of products to the U.S. 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 as a result of the presidential election or otherwise, the U.S. Government's budget deficits, spending priorities (e.g., allocating more spending to combat the effects of the COVID-19 pandemic), the cost of sustaining the U.S. military presence internationally 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.

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 operating performance of the companies issuing the securities. These 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. Such changes could be 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 such changes could be unrelated to our operating performance, such as changes in market conditions affecting the stock market generally or the stocks of aerospace companies or changes in the outlook for our common stock, such as changes to or the confidence in our business strategy, changes to or confidence in our management, or expectations for future growth of the Company. Global health crises such as the COVID-19 pandemic could also cause significant volatility in the market price.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

TransDigm's principal owned properties (defined as greater than 20,000 square feet or related to a principal operation) as of September 30, 2021 are as follows:

Location	Reporting Segment	Square Footage
Brea, CA [1]	Airframe	315,000
Stillington, United Kingdom	Airframe	274,800
Montreal, Canada	Airframe	271,700
Miesbach, Germany	Power & Control	242,000
Liberty, SC [1]	Power & Control	219,000
Waco, TX	Power & Control	218,800
Liverpool, NY	Power & Control	197,100
Ingolstadt, Germany	Airframe	191,900
Kent, OH [1]	Airframe	185,000
Bridport, United Kingdom	Airframe	174,700
Union Gap, WA [1]	Airframe	142,000
Coachella, CA [1]	Power & Control	140,000
Phoenix, AZ	Airframe	138,700
Paks, Hungary	Airframe	137,800
Los Angeles, CA	Power & Control	131,000
Bohemia, NY [1]	Power & Control	124,000
Buena Park, CA	Power & Control	115,000
Llangeinor, United Kingdom	Airframe	110,000
Bourges, France	Power & Control	109,400
Westbury, NY	Power & Control	106,800
Kent, WA [1]	Airframe	100,000
Painesville, OH	Power & Control	94,200
Valencia, CA [1]	Airframe	88,400
Letchworth, United Kingdom	Airframe	88,200
Placentia, CA	Airframe	86,600
Addison, IL [1]	Power & Control	83,300
Sarralbe, France	Power & Control	77,900
Niort, France	Power & Control	69,000
Clearwater, FL	Power & Control	64,200
Prescott, AZ	Airframe	62,400
South Euclid, OH	Power & Control	60,000
Wichita, KS	Power & Control	57,000
Branford, CT	Airframe	52,000
Avenel, NJ	Power & Control	48,500
Rancho Cucamonga, CA [1]	Power & Control	47,000
Pennsauken, NJ	Airframe	38,000
Ryde, United Kingdom	Power & Control	33,200
Rancho Cucamonga, CA	Airframe	32,700
Melaka, Malaysia	Power & Control	24,800
Cheveley, United Kingdom	Airframe	24,000
Deerfield Beach, FL	Non-aviation	20,000

(1) Subject to mortgage liens under our senior secured credit facility, our 6.25% senior secured notes due March 15, 2026 and our 8.00% senior secured notes due December 15, 2025.

TransDigm's principal leased properties (defined as greater than 20,000 square feet or related to a principal operation) as of September 30, 2021 are as follows:

Location	Reporting Segment	Square Footage
Everett, WA	Airframe	337,000
East Camden, AR	Power & Control	276,000
Whippany, NJ	Power & Control	229,600
Nittambuwa, Sri Lanka	Airframe	168,000
Santa Ana, CA	Airframe	159,200
Holmestrand, Norway	Airframe	144,700
Dayton, NV	Airframe	144,000
Tijuana, Mexico	Airframe	141,000
Anaheim, CA	Airframe	138,900
Marlow, United Kingdom	Airframe	116,100
Melbourne, FL	Power & Control	107,000
Farnborough, United Kingdom	Power & Control	103,400
Goldsboro, NC	Power & Control	101,000
Fullerton, CA	Airframe	100,000
Kunshan, China	Airframe	95,200
Sylmar, CA	Airframe	93,000
Elkhart, IN	Non-aviation	91,500
Davis Junction, IL	Airframe	84,500
Miesbach, Germany	Power & Control	80,800
Kunshan, China	Non-aviation	75,300
Camarillo, CA	Power & Control	70,000
Gloucestor, United Kingdom	Airframe	67,800
Tijuana, Mexico	Power & Control	63,500
Matamoros, Mexico	Power & Control	60,500
Tijuana, Mexico	Power & Control	49,300
Lillington, NC	Power & Control	48,800
Sugar Grove, IL	Airframe	45,000
Zunyi, China	Power & Control	43,000
Tempe, AZ	Power & Control	40,200
Collegeville, PA	Airframe	37,000
Chongqing, China	Airframe	36,300
Rancho Santa Margarita, CA	Airframe	35,200
Joensuu, Finland	Airframe	32,300
Ashford, United Kingdom	Power & Control	28,000
Nogales, Mexico	Airframe	27,000
Bridgend, United Kingdom	Airframe	24,800
Ravenna, OH	Airframe	22,500
Pennsauken, NJ	Airframe	20,500
Cleveland, OH	Corporate	20,100

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

The Company is involved in various claims and legal actions arising in the ordinary course of business. SEC regulations require us to disclose certain information about environmental proceedings when a governmental authority is a party to the proceedings if we reasonably believe that such proceedings may result in monetary sanctions above a stated threshold. Pursuant to such regulations, the Company uses a threshold of $1 million or more for purposes of determining whether disclosure of any such proceedings is required as we believe matters under this threshold are not material to the Company. 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.

Information with respect to our legal proceedings is contained in Note 15, “Commitments and Contingencies,” within the notes to the consolidated financial statements included herein.

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.”

Holders

As of October 13, 2021, there were 33 stockholders of record of our common stock and approximately 194,000 beneficial stockholders, which includes an estimated number of stockholders who have their shares held in their accounts by banks and brokers.

Dividends

No dividends were declared during fiscal 2021. During fiscal 2020, TD Group’s Board of Directors declared a special cash dividend of $32.50 (in December 2019) on each outstanding share of common stock and cash dividend equivalent payments under options granted under its equity compensation plans.

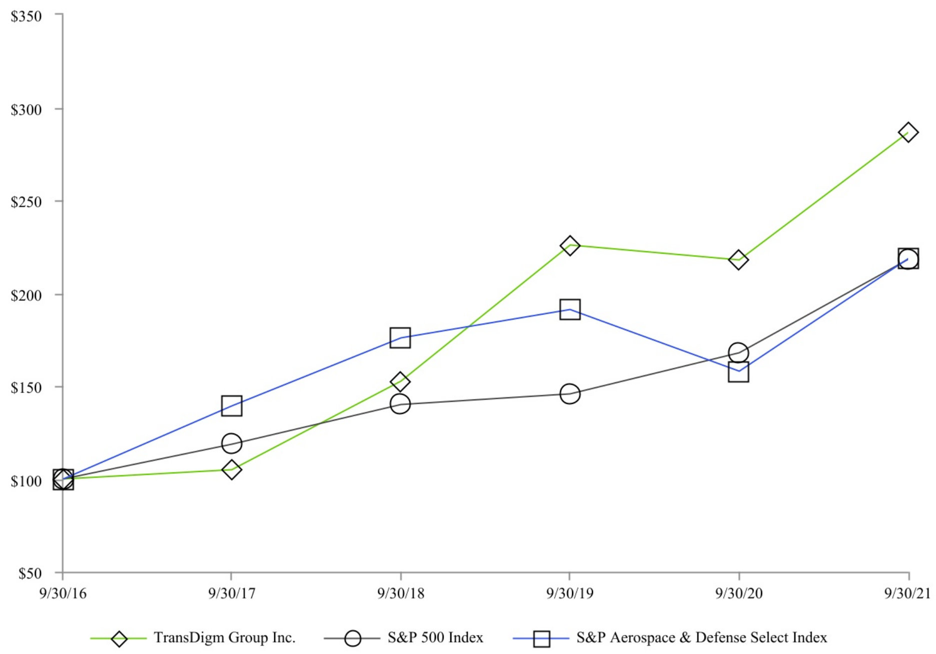
Performance Graph

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 500 Index and the S&P Aerospace & Defense Select Index. An investment of $100 (with reinvestment of all dividends) is assumed to have been made in our common stock and in each of the indexes on September 30, 2016, and its relative performance is tracked through September 30, 2021.

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 500 Index and S&P Aerospace & Defense Select Index



*$100 invested on 9/30/16 in stock or index, including reinvestment of dividends.

	9/30/16	9/30/17	9/30/18	9/30/19	9/30/20	9/30/21
TransDigm Group Inc.	100.00	104.73	152.52	225.70	217.82	286.34
S&P 500 Index	100.00	118.61	139.85	145.80	167.89	218.27
S&P Aerospace & Defense Select Index	100.00	139.21	175.93	191.20	157.98	218.45

Purchases of Equity Securities by the Issuer or Affiliated Purchaser

On November 8, 2017, our Board of Directors, authorized a stock repurchase program permitting repurchases of our outstanding shares not to exceed $650 million in the aggregate, subject to any restrictions specified in the Credit Agreement and/or Indentures governing the existing Notes as described within the *Liquidity and Capital Resources* section of Item 7. "Management's Discussion and Analysis of Financial Conditions and Results of Operations."

No repurchases were made under the program during the fiscal year ended September 30, 2021. During the fiscal year ended September 30, 2020, the Company repurchased 36,900 shares of its common stock at a gross cost of $18.9 million at the weighted average cost of $512.67 under the repurchase program. As of September 30, 2021, the remaining amount of repurchases allowable under the program was $631.1 million subject to any restrictions specified in the Credit Agreement and/or Indentures governing the existing Notes.

ITEM 6. SELECTED FINANCIAL DATA

[Reserved]

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 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 2021, we generated net sales of $4,798 million, gross profit of $2,513 million or 52.4% of net sales, and net income attributable to TD Group of $680 million. The COVID-19 pandemic has continued to cause a significant adverse impact on our net sales, net income and EBITDA As Defined when compared to pre-pandemic levels. Historically and as our business continues to recover from the pandemic, 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 in the financial performance of the acquired business.

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 over 100,000 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. As a result of the COVID-19 pandemic, many of our businesses have taken the opportunity to explore new business opportunities by working on developing highly engineered solutions for emerging needs arising from the pandemic. Product solutions currently being explored include anti-viral or antimicrobial technology, air purification, and touchless technologies, among others.

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 potential disincentives to competition for certain products.

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 approximately 86 businesses and 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. In the case of larger acquisitions that consists of multiple business units (such as the Esterline acquisition), we may pursue opportunities to divest certain acquired business units that are not in line with our long-term acquisition strategy.

Acquisitions and divestitures during the most recent three fiscal years are described in Note 2, "Acquisitions and Divestitures," in the notes to the consolidated financial statements included herein.

Impact of the COVID-19 Pandemic

The COVID-19 pandemic is continuing to cause an adverse impact on our employees, operations, supply chain and distribution system and the long-term impact to our business remains unknown. This is due to the numerous uncertainties that have risen from the pandemic, including the severity of the disease, the duration of the outbreak, the likelihood of resurgences of the outbreak, including due to the emergence and spread of variants, actions that may be taken by governmental authorities in response to the disease, the continued efficacy and public acceptance of vaccines, and unintended consequences of the foregoing.

The commercial aerospace industry, in particular, has been significantly disrupted, both domestically and internationally, by the pandemic. The pandemic has resulted in governments around the world implementing stringent measures to help control the spread of the virus, including quarantines, "shelter in place" and "stay at home" orders, travel restrictions, business curtailments and other measures. As a result, demand for travel declined at a rapid pace beginning in the second half of fiscal 2020 and has remained depressed compared to pre-pandemic levels. However, commercial air travel has increasingly shown signs of recovery in recent months with increasing air traffic, primarily in certain domestic markets. The recovery in international commercial air travel has been slower with international travel only slightly recovered from COVID-19 pandemic lows. The exact pace and timing of the commercial air travel recovery remains uncertain and is expected to continue to be uneven depending on factors such as trends in the number of COVID-19 infections (e.g., impact of new variants of COVID-19 resurfacing), the continued efficacy and public acceptance of vaccines and easing of quarantines and travel restrictions, among other factors. We currently expect COVID-19 to continue to cause an adverse impact on our net sales, net income and EBITDA as Defined compared to pre-pandemic levels into fiscal 2022. Longer-term, because the duration of the pandemic is unclear, it is difficult to forecast a precise impact on the Company's future results.

The Company took immediate and aggressive action to minimize the spread of COVID-19 in our workplaces and reduce costs. Since the early days of the pandemic, we have been following guidance from the World Health Organization and the U.S. Center for Disease Control to protect employees and prevent the spread of the virus within all of our facilities globally.

For the fiscal year ended September 30, 2021, COVID-19 restructuring costs incurred were approximately $36 million, of which $26 million was recorded in cost of sales and $10 million was recorded in selling and administrative expenses. These were costs related to the Company's actions to reduce its workforce to align with customer demand. Additionally, the Company incurred approximately $4 million in incremental costs related to the pandemic that are not expected to recur once the pandemic has subsided and are clearly separable from normal operations (e.g., additional cleaning and disinfecting of facilities by contractors above and beyond normal requirements, personal protective equipment).

As of September 30, 2021, the restructuring accrual associated with the costs incurred in response to the COVID-19 pandemic was approximately $19 million. In fiscal 2022, the Company may incur additional restructuring and incremental costs related to the COVID-19 pandemic though at a reduced level in comparison to fiscal 2021 and 2020.

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 millions):

	Fiscal Years Ended September 30,			
	2021	2021 % of Net Sales	2020	2020 % of Net Sales
Net sales	$ 4,798	100.0 %	$ 5,103	100.0 %
Cost of sales	2,285	47.6 %	2,456	48.1 %
Selling and administrative expenses	685	14.3 %	727	14.2 %
Amortization of intangible assets	137	2.9 %	169	3.3 %
Income from operations	1,691	35.2 %	1,751	34.3 %
Interest expense, net	1,059	22.1 %	1,029	20.2 %
Refinancing costs	37	0.8 %	28	0.5 %
Other income	(51)	(1.1)%	(46)	(0.9)%
Gain on sale of businesses, net	(69)	(1.4)%	—	— %
Income tax provision	34	0.7 %	87	1.7 %
Income from continuing operations	681	14.2 %	653	12.8 %
Less: Net income attributable to noncontrolling interests	(1)	— %	(1)	— %
Income from continuing operations attributable to TD Group	680	14.2 %	652	12.8 %
Income from discontinued operations, net of tax	—	— %	47	0.9 %
Net income attributable to TD Group	$ 680	14.2 %	$ 699	13.7 %
Net income applicable to TD Group common stockholders	$ 607 (1)	12.7 %	$ 514 (1)	10.1 %
Earnings per share:				
Earnings per share from continuing operations—basic and diluted	$ 10.41 (2)		$ 8.14 (2)	
Earnings per share from discontinued operations—basic and diluted	— (2)		0.82 (2)	
Earnings per share	$ 10.41		$ 8.96	
Cash dividends paid per common share	$ —		$ 32.50	
Weighted-average shares outstanding—basic and diluted	58.4		57.3	
Other Data:				
EBITDA	$ 2,027 (3)		$ 2,052 (3)	
EBITDA As Defined	$ 2,189 (3)	45.6 %	$ 2,278 (3)	44.6 %

(1) Net income applicable to TD Group common stockholders represents net income attributable to TD Group less special dividends declared or paid on participating securities, including dividend equivalent payments of $73 million and $185 million for the fiscal years ended September 30, 2021 and 2020.

(2) Earnings per share from continuing operations is calculated by dividing net income applicable to TD Group common stockholders, excluding income from discontinued operations, net of tax, by the basic and diluted weighted average common shares outstanding. Earnings per share from discontinued operations is calculated by dividing income from discontinued operations, net of tax, by the basic and diluted weighted average common shares outstanding.

(3) Refer to “Non-GAAP Financial Measures” in this discussion and analysis for additional information and limitations regarding these non-GAAP financial measures, including a reconciliation to the comparable GAAP financial measure.

Fiscal year ended September 30, 2021 compared with fiscal year ended September 30, 2020

Total Company

- ***Net Sales.*** Net organic sales and acquisition and divestiture sales and the related dollar and percentage changes for the fiscal years ended September 30, 2021 and 2020 were as follows (amounts in millions):

	Fiscal Years Ended			
	September 30, 2021	September 30, 2020	Change	% Change Net Sales
Organic sales	$ 4,520	$ 4,900	$ (380)	(7.4)%
Acquisition and divestiture sales	278	203	75	1.4 %
Net sales	$ 4,798	$ 5,103	$ (305)	(6.0)%

Organic sales represent sales from existing businesses owned by the Company, excluding sales from acquisitions and divestitures. Acquisition sales represent sales from acquired businesses for the period up to one year subsequent to their respective acquisition date. Divestiture sales represent sales from businesses divested in fiscal 2021. Acquisition and divestiture sales are excluded from organic sales due to the variability in the nature, timing and extent of acquisitions and divestitures and resulting variable impact on underlying trends.

The decrease in organic sales of $380 million for the fiscal year ended September 30, 2021 compared to the fiscal year ended September 30, 2020, is primarily related to decreases in commercial OEM sales ($315 million, a decrease of 25.6%) and commercial aftermarket sales ($233 million, a decrease of 18.1%); partially offset by increases in defense sales ($115 million, an increase of 5.4%) and non-aerospace sales ($53 million, an increase of 19.8%). The decreases in the commercial OEM market and commercial aftermarket are primarily attributable to the adverse impact that the COVID-19 pandemic has had on the customer demand for air travel worldwide particularly in the first half of fiscal 2021 and build rate reductions by aircraft OEMs. Both commercial OEM and aftermarket sales increased in the second half of fiscal 2021 compared to the previous year's comparable period. The increase in defense sales and non-aerospace sales in fiscal 2021 is primarily driven by the OEM market.

The increase in acquisition and divestiture sales for the fiscal year ended September 30, 2021 is primarily attributable to the acquisition of Cobham Aero Connectivity ("CAC") in the second quarter of fiscal 2021 and the divestitures of ScioTeq and TREALITY Simulation Visual Systems ("ScioTeq and TREALITY") and Technical Airborne Components ("TAC"), all of which were completed in the third quarter of fiscal 2021. Refer to Note 2, "Acquisitions and Divestitures," in the notes to the consolidated financial statements included herein for further information on the businesses acquired and divested by the Company in fiscal years 2020 and 2021.

- ***Cost of Sales and Gross Profit.*** Cost of sales decreased by $171 million, or 7.0%, to $2,285 million for the fiscal year ended September 30, 2021 compared to $2,456 million for the fiscal year ended September 30, 2020. Cost of sales and the related percentage of net sales for the fiscal years ended September 30, 2021 and 2020 were as follows (amounts in millions):

	Fiscal Years Ended			
	September 30, 2021	September 30, 2020	Change	% Change
Cost of sales - excluding costs below	$ 2,280	$ 2,414	$ (134)	(5.6)%
% of net sales	47.5 %	47.3 %		
COVID-19 pandemic restructuring costs	26	37	(11)	(29.7)%
% of net sales	0.5 %	0.7 %		
Non-cash stock compensation expense	13	9	4	44.4 %
% of net sales	0.3 %	0.2 %		
Foreign currency losses	11	22	(11)	(50.0)%
% of net sales	0.2 %	0.4 %		
Inventory acquisition accounting adjustments	6	—	6	100.0 %
% of net sales	0.1 %	— %		
Acquisition integration costs	4	10	(6)	(60.0)%
% of net sales	0.1 %	0.2 %		
Loss contract amortization	(55)	(36)	(19)	52.8 %
% of net sales	(1.1)%	(0.7)%		
Total cost of sales	$ 2,285	$ 2,456	$ (171)	(7.0)%
% of net sales	47.6 %	48.1 %		
Gross profit	$ 2,513	$ 2,647	$ (134)	(5.1)%
Gross profit percentage	52.4 %	51.9 %		

The decrease in the dollar amount of cost of sales during the fiscal year ended September 30, 2021 was primarily due to lower sales volume from decreased customer demand due to the COVID-19 pandemic and the other factors summarized above, including those factors that partially offset the decrease in cost of sales.

Gross profit as a percentage of net sales increased by 0.5 percentage points to 52.4% for the fiscal year ended September 30, 2021 from 51.9% for the fiscal year ended September 30, 2020. In addition to the factors summarized above, the increase in the gross profit percentage is primarily driven by the realization of the cost mitigation measures that began to be enacted in the second half of fiscal 2020 in response to the COVID-19 pandemic. The material cost mitigation measures enacted are described in Note 1, "Description of the Business and Impact of COVID-19 Pandemic," in the notes to the consolidated financial statements included herein. Partially offsetting were higher material costs due to inflationary effects and shortages in the global supply chain for certain raw materials and component parts. Also partially offsetting were fixed overhead costs spread over a lower production volume during the fiscal year ended September 30, 2021.

- ***Selling and Administrative Expenses.*** Selling and administrative expenses decreased by $42 million to $685 million, or 14.3% of sales, for the fiscal year ended September 30, 2021 from $727 million, or 14.2% of sales, for the comparable period in the prior year. Selling and administrative expenses and the related percentage of total sales for the fiscal years ended September 30, 2021 and 2020 were as follows (amounts in millions):

	Fiscal Years Ended			
	September 30, 2021	September 30, 2020	Change	% Change
Selling and administrative expenses - excluding costs below	$ 534	$ 592	$ (58)	(9.8)%
% of net sales	11.1 %	11.6 %		
Non-cash stock compensation expense	116	84	32	38.1 %
% of net sales	2.4 %	1.6 %		
Acquisition and divestiture transaction-related expenses	15	1	14	1,400.0 %
% of net sales	0.3 %	— %		
Acquisition integration costs	10	20	(10)	(50.0)%
% of net sales	0.2 %	0.4 %		
COVID-19 pandemic restructuring costs	10	9	1	11.1 %
% of net sales	0.2 %	0.2 %		
Bad debt expense	—	21	(21)	(100.0)%
% of net sales	— %	0.4 %		
Total selling and administrative expenses	$ 685	$ 727	$ (42)	(5.8)%
% of net sales	14.3 %	14.2 %		

The decrease in total selling and administrative expenses during the fiscal year ended September 30, 2021 is primarily due to the realization of the cost mitigation measures that began to be enacted in the second half of fiscal 2020 in response to the COVID-19 pandemic, partially offset by the other factors summarized above. The material cost mitigation measures enacted are described in Note 1, "Description of the Business and Impact of COVID-19 Pandemic," in the notes to the consolidated financial statements included herein. The increase in non-cash stock compensation expense is attributable to the new stock option grants awarded in fiscal 2021 and the impact of the Black-Scholes fair value on certain fiscal 2021 stock option grant modifications and on the fiscal 2020 grants in connection with the change in vesting terms approved by the Compensation Committee of the Board of Directors in the first quarter of fiscal 2021. The decrease in bad debt expense for the fiscal year ended September 30, 2021 is primarily driven by a decrease in estimated losses from certain commercial aerospace customers that were more adversely affected by the COVID-19 pandemic.

- ***Amortization of Intangible Assets.*** Amortization of intangible assets was $137 million for the fiscal year ended September 30, 2021 compared to $169 million for the fiscal year ended September 30, 2020. The decrease in amortization expense of $32 million was primarily due to the amortization expense on sales order backlog recorded in fiscal 2020 in connection with the acquisition of Esterline that did not occur in fiscal 2021 as sales order backlog was fully amortized by the end of fiscal 2020. This was partially offset by amortization expense on intangible assets related to the CAC acquisition in the second quarter of fiscal 2021.
- ***Interest Expense-net.*** Interest expense-net includes interest on borrowings outstanding, amortization of debt issuance costs, original issue discount and premium, revolving credit facility fees and interest on finance leases; slightly offset by interest income. Interest expense-net increased $30 million, or 2.9%, to $1,059 million for the fiscal year ended September 30, 2021 from $1,029 million for the comparable period in the prior year. The increase in interest expense-net was primarily due to an increase in the weighted average level of outstanding borrowings, which was approximately $20.0 billion for the fiscal year ended September 30, 2021 compared to approximately $19.1 billion for the fiscal year ended September 30, 2020. The weighted average interest rate for cash interest payments on total borrowings outstanding for the fiscal year ended September 30, 2021 was 5.03%.
- ***Refinancing Costs.*** Refinancing costs of $37 million were recorded for the fiscal year ended September 30, 2021 compared to $28 million recorded for the fiscal year ended September 30, 2020. The refinancing costs are primarily related to fees incurred on the early redemptions of the 6.50% Senior Subordinated Notes due 2024 (the "2024 Notes") and the 2025 Notes that occurred in the second and third quarters of fiscal 2021, respectively.

- ***Other Income***. Other income of $51 million was recorded for the fiscal year ended September 30, 2021 compared to $46 million recorded for the fiscal year ended September 30, 2020. Other income for the fiscal year ended September 30, 2021 was primarily driven by $24 million recorded for the settlement of the insurance claim for Leach International Europe's Niort, France operating facility fire in August 2019. This primarily represents the insurance proceeds received in excess of the carrying value of the damaged fixed assets and inventory and proceeds from the business interruption settlement. The remaining $27 million is primarily driven by non-service related components of net periodic benefit costs on the Company's defined benefit pension plans ($14 million), receipt of payment of Canadian governmental subsidies ($7 million) and the release of a litigation reserve ($3 million). Other income for the fiscal year ended September 30, 2020 was primarily driven by proceeds or proceeds receivable from business interruption insurance settlements ($34 million) and non-service related components of net periodic benefit costs on the Company's defined benefit pension plans ($12 million).
- ***Gain on Sale of Businesses-net.*** Gain on sale of businesses-net of $69 million was recorded for the fiscal year ended September 30, 2021, and is primarily related to the net gain on sale recognized during the third quarter of fiscal 2021 as a result of the ScioTeq and TREALITY and TAC divestitures. There was no gain on sale of businesses-net recorded for the fiscal year ended September 30, 2020.
- ***Income Taxes.*** Income tax expense as a percentage of income before income taxes was approximately 4.7% for the fiscal year ended September 30, 2021 compared to 11.7% for the fiscal year ended September 30, 2020. The Company's lower effective tax rate for the fiscal year ended September 30, 2021 was primarily due to the Company's ability to utilize its net interest deduction limitation carryforward pursuant to IRC Section 163(j) resulting in the release of the valuation allowance applicable to such carryforward and the discrete impact of excess tax benefits associated with share-based compensation.
- ***Income from Discontinued Operations, net of tax*.** There were no discontinued operations for the fiscal year ended September 30, 2021. Income from discontinued operations, net of tax, for the fiscal year ended September 30, 2020 was $47 million and consisted of $7 million from the results of operations of Souriau-Sunbank and a gain on the sale of Souriau-Sunbank, net of tax, of $40 million.
- ***Net Income Attributable to TD Group.*** Net income attributable to TD Group decreased $19 million, or 2.7%, to $680 million for the fiscal year ended September 30, 2021 compared to net income attributable to TD Group of $699 million for the fiscal year ended September 30, 2020.
- ***Earnings per Share*.** Basic and diluted earnings per share was $10.41 for the fiscal year ended September 30, 2021. There was no impact on earnings per share from discontinued operations for the fiscal year ended September 30, 2021. Basic and diluted earnings per share from continuing operations and discontinued operations were $8.14 and $0.82, respectively, for the fiscal year ended September 30, 2020. Net income attributable to TD Group for the fiscal year ended September 30, 2021 of $680 million was decreased by dividend equivalent payments of $73 million, or $1.24 per share, resulting in net income applicable to TD Group common stockholders of $607 million, or $10.41 per share. Net income attributable to TD Group for the fiscal year ended September 30, 2020 of $699 million was decreased by dividend equivalent payments of $185 million, or $3.22 per share, resulting in net income applicable to TD Group common stockholders of $514 million, or $8.96 per share. The increase of $1.45 per share is primarily a result of the factors referred to above.

Business Segments

- ***Segment Net Sales*.** Net sales by segment for the fiscal years ended September 30, 2021 and 2020 were as follows (amounts in millions):

	Fiscal Years Ended September 30,					
	2021	% of Net Sales	2020	% of Net Sales	Change	% Change
Power & Control	$ 2,550	53.2 %	$ 2,695	52.8 %	$ (145)	(5.4)%
Airframe	2,083	43.4 %	2,253	44.2 %	(170)	(7.5)%
Non-aviation	165	3.4 %	155	3.0 %	10	6.5 %
Net sales	$ 4,798	100.0 %	$ 5,103	100.0 %	$ (305)	(6.0)%

Net sales for the Power & Control segment decreased $145 million, a decrease of 5.4%, for the fiscal year ended September 30, 2021. The sales decrease resulted primarily from decreases in organic sales in commercial OEM ($101 million, a decrease of 18.5%) and commercial aftermarket ($81 million, a decrease of 12.7%); partially offset by an increase in organic defense sales ($44 million, an increase of 3.2%). The decreases in commercial OEM and commercial aftermarket sales are attributable to the COVID-19 pandemic and its adverse impact on the commercial aerospace sector, particularly in the first half of fiscal 2021, and build rate reductions by aircraft OEMs. The increase in defense sales is primarily attributable to the rebound in demand from the temporary pandemic-induced decline for certain platforms in fiscal 2020. The change in acquisition and divestiture sales was immaterial for the fiscal year ended September 30, 2021.

Net sales for the Airframe segment decreased $170 million, a decrease of 7.5%, for the fiscal year ended September 30, 2021. The sales decrease resulted primarily from decreases in organic sales in commercial OEM ($214 million, a decrease of 31.8%) and commercial aftermarket ($151 million, a decrease of 23.4%); partially offset by an increase in organic defense sales ($72 million, an increase of 10.4%). The decreases in commercial OEM and commercial aftermarket sales are attributable to the COVID-19 pandemic and its adverse impact on the commercial aerospace sector, particularly in the first half of fiscal 2021. The increase in defense sales is primarily attributable to the rebound in demand from the temporary pandemic-induced decline for certain platforms in fiscal 2020. Acquisition and divestiture sales increased $85 million, primarily due to the acquisition of CAC in the second quarter of fiscal 2021.

Net sales for the Non-aviation segment increased by $10 million, an increase of 6.5%, for the fiscal year ended September 30, 2021. The sales increase resulted primarily from an increase in organic sales in non-aerospace ($21 million, an increase of 18.7%). Acquisition and divestiture sales decreased by $9 million.

- ***EBITDA As Defined*.** Refer to the “Non-GAAP Financial Measures” section within Item 7 for further information on EBITDA as Defined. EBITDA As Defined by segment for the fiscal years ended September 30, 2021 and 2020 were as follows (amounts in millions):

	Fiscal Years Ended September 30,					
	2021	% of Segment Net Sales	2020	% of Segment Net Sales	Change	% Change
Power & Control	$ 1,319	51.7 %	$ 1,345	49.9 %	$ (26)	(1.9)%
Airframe	878	42.2 %	955	42.4 %	(77)	(8.1)%
Non-aviation	62	37.6 %	54	34.8 %	8	14.8 %
	$ 2,259	47.1 %	$ 2,354	46.1 %	$ (95)	(4.0)%

Organic EBITDA As Defined represents EBITDA As Defined from existing businesses owned by the Company as of September 30, 2021, excluding EBITDA As Defined from acquisitions and divestitures. EBITDA As Defined from acquisitions and divestitures represents EBITDA As Defined from acquired businesses up to one year subsequent to the respective acquisition date and from businesses divested by the Company during the fiscal year ended September 30, 2021.

EBITDA As Defined for the Power & Control segment decreased approximately $26 million, a decrease of 1.9%, primarily as a result of lower organic sales in the commercial OEM market and commercial aftermarket due to the COVID-19 pandemic and its adverse impact on the commercial aerospace sector, particularly in the first half of fiscal 2021, and build rate reductions by aircraft OEMs. The change in EBITDA As Defined for the Power & Control segment from acquisitions and divestitures was immaterial for the fiscal year ended September 30, 2021.

EBITDA As Defined for the Airframe segment decreased approximately $77 million, a decrease of 8.1%, primarily as a result of lower organic sales in the commercial OEM market and commercial aftermarket due to the COVID-19 pandemic and its adverse impact on the commercial aerospace sector, particularly in the first half of fiscal 2021, and build rate reductions by aircraft OEMs. EBITDA As Defined for the Airframe segment from acquisitions and divestitures increased by $27 million, primarily due to the acquisition of CAC in the second quarter of fiscal 2021.

EBITDA As Defined for the Non-aviation segment increased approximately $8 million, an increase of 14.8%, primarily as a result of favorable organic sales mix specifically from other non-aerospace sales. The change in EBITDA As Defined for the Non-aviation segment from acquisitions and divestitures was immaterial for the fiscal year ended September 30, 2021.

Fiscal year ended September 30, 2020 compared with fiscal year ended September 30, 2019

For our results of operations for fiscal 2020 compared with fiscal 2019, refer to the discussion in Item 7. “Management’s Discussion and Analysis of Financial Conditions and Results of Operations” of Form 10-K for the fiscal year ended September 30, 2020, as filed with the Securities and Exchange Commission on November 12, 2020.

Liquidity and Capital Resources

The following table presents selected balance sheet, cash flow and other financial data relevant to the liquidity or capital resources of the Company for the periods specified below (in millions):

		As of September 30,	
		2021	2020
Selected Balance Sheet, Cash Flow and Other Financial Data:			
Cash and cash equivalents		$ 4,787	$ 4,717
Working capital		5,367	5,344
Total assets		19,315	18,395
Total debt [1]		19,998	20,009
TD Group stockholders' deficit		(2,916)	(3,972)
Cash flows provided by (used in):			
Operating activities	$913	913	1,213
Investing activities	(785)	(785)	799
Financing activities	(70)	(70)	1,230
Capital expenditures	105	105	105
Ratio of earnings to fixed charges [2]	1.7x	1.7x	1.7x

(1) Includes debt issuance costs and original issue discount and premiums. Reference Note 12, "Debt," in the notes to the consolidated financial statements included herein for additional information.

(2) 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, original issue discount and premium and the "interest component" of rental expense.

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.

If the Company has excess cash, it generally prioritizes allocating the excess cash in the following manner: (1) capital spending at existing businesses, (2) acquisitions of businesses, (3) payment of a special dividend and/or repurchases of our common stock and (4) prepayment of indebtedness or repurchase of debt. Whether the Company undertakes common 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, including the ongoing COVID-19 pandemic.

The Company is continuing to strategically manage the Company's cash and cash equivalents in response to the ongoing COVID-19 pandemic and related uncertainty of the duration and impact of the pandemic on the Company's business in fiscal 2022 and beyond. For instance, due to favorable market conditions in the high yield bond market, the Company refinanced $1,950 of its senior subordinated notes in fiscal 2021 resulting in a reduced interest rate (estimated $35 million reduction in annual interest payments) and an extended maturity date.

As of September 30, 2021, the Company has significant cash liquidity as illustrated in the table presented below (in millions):

	As of September 30, 2021
Cash and cash equivalents [1]	$ 4,787
Availability on revolving credit facility [1]	529
Cash liquidity	$ 5,316

(1) On October 6, 2021, the Company repaid $200 million drawn on the revolving credit facility using existing cash on hand, increasing the borrowings available under the revolving credit facility to $728.9 million.

We believe our significant cash liquidity will allow us to meet our anticipated funding requirements. We expect to meet our short-term cash liquidity requirements (including interest obligations and capital expenditures) through net cash from operating activities, cash on hand and, if needed, additional draws on the revolving credit facility. Long-term cash liquidity requirements consist primarily of obligations under our long-term debt agreements. There is no maturity on any tranche of term loans or notes until August 2024.

In connection with the continued 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), we expect our efforts will continue to generate strong margins and provide sufficient cash provided by operating activities to meet our interest obligations and liquidity needs. We believe our cash provided by operating activities and available borrowing capacity will enable us to make strategic business acquisitions (such as the CAC acquisition completed in the second quarter of fiscal 2021 for an enterprise value of $965 million using existing cash on hand), pay dividends to our shareholders and make opportunistic investments in our own stock, subject to any restrictions in our existing credit agreement and market conditions in consideration of the ongoing COVID-19 pandemic.

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 $913 million of net cash from operating activities during fiscal 2021 compared to $1,213 million during fiscal 2020. The change from prior year is primarily driven by changes in working capital as further described below.

The change in trade accounts receivable during fiscal 2021 was a use of cash of $78 million in cash compared to a source of cash of $352 million in fiscal 2020. The increase in the use of cash of $430 million is primarily attributable to the decrease in accounts receivable from lower sales due to the COVID-19 pandemic. The Company continues to actively manage its accounts receivable, the related agings and collection efforts in response to the COVID-19 pandemic.

The change in inventories during fiscal 2021 was a source of cash of $79 million compared to a use of cash of $62 million in fiscal 2020. The increase in the source of cash is primarily driven by decreased purchasing of raw materials particularly in the first half of fiscal 2021 from lower demand as a result of the COVID-19 pandemic and actively managing inventory levels.

The change in accounts payable during fiscal 2021 was a source of cash of $3 million compared to a use of cash of $62 million in fiscal 2020 primarily due to timing of payments to suppliers.

Investing Activities. Net cash used in investing activities was $785 million during fiscal 2021, consisting primarily of $945 million from the acquisition of CAC in the second quarter of fiscal 2021 and capital expenditures of $105 million. This was partially offset by proceeds of $259 million from the completion of the divestitures of certain businesses, and $24 million of insurance proceeds received from the Leach International Europe facility fire claim. The Company estimates its capital expenditures in fiscal year 2022 to be between $135 million and $155 million with the increase from prior year attributable to projects that were delayed into fiscal 2022 as a result of the COVID-19 pandemic. 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 improving our cost structure and providing highly engineered value-added products to customers).

Financing Activities. Net cash used in financing activities during fiscal 2021 was $70 million. The use of cash was primarily attributable to the redemptions of the 2024 Notes and 2025 Notes for $1,220 million and $762 million, respectively, repayment on term loans of $75 million and dividend equivalent payments of $73 million. This was partially offset by $1,189 million in net proceeds from the completion of the 4.625% 2029 Notes offering, $743 million in net proceeds from the completion of the 4.875% 2029 Notes offering and $128 million in proceeds from stock option exercises.

Description of Senior Secured Term Loans and Indentures

Senior Secured Credit Facilities

TransDigm has $7,374 million in fully drawn term loans (the “Term Loans Facility”) and a $760 million revolving credit facility. The Term Loans Facility consists of three tranches of term loans as follows (aggregate principal amount disclosed is as of September 30, 2021):

Term Loans Facility	Aggregate Principal	Maturity Date	Interest Rate
Tranche E	$2,177 million	May 30, 2025	LIBOR + 2.25%
Tranche F	$3,454 million	December 9, 2025	LIBOR + 2.25%
Tranche G	$1,743 million	August 22, 2024	LIBOR + 2.25%

The Term Loans Facility requires quarterly aggregate principal payments of $18.8 million. The revolving credit facility consists of two tranches which include up to $151.5 million of multicurrency revolving credit. At September 30, 2021, the Company had $31 million in letters of credit outstanding, $200 million drawn and outstanding, and $529 million in borrowings available under the revolving credit facility. On October 6, 2021, the Company repaid the $200 million drawn using existing cash on hand.

The interest rates per annum applicable to the loans under the Credit Agreement are, at TransDigm's option, equal to either an alternate base rate or an adjusted LIBOR 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 LIBOR related to tranche E, tranche F and tranche G term loans are not subject to a floor. For the fiscal year ended September 30, 2021, the applicable interest rate was approximately 2.33% on the existing term loans. Interest rate swaps and caps used to hedge and offset, respectively, the variable interest rates on the credit facility are described in Note 21, "Derivatives and Hedging Activities," in the notes to the consolidated financial statements included herein.

Fiscal 2021 Amendment to the Credit Agreement

On May 24, 2021, the Company entered into Amendment No. 8 and Loan Modification Agreement (herein, "Amendment No. 8"). Under the terms of Amendment No. 8, the Company, among other things, (i) extends the maturity date of the revolving credit commitments and revolving loans under its existing Credit Agreement to May 24, 2026, and (ii) the LIBOR interest rate per annum applicable to the revolving loans under its existing Credit Agreement is 2.50%, a decrease from the 3.00% rate that applied previous to the amendment. The other terms and conditions that apply to the revolving loans are substantially the same as the terms and conditions that applied to the revolving loans immediately prior to Amendment No. 8.

Indentures

The following table represents the notes outstanding as of September 30, 2021:

Description	Aggregate Principal	Maturity Date	Interest Rate
2025 Secured Notes	$1,100 million	December 15, 2025	8.00%
2026 Secured Notes	$4,400 million	March 15, 2026	6.25%
6.875% 2026 Notes	$500 million	May 15, 2026	6.875%
6.375% 2026 Notes	$950 million	June 15, 2026	6.375%
7.50% 2027 Notes	$550 million	March 15, 2027	7.50%
5.50% 2027 Notes	$2,650 million	November 15, 2027	5.50%
4.625% 2029 Notes	$1,200 million	July 15, 2029	4.625%
4.875% 2029 Notes	$750 million	October 15, 2029	4.875%

Refer to Note 12, "Debt," in the notes to the consolidated financial statements included herein for information over the Company's issuances and redemptions of senior subordinated notes executed during fiscal year 2021.

The 6.375% 2026 Notes, the 7.50% 2027 Notes, the 5.50% 2027 Notes, the 4.625% 2029 Notes and the 4.875% 2029 Notes (collectively, the "TransDigm Inc. Notes") were issued at a price of 100% of the principal amount. The 6.875% 2026 Notes (the "TransDigm UK Notes" and together with the TransDigm Inc. Notes, the "Notes," are further described below) offered in May 2018 were issued at a price of 99.24% of the principal amount, resulting in gross proceeds of $496.2 million. The 2025 Secured Notes (the "Secured Notes") were issued at a price 100% of the principal amount. The initial $3,800 million offering of the 2026 Secured Notes (the "Secured Notes") were issued at a price of 100% of their principal amount and the subsequent $200 million and $400 million offerings of the 2026 Secured Notes in the second quarter of fiscal 2019 and the third quarter of fiscal 2020, respectively, were issued at a price of 101% of their principal amount, resulting in gross proceeds of $4,410.5 million.

The Notes do not require principal payments prior to their maturity. Interest under the Notes is payable semi-annually. The Notes represent our unsecured obligations ranking subordinate to our senior debt, as defined in the applicable indentures. The Notes contain many of the restrictive covenants included in the Credit Agreement. TransDigm is in compliance with all of the covenants contained in the Notes.

Guarantor Information

The Notes are subordinated to all of our existing and future senior debt, rank equally with all of our existing and future senior subordinated debt and rank senior to all of our future debt that is expressly subordinated to the Notes. The TransDigm Inc. Notes are fully and unconditionally guaranteed on a senior subordinated unsecured basis by TD Group and TransDigm Inc.'s Domestic Restricted Subsidiaries. The TransDigm UK Notes are guaranteed on a senior subordinated basis by TransDigm Inc., TD Group and TransDigm Inc.'s Domestic Restricted Subsidiaries. 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 Secured Notes are senior secured obligations of TransDigm and rank equally in right of payment with all of TransDigm's existing and future senior secured debt, including indebtedness under TransDigm's existing senior secured credit facilities, and are senior in right of payment to all of TransDigm's existing and future senior subordinated debt, including the Notes, TransDigm's other outstanding senior subordinated notes and TransDigm's guarantees in respect of TransDigm UK's outstanding senior subordinated notes. The Secured Notes are guaranteed on a senior secured basis by TD Group, TransDigm UK and TransDigm's wholly-owned U.S. subsidiaries named in the Secured Notes Indentures. The guarantees of the Secured Notes rank equally in right of payment with all of the guarantors' existing and future senior secured debt and are senior in right of payment to all of their existing and future senior subordinated debt. The Secured Notes are structurally subordinated to all of the liabilities of TransDigm's non-guarantor subsidiaries. The Secured Notes contain many of the restrictive covenants included in the Credit Agreement. TransDigm is in compliance with all of the covenants contained in the Secured Notes.

Separate financial statements of TransDigm Inc. are not presented because the Secured Notes are fully and unconditionally guaranteed on a senior secured basis by TD Group, TransDigm UK and all of TransDigm Inc.'s Domestic Restricted Subsidiaries. TD Group has no significant operations or assets separate from its investment in TransDigm Inc.

Separate financial statements of TransDigm Inc. are not presented because the TransDigm Inc. Notes are fully and unconditionally guaranteed on a senior subordinated basis by TD Group, TransDigm UK and all of TransDigm Inc.'s Domestic Restricted Subsidiaries. TD Group has no significant operations or assets separate from its investment in TransDigm Inc.

Separate financial statements of TransDigm UK are not presented because TransDigm UK's 6.875% 2026 Notes, issued in May 2018, are fully and unconditionally guaranteed on a senior subordinated basis by TD Group, TransDigm Inc. and all of TransDigm Inc.'s Domestic Restricted Subsidiaries. TD Group has no significant operations or assets separate from its investment in TransDigm Inc.

The financial information presented is that of TD Group and the Guarantors, which includes TransDigm Inc. and TransDigm UK, on a combined basis and the financial information of non-issuer and non-guarantor subsidiaries has been excluded. Intercompany balances and transactions between TD Group and Guarantors have been eliminated, and amounts due from, amounts due to, and transactions with non-issuer and non-guarantor subsidiaries have been presented separately.

Summarized Balance Sheet Information (in millions):	**September 30, 2021**
Current assets	$ 5,452
Goodwill	6,794
Other non-current assets	2,656
Current liabilities	1,019
Non-current liabilities	20,156
Amounts due from subsidiaries that are non-issuers and non-guarantors - net	(865)

Summarized Results of Operations (in millions):	**Fiscal Year Ended September 30, 2021**
Net sales	$ 3,496
Sales to subsidiaries that are non-issuers and non-guarantors	37
Cost of sales	1,442
Expense from subsidiaries that are non-issuers and non-guarantors - net	39
Income from continuing operations	456
Net income attributable to TD Group	456

Certain Restrictive Covenants in Our Debt Documents

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

The restrictive covenants included in the Credit Agreement are subject to amendments executed periodically. The most recent amendment that impacted the restrictive covenants contained in the Credit Agreement is Amendment No. 7.

Under the terms of the Credit Agreement, TransDigm is entitled, on one or more occasions, to request additional term loans or additional revolving commitments to the extent that the existing or new lenders agree to provide such incremental term loans or additional revolving commitments provided that, among other conditions, our consolidated net leverage ratio would be no greater than 7.25x and the consolidated secured net debt ratio would be no greater than 5.00x, in each case, after giving effect to such incremental term loans or additional revolving commitments.

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.

With the exception of the revolving credit facility, the Company has no maintenance covenants in its existing term loan and indenture agreements. Under the Credit Agreement, if the usage of the revolving credit facility exceeds 35%, or $266 million, of the total revolving commitments, the Company is required to maintain a maximum consolidated net leverage ratio of net debt to trailing four-quarter EBITDA As Defined of 7.25x as of the last day of the fiscal quarter.

As of September 30, 2021, the Company was in compliance with all of its debt covenants and expects to remain in compliance with its debt covenants in subsequent periods.

Trade Receivables Securitization

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 the domestic operations’ 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.

On July 27, 2021, the Company amended the Securitization Facility to, among other things, (i) extend the maturity date to July 26, 2022, and (ii) bear interest at a rate of 1.20% plus three month LIBOR, compared to the interest rate of 1.35% plus 0.50% or three-month LIBOR, whichever is greater, that applied prior to the amendment. The Securitization Facility is collateralized by substantially all of the Company’s domestic operations’ trade accounts receivable. As of September 30, 2021, the Company has borrowed $350 million under the Securitization Facility, which is fully drawn.

Dividend and Dividend Equivalent Payments

No dividends were declared or paid in fiscal 2021. 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.

Dividend equivalent payments made in fiscal 2021 were $73 million. 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 existing stock option plans are entitled to certain dividend equivalent payments in the event of the declaration of a dividend by the Company.

Stock Repurchase Program

On November 8, 2017, our Board of Directors, authorized a stock repurchase program permitting repurchases of our outstanding shares not to exceed $650 million in the aggregate, subject to any restrictions specified in the Credit Agreement and/or Indentures governing the existing Notes.

No repurchases were made under the program during the fiscal year ended September 30, 2021. During the fiscal year ended September 30, 2020, the Company repurchased 36,900 shares of its common stock at a gross cost of $18.9 million at the weighted average cost of $512.67 under the repurchase program. As of September 30, 2021, the remaining amount of repurchases allowable under the program was $631.1 million subject to any restrictions specified in the Credit Agreement and/or Indentures governing the existing Notes.

Contractual Obligations and Commitments

The following table summarizes the Company's cash requirements from all significant contractual obligations as of September 30, 2021 (in millions):

	Total Contractual Obligations	Payment Due by Period			
		Less than 1 Year	Between 1-3 Years	Between 3-5 Years	Over 5 Years
Senior Subordinated and Secured Notes [1]	$ 12,100	$ —	$ —	$ 6,950	$ 5,150
Senior Secured Term Loans [2]	7,374	75	1,840	5,459	—
Scheduled Interest Payments [3]	4,966	1,034	2,088	1,440	404
Pension Funding Minimums [4]	464	350	24	25	65
Securitization Facility	350	350	—	—	—
Revolving Credit Facility [5]	200	—	—	200	—
Finance Leases	215	8	18	18	171
Operating Leases	127	24	35	23	45
Total Contractual Cash Obligations	$ 25,796	$ 1,841	$ 4,005	$ 14,115	$ 5,835

(1) Represents principal maturities which excludes interest, debt issuance costs, original issue discount and premiums.

(2) The tranche E term loans mature in May 2025, the tranche F term loans mature in December 2025 and the tranche G term loans mature in August 2024. The term loans require quarterly principal payments totaling $18.8 million.

(3) Assumes that the variable interest rate on our tranche E, tranche F and tranche G term loans under our Senior Secured Term Loans range from approximately 2.38% to 3.94% based on anticipated movements in the LIBOR. In addition, interest payments include the impact of the existing interest rate swap and cap agreements described in Note 21, "Derivatives and Hedging Activities," in the notes to the consolidated financial statements included herein.

(4) Represents future benefit payments expected to be paid from the pension and post-retirement benefit plans or from the Company's assets. Expected benefit payments in fiscal year 2022 primarily relates to the termination of the Esterline Retirement Plan ("ERP"), effective June 30, 2021. The Company anticipates the termination process to be completed within the next 12 months, with the ERP expected to be fully liquidated by the end of fiscal year 2022.

(5) On October 6, 2021, the Company repaid the $200 million drawn on the revolving credit facility using existing cash on hand.

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. As of September 30, 2021, the Company had $31 million in letters of credit outstanding.

Critical Accounting Policies and Estimates

Our consolidated financial statements have been prepared in conformity with U.S. 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 significant accounting policies, see Note 3, "Summary of Significant Accounting Policies," in the notes to the consolidated financial statements included herein.

Revenue Recognition – Revenue is recognized from the sale of products when control transfers to the customer, which is demonstrated by our right to payment, a transfer of title, a transfer of the risk and rewards of ownership, or the customer acceptance, but most frequently upon shipment where the customer obtains physical possession of the goods. The majority of the Company's revenue is recorded at a point in time. Sales recognized over time are generally accounted for using an input measure to determine progress completed at the end of the period. Sales for service contracts generally are recognized as the services are provided. For agreements with multiple performance obligations, judgment is required to determine whether performance obligations specified in these agreements are distinct and should be accounted for as separate revenue transactions for recognition purposes based on the standalone selling price of each performance obligation. The primary method used to estimate a standalone selling price is the price observed in standalone sales to customers for the same product or service. We consider the contractual consideration payable by the customer and assesses variable consideration that may affect the total transaction price. Variable consideration is included in the estimated transaction price when there is a basis to reasonably estimate the amount, including whether the estimate should be constrained in order to avoid a significant reversal of revenue in a future period. These estimates are based on historical experience, anticipated performance under the terms of the contract and our best judgment at the time.

Inventories – Inventories are stated at the lower of cost or net realizable value. 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 net realizable 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. Additionally, management believes that the Company’s estimates of excess and obsolete inventory are reasonable and material changes in future estimates or assumptions used to calculate our estimate is unlikely. However, actual results may differ materially from the estimates and additional provisions may be required in the future. A 10% change in our excess and obsolete inventory reserve at September 30, 2021 would not have a material impact on our results. 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.

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 are recognized as goodwill. The valuations of the acquired assets and liabilities will impact the determination of future operating results. Determining the fair value of assets acquired and liabilities assumed requires management’s judgment and often involves the use of significant estimates and assumptions, including assumptions with respect to future cash inflows and outflows, revenue growth rates and EBITDA margins, discount rates, customer attrition rates, royalty rates, asset lives and market multiples, among other items. We determine the fair values of intangible assets acquired generally in consultation with third-party valuation advisors. 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.

U.S. GAAP requires that the annual, and any interim, goodwill 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, the Company first assesses qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount, and whether it is necessary to perform the quantitative goodwill impairment test. The quantitative test is required only if the Company concludes that it is more likely than not that a reporting unit’s fair value is less than its carrying amount, or if the Company elects not to perform a qualitative assessment of a reporting unit. For the quantitative test, 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, revenue growth rates and EBITDA margins, 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 a 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.

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. 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.

Given the continued adverse global economic and market conditions attributable to the COVID-19 pandemic, particularly as it pertains to the commercial aerospace sector, the Company continues to monitor for any indicators of impairment of goodwill and indefinite-lived intangible assets. For certain reporting units that have higher commercial aerospace content and potentially present a higher risk for impairment, the Company performed a quantitative impairment test using an income approach in the prior year annual impairment assessment. In the second quarter of fiscal 2021, the Company reviewed the key assumptions used within the models to identify if any changes were necessary. Key assumptions reviewed included revenue growth rates and EBITDA margins, available industry data and management's determination of the prospective financial information with consideration of the estimated length of time for the commercial aerospace sector to rebound to pre-pandemic levels. The Company also utilized a third party valuation firm to assist in the determination of the WACC. As a result of the interim impairment testing performed as of April 3, 2021, no goodwill or indefinite-lived intangible assets were determined to be impaired. We updated our assessment during the third quarter of fiscal 2021 and validated that the assumptions used in the analyses performed as of April 3, 2021 and the resulting conclusions remain appropriate as of July 3, 2021.

The Company had 46 reporting units with goodwill and 43 reporting units with indefinite-lived intangible assets as of the first day of the fourth quarter of fiscal 2021, the date of the annual impairment test. Based on its initial qualitative assessment over each of the reporting units, the Company identified 16 reporting units to test for impairment using a quantitative test for both goodwill and indefinite-lived intangible assets. The estimated fair value of each of these reporting units was in excess of its respective carrying value, and therefore, no impairment was recorded on goodwill or indefinite-lived intangible assets. 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, all of the reporting units would continue to have fair values in excess of their respective carrying values.

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 pricing model to estimate the grant-date fair value of the stock options awarded. The Black-Scholes pricing 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 the assumptions. An increase or decrease in the assumptions or economic events outside of management's control could have an impact on the Black-Scholes pricing model. The Company estimates stock option forfeitures based on historical data. The total number of stock options expected to vest is adjusted by actual and estimated forfeitures. Changes to the actual and estimated forfeitures will result in a cumulative adjustment in the period of change. The Company also evaluates any subsequent changes to the respective option holders terms under the modification rules of ASC 718. If determined to be a modification, the Black-Scholes pricing model is updated as of the date of the modification resulting in a cumulative catch-up to expense.

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.

New Accounting Standards

For information about new accounting standards, see Note 4, “Recent Accounting Pronouncements,” in the notes to the consolidated financial statements included herein.

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 income from continuing operations 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 U.S. 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 credit facility 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 U.S. 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 U.S. 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 U.S. GAAP, and neither should be considered as an alternative to net income or cash flow from operations determined in accordance with U.S. GAAP. Our calculation of EBITDA and EBITDA As Defined may not be comparable to the calculation of similarly titled measures reported by other companies.

The following table sets forth a reconciliation of income from continuing operations to EBITDA and EBITDA As Defined (in millions):

	Fiscal Years Ended September 30, 2021	Fiscal Years Ended September 30, 2020
Income from continuing operations	$ 681	$ 653
Adjustments:		
Depreciation and amortization expense	253	283
Interest expense, net	1,059	1,029
Income tax provision	34	87
EBITDA	2,027	2,052
Adjustments:		
Inventory acquisition accounting adjustments (1)	6	—
Acquisition integration costs (2)	14	30
Acquisition and divestiture transaction-related expenses (3)	15	1
Non-cash stock compensation expense (4)	129	93
Refinancing costs (5)	37	28
COVID-19 pandemic restructuring costs (6)	40	54
Gain on sale of businesses, net (7)	(69)	—
Other, net (8)	(10)	20
EBITDA As Defined	$ 2,189	$ 2,278

(1) 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.

(2) Represents costs incurred to integrate acquired businesses and product lines into TD Group's operations, facility relocation costs and other acquisition-related costs.

(3) Represents transaction-related costs for both acquisitions and divestitures comprising deal fees, legal, financial and tax due diligence expenses and valuation costs that are required to be expensed as incurred.

(4) Represents the compensation expense recognized by TD Group under our stock incentive plans.

(5) Represents costs expensed related to debt financing activities, including new issuances, extinguishments, refinancings and amendments to existing agreements.

(6) Represents restructuring costs related to the Company's cost reduction measures in response to the COVID-19 pandemic for the fiscal years ended September 30, 2021 and 2020 of $36 million and $46 million, respectively, and also includes restructuring costs related to the 737 MAX production rate change for the fiscal year ended September 30, 2020 of $3 million. These are costs related to the Company's actions to reduce its workforce and consolidate certain facilities to align with customer demand. This also includes incremental costs related to the pandemic for the fiscal years ended September 30, 2021 and 2020 of $4 million and $5 million, respectively, which are not expected to recur once the pandemic has subsided and are clearly separable from normal operations (e.g., additional cleaning and disinfecting of facilities by contractors above and beyond normal requirements, personal protective equipment).

(7) Represents the net gain on completed divestitures. Refer to Note 2, "Acquisitions and Divestitures," in the notes to the consolidated financial statements included herein for further details.

(8) Primarily represents the gain on insurance proceeds from the Leach International Europe facility fire (refer to Note 15, "Commitments and Contingencies" in the notes to the consolidated financial statements included herein for further details), foreign currency transaction gain or loss, payroll withholding taxes related to special dividend and dividend equivalent payments and stock option exercises, non-service related pension costs, deferred compensation 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 (in millions):

	Fiscal Years Ended September 30, 2021	2020
Net cash provided by operating activities	$ 913	$ 1,213
Adjustments:		
Changes in assets and liabilities, net of effects from acquisitions and sales of businesses	97	(168)
Interest expense, net [1]	1,059	1,029
Income tax (benefit) provision - current	—	63
Loss contract amortization	55	36
Non-cash stock compensation expense [2]	(129)	(93)
Refinancing costs [3]	(37)	(28)
Gain on sale of businesses, net [4]	69	—
EBITDA	2,027	2,052
Adjustments:		
Inventory acquisition accounting adjustments [5]	6	—
Acquisition integration costs [6]	14	30
Acquisition and divestiture transaction-related expenses [7]	15	1
Non-cash stock compensation expense [2]	129	93
Refinancing costs [3]	37	28
COVID-19 pandemic restructuring costs [8]	40	54
Gain on sale of businesses, net [4]	(69)	—
Other, net [9]	(10)	20
EBITDA As Defined	$ 2,189	$ 2,278

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

(2) Represents the compensation expense recognized by TD Group under our stock incentive plans.

(3) Represents costs expensed related to debt financing activities, including new issuances, extinguishments, refinancings and amendments to existing agreements.

(4) Represents the net gain on completed divestitures. Refer to Note 2, “Acquisitions and Divestitures,” in the notes to the consolidated financial statements included herein for further details.

(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 for both acquisitions and divestitures comprising deal fees, legal, financial and tax due diligence expenses, and valuation costs that are required to be expensed as incurred.

(8) Represents restructuring costs related to the Company's cost reduction measures in response to the COVID-19 pandemic for the fiscal years ended September 30, 2021 and 2020 of $36 million and $46 million, respectively, and also includes restructuring costs related to the 737 MAX production rate change for the fiscal year ended September 30, 2020 of $3 million. These are costs related to the Company's actions to reduce its workforce and consolidate certain facilities to align with customer demand. This also includes incremental costs related to the pandemic for the fiscal years ended September 30, 2021 and 2020 of $4 million and $5 million, respectively, which are not expected to recur once the pandemic has subsided and are clearly separable from normal operations (e.g., additional cleaning and disinfecting of facilities by contractors above and beyond normal requirements, personal protective equipment).

(9) Primarily represents the gain on insurance proceeds from the Leach International Europe facility fire (refer to Note 15, “Commitments and Contingencies” in the notes to the consolidated financial statements included herein for further details), foreign currency transaction gain or loss, payroll withholding taxes related to special dividend and dividend equivalent payments and stock option exercises, non-service related pension costs, deferred compensation and gain or loss on sale of fixed assets.

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 is principally our variable rate debt. In 2017, the United Kingdom's Financial Conduct Authority announced that after 2021 it would no longer compel banks to submit the rates required to calculate LIBOR and other interbank offered rates, which have been widely used as reference rates for various securities and financial contracts, including loans, debt and derivatives. However, for U.S dollar LIBOR, the relevant date has been deferred to at least June 30, 2023 for certain tenors, at which time the LIBOR administrator has indicated that it intends to cease publication of U.S. dollar LIBOR. Despite this deferral, the LIBOR administrator has advised that no new contracts using U.S. dollar LIBOR should be entered into after December 31, 2021. These actions indicate that the continuation of U.S. LIBOR on the current basis cannot and will not be guaranteed after June 30, 2023. Moreover, it is possible that U.S. LIBOR will be discontinued or modified prior to June 30, 2023. In February 2020, in connection with Amendment No. 7 to the Credit Agreement, we amended our Credit Agreement to include a provision for the determination of an alternative reference interest rate. The discontinuation of LIBOR will also require our derivative agreements to be amended. Once the alternative interest rate has replaced LIBOR, our future interest expense could be impacted.

At September 30, 2021, we had borrowings under our term loans of approximately $7,374 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 Company's objective is to maintain an allocation of at least 75% fixed rate and 25% variable rate debt thereby limiting its exposure to changes in near-term interest rates. As of September 30, 2021, approximately 86% of our total debt was fixed rate debt. The effect of a hypothetical one percentage point increase in interest rates would increase the annual interest costs under our term loans by approximately $75 million based on the amount of outstanding borrowings at September 30, 2021. The weighted average interest rate on the $7,374 million of borrowings under our term loans on September 30, 2021 was 3.4%.

Interest rate swaps and caps used to hedge and offset, respectively, the variable interest rates on the credit facility are described in Note 21, "Derivatives and Hedging Activities," in the notes to the 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, refer to Note 20, "Fair Value Measurements," in the notes to the consolidated financial statements included herein.

Foreign Currency Risk

Certain of our foreign subsidiaries' sales and results of operations are subject to the impact of foreign currency fluctuations. Because our consolidated financial statements are presented in U.S. dollars, increases or decreases in the value of the U.S. dollar relative to other currencies in which we transact business could materially adversely affect our net sales, net income and the carrying values of our assets located outside the U.S. global economic uncertainty continues to exist. Strengthening of the U.S. dollar relative to other currencies may adversely affect our operating results. Foreign currency forward exchange contracts provide for the purchase or sale of foreign currencies at specified future dates at specified exchange rates, and are used to offset changes in the fair value of certain assets or liabilities or forecasted cash flows resulting from transactions denominated in foreign currencies. The foreign currency forward exchange contracts entered into by the Company are described in Note 21, "Derivatives and Hedging Activities," in the notes to the consolidated financial statements included herein.

If the U.S. dollar were to strengthen, our foreign results of operations would be unfavorably impacted, but the effect is not expected to be material. A 10% change in foreign currency exchange rates would not have resulted in a material impact to net income for the fiscal year ended September 30, 2021.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The information required by this Item is contained on pages F-1 through F-46 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, 2021, TD Group carried out an evaluation, under the supervision and with the participation of TD Group's management, including its President, Chief Executive Officer and Director (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 President, Chief Executive Officer and Director 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 President, Chief Executive Officer and Director 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.

During the fiscal quarter ended April 3, 2021, the Company completed the acquisition of CAC. The Company is currently integrating the acquisition into its operations, compliance programs and internal control processes. As permitted by SEC rules and regulations, the Company has excluded the acquisition from management's evaluation of internal controls over financial reporting as of September 30, 2021. The Company's total assets, net sales and income from continuing operations before income taxes for the fiscal year ended September 30, 2021 for the acquisition of CAC constituted approximately 6%, 3% and (1)%, respectively, of each of these key measures as reported in our consolidated financial statements.

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, 2021. Based on our assessment, management concluded that the Company's internal control over financial reporting was effective as of September 30, 2021.

The effectiveness of the Company's internal control over financial reporting as of September 30, 2021 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

There have been no changes in the Company's internal control over financial reporting that occurred during the fourth quarter of fiscal 2021 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

To the Shareholders and the Board of Directors of
TransDigm Group Incorporated

Opinion on Internal Control over Financial Reporting

We have audited TransDigm Group Incorporated's internal control over financial reporting as of September 30, 2021, 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). In our opinion, TransDigm Group Incorporated (the Company) maintained, in all material respects, effective internal control over financial reporting as of September 30, 2021, based on the COSO criteria**.**

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 Cobham Aero Connectivity (CAC), which is included in the 2021 consolidated financial statements of the Company and constituted 6% of total assets as of September 30, 2021 and 3% and (1%) of net sales and income from continuing operations before income taxes, respectively, for the year then ended. Our audit of internal control over financial reporting of the Company also did not include an evaluation of the internal control over financial reporting of CAC.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the consolidated balance sheets of the Company as of September 30, 2021 and 2020, 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, 2021, and the related notes and financial statement schedule listed in the Index at Item 15(a) and our report dated November 16, 2021 expressed an unqualified opinion thereon.

Basis for Opinion

The Company'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 are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. 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.

Definition and Limitations of Internal Control Over Financial Reporting

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 the policies or procedures may deteriorate.

/s/ Ernst & Young LLP

Cleveland, Ohio
November 16, 2021

ITEM 9B. OTHER INFORMATION

On November 16, 2021, the Company and Jorge Valladares, Chief Operating Officer, entered into an amendment to Mr. Valladares' employment agreement. The amendment (1) modified the severance provisions in the event of a termination without cause or for good reason or by reason of death or disability from providing for 90 day notice of termination and severance of one times annual salary and one times the greater of last year's annual incentive or the current year target to no notice of termination and severance of 1.25 times annual salary and the greater of last year's annual incentive or current year target, consistent with other officers of the Company; Mr. Valladares also would receive as severance 18 times the difference between the rate of health plan coverage on the date of termination and the COBRA rate of such coverage, but this provision was not changed; (2) eliminated Mr. Valladares' opportunity to cure a default in the event of a potential termination for cause; and (3) added a requirement for Mr. Valladares to execute a release as a condition to receiving severance.

On November 15, 2021, the Company and Michael Lisman, Chief Financial Officer, and the Company and Sarah Wynne, Chief Accounting Officer, entered into respective amendments to Mr. Lisman's and Ms. Wynne's employment agreements. The amendment modified the severance provisions in the event of a termination without cause or for good reason or by reason of death or disability from providing 15 times the difference between the rate of health plan coverage on the date of termination and the COBRA rate of such coverage to 18 times such difference, consistent with other officers of the Company. Mr. Lisman and Ms. Wynne would also receive as severance 1.25 times annual salary and the greater of last year's annual incentive or current year target, but those provisions were not changed.

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:

Name	Age	Position
Kevin Stein	55	President, Chief Executive Officer and Director
Robert S. Henderson	65	Vice Chairman
Jorge L. Valladares III	47	Chief Operating Officer
Michael Lisman	39	Chief Financial Officer
Sarah Wynne	47	Chief Accounting Officer
Halle Martin	53	General Counsel, Chief Compliance Officer & Secretary

Mr. Stein was appointed President, Chief Executive Officer and Director in April 2018. Prior to that, Mr. Stein served as President and Chief Operating Officer from January 2017 through March 2018 and Chief Operating Officer—Power and Control from October 2014 to December 2016. Prior to joining TransDigm, 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. Henderson was appointed Vice Chairman in January 2017. Prior to that, Mr. Henderson served as Chief Operating Officer—Airframe from October 2014 to December 2016. Mr. Henderson also previously 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. Valladares was appointed Chief Operating Officer in April 2019. Prior to that, Mr. Valladares served as Chief Operating Officer — Power & Control from June 2018 to March 2019, Executive Vice President from October 2013 to May 2018, 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. Lisman was appointed Chief Financial Officer in July 2018. Prior to that, Mr. Lisman served as Vice President—Mergers and Acquisitions from January 2018 through June 2018, Business Unit Manager for the Air & Fuel Valves business unit at Aero Fluid Products, a wholly-owned subsidiary of TransDigm Inc., from January 2017 to January 2018 and Director of Mergers and Acquisitions of TransDigm from November 2015 to January 2017.

Ms. Wynne was appointed Chief Accounting Officer in November 2018. Prior to that, Ms. Wynne served as Group Controller from April 2015 to October 2018, as Controller of the Aero Fluid Products division of AeroControlex Group, Inc., a wholly-owned subsidiary of TransDigm Inc., from October 2009 to March 2015, and previously in other accounting roles with the Company.

Ms. Martin was appointed General Counsel and Chief Compliance Officer in March 2012 and Secretary in May 2015. Prior to that, Ms. Martin was a partner at BakerHostetler LLP.

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 president and chief executive officer, chief operating officer, chief financial officer, chief accounting officer, treasurer, vice president of finance, director of internal audit, general counsel, operating unit presidents and operating unit vice presidents of finance). Please refer to the information set forth 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*. Any person may receive a copy without charge by writing to us at TransDigm Group Incorporated, 1301 East 9th 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 "Directors" 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" 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" and "Director Compensation" 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

Plan category	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 (1)	5,751,528 (2)	$ 344.58	4,626,294 (3)

(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 1,548,605 and 4,202,923 shares subject to outstanding stock options under our 2006 stock incentive plan and 2014 stock option plan, respectively. No further grants may be made under our 2003 stock incentive plan and no shares are subject to outstanding stock options under our 2003 stock incentive plan. No further grants may be made under our 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 and 2019 stock option plan. In August 2019, the 2019 stock option plan was adopted by the Board of Directors of TD Group and was subsequently approved by stockholders on October 3, 2019. The 2019 stock option plan permits TD Group to award stock options to our key employees, directors or consultants. The total number shares of TD Group common stock reserved for issuance or delivery under the 2019 stock option plan is 4,000,000, 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. No grants have been made under TD Group's 2019 stock option plan as of September 30, 2021.

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,” “Director Compensation,” and “Independence of Directors” in our Proxy Statement, which is incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by this item will be set forth under the captions “Audit Fees,” “Audit-Related Fees,” “Tax Fees,” and “All Other Fees,” in our Proxy Statement, which is incorporated herein by reference.

PART IV

15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) Documents Filed with Report

(a) (1) Financial Statements

(a) (2) Financial Statement Schedules

(a) (3) Exhibits

Exhibit No.	Description	Filed Herewith or Incorporated by Reference From
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	Third Amended and Restated Bylaws of TransDigm Group Incorporated	Incorporated by reference to TransDigm Group Incorporated's Form 8-K, filed January 30, 2018 (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.'s 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.'s 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.'s 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 5, 2009 (File No. 001-32833)
3.7	By-laws of Acme Aerospace, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q, filed August 5, 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.'s and TransDigm Holding Company's Form S-4, filed April 23, 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.'s and TransDigm Holding Company's Form S-4, filed April 23, 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.'s and TransDigm Holding Company's Form S-4, filed April 23, 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.'s and TransDigm Holding Company's Form S-4, filed April 23, 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.'s and TransDigm Holding Company's Form S-4, filed April 23, 1999 (File No. 333-71397)
3.13	Amended and Restated Bylaws of Adams Rite Aerospace, Inc.	Incorporated by reference to TransDigm Inc.'s and TransDigm Holding Company's Form S-4, filed April 23, 1999 (File No. 333-71397)

Exhibit No.	Description	Filed Herewith or Incorporated by Reference From
3.14	Certificate of Incorporation, filed June 18, 2007, of AeroControlex Group, Inc.	Incorporated by reference to TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed July 6, 2007 (File No. 333-144366)
3.15	By-laws of AeroControlex Group, Inc.	Incorporated by reference to TransDigm Inc.'s 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 of 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 of Certificate of Incorporation, filed December 10, 2013, of HDT Global, 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)
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)

Exhibit No.	Description	Filed Herewith or Incorporated by Reference From
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 of 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 of 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, 2007, 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, 2007, 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, as amended, 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)
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)

Exhibit No.	Description	Filed Herewith or Incorporated by Reference From
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	Second 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.'s and TransDigm Group Incorporated's Form S-4, filed June 27, 2013 (File No. 333-186494)
3.47	Certificate of Amendment of Certificate of Incorporation, filed November 4, 1981, of Arkwin Industries, Inc.	Incorporated by reference to Amendment No. 3 to TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed June 27, 2013 (File No. 333-186494)
3.48	Certificate of Amendment of Certificate of Incorporation, filed June 11, 1999, of Arkwin Industries, Inc.	Incorporated by reference to Amendment No. 3 to TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed June 27, 2013 (File No. 333-186494)
3.49	By-laws of Arkwin Industries, Inc.	Incorporated by reference to Amendment No. 3 to TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed June 27, 2013 (File No. 333-186494)
3.50	Amended and Restated Certificate of Incorporation of Aviation Technologies, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-K, filed November 9, 2018 (File No. 001-32833)
3.51	By-laws of Wings Holdings, Inc. (now known as Aviation Technologies, Inc.)	Incorporated by reference to TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed July 6, 2007 (File No. 333-144366)
3.52	Certificate of Formation, effective June 28, 2007, of Avionic Instruments LLC	Incorporated by reference to TransDigm Group Incorporated's Form 10-K, filed November 9, 2018 (File No. 001-32833)
3.53	Limited Liability Company Agreement of Avionic Instruments LLC	Incorporated by reference to TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed July 6, 2007 (File No.333-144366)
3.54	Articles of Incorporation, filed December 29, 1992, of Avionics Specialties, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-K, filed November 9, 2018 (File No. 001-32833)
3.55	Bylaws of Avionics Specialties, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q, filed February 5, 2014 (File No. 001-32833)
3.56	Articles of Incorporation, filed October 3, 1963, of Avtech Corporation (now known as AvtechTyee, Inc.)	Incorporated by reference to TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed July 6, 2007 (File No. 333-144366)
3.57	Amendment to Articles of Incorporation, filed March 30, 1984, of Avtech Corporation (now known as AvtechTyee, Inc.)	Incorporated by reference to TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed July 6, 2007 (File No. 333-144366)

Exhibit No.	Description	Filed Herewith or Incorporated by Reference From
3.58	Amendment to Articles of Incorporation, filed April 17, 1989, of Avtech Corporation (now known as AvtechTyee, Inc.)	Incorporated by reference to TransDigm Inc.'s 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 July 17, 1998, of Avtech Corporation (now known as AvtechTyee, Inc.)	Incorporated by reference to TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed July 6, 2007 (File No. 333-144366)
3.60	Articles of Amendment to Articles of Incorporation, filed May 20, 2003, of Avtech Corporation (now known as AvtechTyee, Inc.)	Incorporated by reference to TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed July 6, 2007 (File No. 333-144366)
3.61	Articles of Amendment to Articles of Incorporation, filed May 2, 2012, of AvtechTyee, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-K, filed November 16, 2012 (File No. 001-32833)
3.62	By-laws of Avtech Corporation (now known as AvtechTyee, Inc.)	Incorporated by reference to TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed July 6, 2007 (File No. 333-144366)
3.63	Certificate of Incorporation, filed October 24, 1977, of Transformer Technology Corporation (now known as Beta Transformer Technology Corporation)	Incorporated by reference to TransDigm Group Incorporated's Form 10-K, filed November 15, 2016 (File No. 001-32833)
3.64	Certificate of Amendment of Certificate of Incorporation, filed December 1, 1977, of Transformer Technology Corporation (now known as Beta Transformer Technology Corporation)	Incorporated by reference to TransDigm Group Incorporated's Form 10-K, filed November 15, 2016 (File No. 001-32833)
3.65	By-laws of Transformer Technology Corporation (now known as Beta Transformer Technology Corporation)	Incorporated by reference to TransDigm Group Incorporated's Form 10-K, filed November 15, 2016 (File No. 001-32833)
3.66	Amended and Restated Limited Liability Company Agreement, filed July 7, 2016, of Beta Transformer Technology LLC	Incorporated by reference to TransDigm Group Incorporated's Form 10-K, filed November 15, 2016 (File No. 001-32833)
3.67	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)
3.68	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)
3.69	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)
3.70	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)
3.71	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)

Exhibit No.	Description	Filed Herewith or Incorporated by Reference From
3.72	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)
3.73	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)
3.74	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)
3.75	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)
3.76	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)
3.77	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)
3.78	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)
3.79	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)
3.80	By-laws of Bruce Aerospace Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-K, filed November 21, 2007 (File No. 001-32833)
3.81	Articles of Organization of CDA InterCorp LLC	Incorporated by reference to TransDigm Group Incorporated's Form 10-K, filed November 9, 2018 (File No. 001-32833)
3.82	Operating Agreement of CDA InterCorp LLC	Incorporated by reference to TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed July 6, 2007 (File No. 333-144366)
3.83	Certificate of Formation, filed September 30, 2009, of CEF Industries, LLC	Incorporated by reference to TransDigm Group Incorporated's Form 10-K, filed November 24, 2009 (File No. 001-32833)
3.84	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)
3.85	Certificate of Formation, effective June 30, 2007, of Champion Aerospace LLC	Incorporated by reference to TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed July 6, 2007 (File No. 333-144366)
3.86	Limited Liability Company Agreement of Champion Aerospace LLC	Incorporated by reference to TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed July 6, 2007 (File No. 333-144366)

Exhibit No.	Description	Filed Herewith or Incorporated by Reference From
3.87	Certificate of Incorporation, filed October 23, 1970, of ILC Data Devices Corporation (now known as Data Device Corporation)	Incorporated by reference to TransDigm Group Incorporated's Form 10-K, filed November 15, 2016 (File No. 001-32833)
3.88	Certificate of Amendment of Certificate of Incorporation, filed April 23, 1999, of ILC Data Device Corporation (now known as Data Device Corporation)	Incorporated by reference to TransDigm Group Incorporated's Form 10-K, filed November 15, 2016 (File No. 001-32833)
3.89	Certificate of Amendment of Certificate of Incorporation, filed July 14, 2014, of Data Device Corporation	Incorporated by reference to TransDigm Group Incorporated's Form 10-K, filed November 15, 2016 (File No. 001-32833)
3.90	By-laws of ILC Data Devices Corporation (now known as Data Device Corporation)	Incorporated by reference to TransDigm Group Incorporated's Form 10-K, filed November 15, 2016 (File No. 001-32833)
3.91	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)
3.92	By-laws of Dukes Aerospace, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 8-K, filed December 4, 2009 (File No. 001-32833)
3.93	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)
3.94	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 (File No. 001-32833)
3.95	Fourth Amended and Restated Limited Liability Agreement of Electromech Technologies LLC	Incorporated by reference to TransDigm Group Incorporated's Form 10-K, filed November 9, 2018 (File No. 001-32833)
3.96	Articles of Organization, as amended, of HarcoSemco LLC	Incorporated by reference to TransDigm Group Incorporated's Form 10-K, filed November 9, 2018 (File No. 001-32833)
3.97	First Amended and Restated Limited Liability Company Agreement of HarcoSemco LLC	Incorporated by reference to TransDigm Group Incorporated's Form 10-K, filed November 9, 2018 (File No. 001-32833)
3.98	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)
3.99	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)
3.100	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)
3.101	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)

Exhibit No.	Description	Filed Herewith or Incorporated by Reference From
3.102	By-laws of Hartwell Corporation	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q, filed February 8, 2011 (File No. 001-32833)
3.103	Amended and Restated Certificate of Incorporation of ILC Holdings, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-K, filed November 15, 2016 (File No. 001-32833)
3.104	By-laws, as amended, of ILC Holdings, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-K, filed November 9, 2018 (File No. 001-32833)
3.105	Certificate of Formation, filed January 26, 2007, of Johnson Liverpool LLC	Incorporated by reference to TransDigm Group Incorporated's Form 10-K, filed November 15, 2016 (File No. 001-32833)
3.106	Amended and Restated Limited Liability Company Agreement of Johnson Liverpool LLC	Incorporated by reference to TransDigm Group Incorporated's Form 10-K, filed November 15, 2016 (File No. 001-32833)
3.107	Certificate of Incorporation, filed March 28, 1994, of MPT Acquisition Corp. (now known as MarathonNorco Aerospace, Inc.)	Incorporated by reference to TransDigm Inc.'s and TransDigm Holding Company's Form S-4, filed January 29, 1999 (File No. 333-71397)
3.108	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.'s and TransDigm Holding Company's Form S-4, filed January 29, 1999 (File No. 333-71397)
3.109	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.'s and TransDigm Holding Company's Form S-4, filed January 29, 1999 (File No. 333-71397)
3.110	Certificate of Amendment, filed August 28, 2003, of the Certificate of Incorporation of Marathon Power Technologies 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)
3.111	Bylaws of MPT Acquisition Corp. (now known as MarathonNorco Aerospace, Inc.)	Incorporated by reference to TransDigm Inc.'s and TransDigm Holding Company's Form S-4, filed January 29, 1999 (File No. 333-71397)
3.112	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)
3.113	By-laws of McKechnie Aerospace DE, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q, filed February 8, 2011 (File No. 001-32833)
3.114	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)
3.115	By-laws of McKechnie Aerospace Holdings, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q, filed February 8, 2011 (File No. 001-32833)

Exhibit No.	Description	Filed Herewith or Incorporated by Reference From
3.116	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)
3.117	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)
3.118	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)
3.119	Restated Certificate of Incorporation, filed June 27, 2014, of North Hills Signal Processing Corp.	Incorporated by reference to TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed May 10, 2017 (File No. 333-217850)
3.120	By-laws of Porta Systems Corp. (now known as North Hills Signal Processing Corp.)	Incorporated by reference to TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed May 10, 2017 (File No. 333-217850)
3.121	Certificate of Formation, filed September 30, 2021, of North Hills Signal Processing Overseas LLC	Filed Herewith
3.122	Limited Liability Company Agreement of North Hills Signal Processing Overseas LLC	Filed Herewith
3.123	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)
3.124	Certificate of Amendment of Certificate of Incorporation, filed May 14, 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)
3.125	By-laws 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)
3.126	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)
3.127	Certificate of Amendment of Articles of Incorporation, 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)
3.128	Restated By-laws of PneuDraulics, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-K, filed November 13, 2015 (File No. 001-32833)
3.129	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)
3.130	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)
3.131	Certificate of Incorporation, as amended, of Semco Instruments, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 8-K, filed September 7, 2010 (File No. 001-32833)

Exhibit No.	Description	Filed Herewith or Incorporated by Reference From
3.132	Certificate of Amendment of 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)
3.133	Amended and Restated By-laws of Semco Instruments, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 8-K, filed September 7, 2010 (File No. 001-32833)
3.134	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)
3.135	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)
3.136	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)
3.137	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)
3.138	Certificate of Incorporation, filed December 22, 2004, of Skurka Aerospace Inc.	Incorporated by reference to TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed October 11, 2006 (File No. 333-137937)
3.139	By-laws, as amended, of Skurka Aerospace Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-K, filed November 9, 2018 (File No. 001-32833)
3.140	Certificate of Incorporation, filed August 22, 1986, of Tactair Fluid Controls, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-K, filed November 15, 2016 (File No. 001-32833)
3.141	Certificate of Amendment, filed June 8, 1998, of Certificate of Incorporation of Tactair Fluid Controls, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-K, filed November 15, 2016 (File No. 001-32833)
3.142	By-Laws, as amended, of Tactair Fluid Controls, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-K, filed November 9, 2018 (File No. 001-32833)
3.143	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)
3.144	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)
3.145	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)
3.146	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)

Exhibit No.	Description	Filed Herewith or Incorporated by Reference From
3.147	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)
3.148	By-laws, as amended, of Texas Rotronics, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-K, filed November 9, 2018 (File No. 001-32833)
3.149	Certificate of Formation, effective June 30, 2007, of Transicoil LLC	Incorporated by reference to TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed July 6, 2007 (File No. 333-144366)
3.150	Limited Liability Company Agreement of Transicoil LLC	Incorporated by reference to TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed July 6, 2007 (File No. 333-144366)
3.151	Certificate of Formation, filed June 13, 2013, of Whippany Actuation Systems, LLC	Incorporated by reference to Amendment No. 3 to TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4/A, filed June 27, 2013 (File No. 333-186494)
3.152	Limited Liability Company Agreement of Whippany Actuation Systems, LLC	Incorporated by reference to Amendment No. 3 to TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4/A, filed June 27, 2013 (File No. 333-186494)
3.153	Restated Certificate of Incorporation of Young & Franklin Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-K, filed November 15, 2016 (File No. 001-32833)
3.154	By-laws, as amended, of Young & Franklin Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-K, filed November 9, 2018 (File No. 001-32833)
3.155	Certificate of Formation, filed May 30, 2013, of Beta Transformer Technology LLC	Incorporated by reference to TransDigm Group Incorporated's Form 10-K, filed November 15, 2016 (File No. 001-32833)
3.156	Amended and Restated By-laws of Kirkhill Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q, filed May 4, 2018 (File No. 001-32833)
3.157	Certificate of Incorporation, as amended, of KH Acquisition I Co. (now known as Kirkhill Inc.)	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q, filed May 4, 2018 (File No. 001-32833)
3.158	Certificate of Incorporation of TransDigm UK Holdings plc	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q, filed August 8, 2018 (File No. 001-32833)
3.159	Articles of Association of TransDigm UK Holdings plc	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q, filed August 8, 2018 (File No. 001-32833)
3.160	Amended and Restated Certificate of Incorporation of Extant Components Group Holdings, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q, filed August 8, 2018 (File No. 001-32833)

Exhibit No.	Description	Filed Herewith or Incorporated by Reference From
3.161	Bylaws of Extant Components Group Holdings, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q, filed August 8, 2018 (File No. 001-32833)
3.162	Certificate of Incorporation of Extant Components Group Intermediate, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q, filed August 8, 2018 (File No. 001-32833)
3.163	Bylaws of Extant Components Group Intermediate, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q, filed August 8, 2018 (File No. 001-32833)
3.164	Articles of Organization, as amended, of Symetrics Industries, LLC	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q, filed August 8, 2018 (File No. 001-32833)
3.165	Amended and Restated Limited Liability Company Agreement of Symetrics Industries, LLC	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q, filed August 8, 2018 (File No. 001-32833)
3.166	Articles of Organization, as amended, of Symetrics Technology Group, LLC	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q, filed August 8, 2018 (File No. 001-32833)
3.167	Amended and Restated Limited Liability Company Agreement of Symetrics Technology Group, LLC	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q, filed August 8, 2018 (File No. 001-32833)
3.168	Certificate of Incorporation, as amended, of TEAC Aerospace Holdings, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q, filed August 8, 2018 (File No. 001-32833)
3.169	Bylaws of TEAC Aerospace Holdings, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q, filed August 8, 2018 (File No. 001-32833)
3.170	Certificate of Incorporation, as amended, of TEAC Aerospace Technologies, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q, filed August 8, 2018 (File No. 001-32833)
3.171	Bylaws of TEAC Aerospace Technologies, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q, filed August 8, 2018 (File No. 001-32833)
3.172	Articles of Incorporation, filed January 2, 1992, of Skandia, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q, filed August 8, 2018 (File No. 001-32833)
3.173	Amended and Restated By-laws of Skandia, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q, filed August 8, 2018 (File No. 001-32833)
3.174	Fifth Amended and Restated Certificate of Incorporation of Esterline Technologies Corporation	Incorporated by reference to Amendment No. 1 to TransDigm UK Holdings plc's, TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed April 2, 2019 (File No. 333-228336)

Exhibit No.	Description	Filed Herewith or Incorporated by Reference From
3.175	Second Amended and Restated By-laws of Esterline Technologies Corporation	Incorporated by reference to Amendment No. 1 to TransDigm UK Holdings plc's, TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed April 2, 2019 (File No. 333-228336)
3.176	Certificate of Formation of Esterline International Company	Incorporated by reference to Amendment No. 1 to TransDigm UK Holdings plc's, TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed April 2, 2019 (File No. 333-228336)
3.177	Amended and Restated Bylaws of Esterline International Company	Incorporated by reference to Amendment No. 1 to TransDigm UK Holdings plc's, TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4 filed April 2, 2019 (File No. 333-228336)
3.178	Certificate of Incorporation, as amended, of Leach Holding Corporation	Incorporated by reference to Amendment No. 1 to TransDigm UK Holdings plc's, TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed April 2, 2019 (File No. 333-228336)
3.179	Amended and Restated Bylaws of Leach Holding Corporation	Incorporated by reference to Amendment No. 1 to TransDigm UK Holdings plc's, TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed April 2, 2019 (File No. 333-228336)
3.180	Certificate of Incorporation, as amended, of Leach International Corporation	Incorporated by reference to Amendment No. 1 to TransDigm UK Holdings plc's, TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed April 2, 2019 (File No. 333-228336)
3.181	Amended and Restated Bylaws of Leach International Corporation	Incorporated by reference to Amendment No. 1 to TransDigm UK Holdings plc's, TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed April 2, 2019 (File No. 333-228336)
3.182	Certificate of Incorporation of Leach Technology Group, Inc.	Incorporated by reference to Amendment No. 1 to TransDigm UK Holdings plc's, TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed April 2, 2019 (File No. 333-228336)
3.183	Amended and Restated Bylaws of Leach Technology Group, Inc.	Incorporated by reference to Amendment No. 1 to TransDigm UK Holdings plc's, TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed April 2, 2019 (File No. 333-228336)

Exhibit No.	Description	Filed Herewith or Incorporated by Reference From
3.184	Restated Articles of Incorporation of TA Aerospace Co.	Incorporated by reference to Amendment No. 1 to TransDigm UK Holdings plc's, TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed April 2, 2019 (File No. 333-228336)
3.185	Amended and Restated Bylaws of TA Aerospace Co.	Incorporated by reference to Amendment No. 1 to TransDigm UK Holdings plc's, TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed April 2, 2019 (File No. 333-228336)
3.186	Certificate of Formation of CMC Electronics Aurora LLC	Incorporated by reference to Amendment No. 1 to TransDigm UK Holdings plc's, TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed April 2, 2019 (File No. 333-228336)
3.187	Amended and Restated Limited Liability Company Agreement of CMC Electronics Aurora LLC	Incorporated by reference to Amendment No. 1 to TransDigm UK Holdings plc's, TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed April 2, 2019 (File No. 333-228336)
3.188	Certificate of Formation of Esterline Europe Company LLC	Incorporated by reference to Amendment No. 1 to TransDigm UK Holdings plc's, TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed April 2, 2019 (File No. 333-228336)
3.189	Amended and Restated Limited Liability Company Agreement of Esterline Europe Company LLC	Incorporated by reference to Amendment No. 1 to TransDigm UK Holdings plc's, TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed April 2, 2019 (File No. 333-228336)
3.190	Certificate of Incorporation, as amended, of Angus Electronics Co.	Incorporated by reference to Amendment No. 1 to TransDigm UK Holdings plc's, TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed April 2, 2019 (File No. 333-228336)
3.191	Amended and Restated Bylaws of Angus Electronics Co.	Incorporated by reference to Amendment No. 1 to TransDigm UK Holdings plc's, TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed April 2, 2019 (File No. 333-228336)
3.192	Certificate of Incorporation, as amended, of Esterline Sensors Services Americas, Inc. (now known as Auxitrol Weston USA, Inc.)	Incorporated by reference to TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed August 7, 2019 (File No. 333-233103)

Exhibit No.	Description	Filed Herewith or Incorporated by Reference From
3.193	Amended and Restated Bylaws of Esterline Sensors Services Americas, Inc. (now known as Auxitrol Weston USA, Inc.)	Incorporated by reference to Amendment No. 1 to TransDigm UK Holdings plc's, TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed April 2, 2019 (File No. 333-228336)
3.194	Certificate of Formation of Esterline Technologies SGIP LLC	Incorporated by reference to Amendment No. 1 to TransDigm UK Holdings plc's, TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed April 2, 2019 (File No. 333-228336)
3.195	Limited Liability Company Agreement of Esterline Technologies SGIP LLC	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q, filed May 8, 2019 (File No. 001-32833)
3.196	Certificate of Incorporation of Hytek Finishes Co.	Incorporated by reference to Amendment No. 1 to TransDigm UK Holdings plc's, TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed April 2, 2019 (File No. 333-228336)
3.197	Amended and Restated Bylaws of Hytek Finishes Co.	Incorporated by reference to Amendment No. 1 to TransDigm UK Holdings plc's, TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed April 2, 2019 (File No. 333-228336)
3.198	Restated Articles of Incorporation of Janco Corporation	Incorporated by reference to Amendment No. 1 to TransDigm UK Holdings plc's, TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed April 2, 2019 (File No. 333-228336)
3.199	Amended and Restated Bylaws of Janco Corporation	Incorporated by reference to Amendment No. 1 to TransDigm UK Holdings plc's, TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed April 2, 2019 (File No. 333-228336)
3.200	Certificate of Incorporation, as amended, of Mason Electric Co.	Incorporated by reference to Amendment No. 1 to TransDigm UK Holdings plc's, TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed April 2, 2019 (File No. 333-228336)
3.201	Amended and Restated Bylaws of Mason Electric Co.	Incorporated by reference to Amendment No. 1 to TransDigm UK Holdings plc's, TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed April 2, 2019 (File No. 333-228336)

Exhibit No.	Description	Filed Herewith or Incorporated by Reference From
3.202	Amended and Restated Articles of Incorporation, as amended, of NMC Group, Inc.	Incorporated by reference to Amendment No. 1 to TransDigm UK Holdings plc's, TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed April 2, 2019 (File No. 333-228336)
3.203	Amended and Restated Bylaws of NMC Group, Inc.	Incorporated by reference to Amendment No. 1 to TransDigm UK Holdings plc's, TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed April 2, 2019 (File No. 333-228336)
3.204	Certificate of Incorporation, as amended, of Norwich Aero Products, Inc.	Incorporated by reference to Amendment No. 1 to TransDigm UK Holdings plc's, TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed April 2, 2019 (File No. 333-228336)
3.205	Amended and Restated By-laws of Norwich Aero Products, Inc.	Incorporated by reference to Amendment No. 1 to TransDigm UK Holdings plc's, TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed April 2, 2019 (File No. 333-228336)
3.206	Certificate of Incorporation, as amended, of Palomar Products, Inc.	Incorporated by reference to Amendment No. 1 to TransDigm UK Holdings plc's, TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed April 2, 2019 (File No. 333-228336)
3.207	Amended and Restated Bylaws of Palomar Products, Inc.	Incorporated by reference to Amendment No. 1 to TransDigm UK Holdings plc's, TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed April 2, 2019 (File No. 333-228336)
3.208	Certificate of Formation of 17111 Waterview Pkwy LLC	Incorporated by reference to Amendment No. 1 to TransDigm UK Holdings plc's, TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed April 2, 2019 (File No. 333-228336)
3.209	Limited Liability Company Agreement of 17111 Waterview Pkwy LLC	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q, filed May 8, 2019 (File No. 001-32833)
3.210	Certificate of Incorporation of Korry Electronics Co.	Incorporated by reference to Amendment No. 1 to TransDigm UK Holdings plc's, TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed April 2, 2019 (File No. 333-228336)

Exhibit No.	Description	Filed Herewith or Incorporated by Reference From
3.211	Amended and Restated Bylaws of Korry Electronics Co.	Incorporated by reference to Amendment No. 1 to TransDigm UK Holdings plc's, TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed April 2, 2019 (File No. 333-228336)
3.212	Certificate of Incorporation of Armtec Defense Products Co.	Incorporated by reference to Amendment No. 1 to TransDigm UK Holdings plc's, TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed April 2, 2019 (File No. 333-228336)
3.213	Amended and Restated Bylaws of Armtec Defense Products Co.	Incorporated by reference to Amendment No. 1 to TransDigm UK Holdings plc's, TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed April 2, 2019 (File No. 333-228336)
3.214	Certificate of Incorporation of Armtec Countermeasures Co.	Incorporated by reference to Amendment No. 1 to TransDigm UK Holdings plc's, TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed April 2, 2019 (File No. 333-228336)
3.215	Amended and Restated Bylaws of Armtec Countermeasures Co.	Incorporated by reference to Amendment No. 1 to TransDigm UK Holdings plc's, TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed April 2, 2019 (File No. 333-228336)
3.216	Certificate of Incorporation, as amended, of Armtec Countermeasures TNO Co.	Incorporated by reference to Amendment No. 1 to TransDigm UK Holdings plc's, TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed April 2, 2019 (File No. 333-228336)
3.217	Amended and Restated Bylaws of Armtec Countermeasures TNO Co.	Incorporated by reference to Amendment No. 1 to TransDigm UK Holdings plc's, TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed April 2, 2019 (File No. 333-228336)
3.218	Certificate of Incorporation of TDG ESL Holdings Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-K, filed November 19, 2019 (File No. 001-32833)
3.219	By-laws of TDG ESL Holdings Inc.	Incorporated by reference to TransDigm Group Incorporated's Form 10-K, filed November 19, 2019 (File No. 001-32833)
3.220	Certificate of Incorporation of Chelton Avionics Holdings, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form S-4, filed August 10, 2021 (File No. 333-258676)
3.221	Bylaws of Chelton Avionics Holdings, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form S-4, filed August 10, 2021 (File No. 333-258676)

Exhibit No.	Description	Filed Herewith or Incorporated by Reference From
3.222	Certificate of Incorporation of Chelton Avionics, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form S-4, filed August 10, 2021 (File No. 333-258676)
3.223	Amended and Restated By-laws of Chelton Avionics, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form S-4, filed August 10, 2021 (File No. 333-258676)
3.224	Certificate of Incorporation of Cobham Defense Products, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form S-4, filed August 10, 2021 (File No. 333-258676)
3.225	Amended and Restated By-laws of Cobham Defense Products, Inc.	Incorporated by reference to TransDigm Group Incorporated's Form S-4, filed August 10, 2021 (File No. 333-258676)
3.226	Certificate of Formation of Leach Mexico Holding LLC	Incorporated by reference to TransDigm Group Incorporated's Form S-4, filed August 10, 2021 (File No. 333-258676)
3.227	Limited Liability Company Agreement of Leach Mexico Holding LLC	Incorporated by reference to TransDigm Group Incorporated's Form S-4, filed August 10, 2021 (File No. 333-258676)
3.228	Certificate of Incorporation, as amended, of NAT Seattle Inc.	Incorporated by reference to TransDigm Group Incorporated's Form S-4, filed August 10, 2021 (File No. 333-258676)
3.229	Amended and Restated By-laws of NAT Seattle Inc.	Incorporated by reference to TransDigm Group Incorporated's Form S-4, filed August 10, 2021 (File No. 333-258676)
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 June 9, 2016, 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 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)
4.3	Indenture, dated as of May 8, 2018, among TransDigm UK Holdings plc, as issuer, TransDigm Group Incorporated and TransDigm Inc., as guarantors, the subsidiary guarantors party thereto and The Bank of New York Mellon Trust Company, N.A., as trustee, relating to TransDigm UK Holdings plc's 6.875% Senior Subordinated Notes due 2026	Incorporated by reference to TransDigm Group Incorporated's Form 8-K, filed May 14, 2018 (File No. 001-32833)
4.4	Indenture, dated as of February 13, 2019, 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 2027	Incorporated by reference to TransDigm Group Incorporated's Form 8-K, filed February 13, 2019 (File No. 001-32833)
4.5	Indenture, dated as of February 13, 2019, among TransDigm Inc., as issuer, TransDigm Group Incorporated, as a guarantor, the subsidiary guarantors party thereto, The Bank of New York Mellon Trust Company, N.A., as trustee and US collateral agent, and The Bank of New York Mellon, as UK collateral agent, relating to TransDigm Inc.'s 6.25% Senior Secured Notes due 2026	Incorporated by reference to TransDigm Group Incorporated's Form 8-K, filed February 13, 2019 (File No. 001-32833)

Exhibit No.	Description	Filed Herewith or Incorporated by Reference From
4.6	Indenture, dated as of November 13, 2019, 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 5.50% Senior Subordinated Notes due 2027	Incorporated by reference to TransDigm Group Incorporated's Form 8-K, filed November 13, 2019 (File No. 001-32833)
4.7	Indenture, dated as of April 8, 2020, among TransDigm Inc., as issuer, TransDigm Group Incorporated, as a guarantor, the subsidiary guarantors party thereto, The Bank of New York Mellon Trust Company, N.A., as trustee and US collateral agent, and The Bank of New York Mellon, as UK collateral agent, relating to TransDigm Inc.'s 8.00% Senior Secured Notes due 2025	Incorporated by reference to TransDigm Group Incorporated's Form 8-K, filed April 8, 2020 (File No. 001-32833)
4.8	Indenture, dated as of January 20, 2021, 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 4.625% Senior Subordinated Notes due 2029	Incorporated by reference to TransDigm Group Incorporated's Form 8-K, filed January 20, 2021 (File No. 001-32833)
4.9	Indenture, dated as of April 21, 2021, 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 4.875% Senior Subordinated Notes due 2029	Incorporated by reference to TransDigm Group Incorporated's Form 8-K, filed April 21, 2021 (File No. 001-32833)
4.10	Form of Supplemental Indenture to Add New Guarantors	Incorporated by reference to TransDigm Group Incorporated's Form 10-K, filed November 19, 2019 (File No. 001-32833)
4.11	Form of 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)
4.12	Form of TransDigm UK Holdings plc's 6.875% Senior Subordinated Notes due 2026	Incorporated by reference to TransDigm Group Incorporated's Form 8-K, filed May 14, 2018 (File No. 001-32833)
4.13	Form of TransDigm Inc.'s 7.50% Senior Subordinated Notes due 2027	Incorporated by reference to TransDigm Group Incorporated's Form 8-K, filed February 13, 2019 (File No. 001-32833)
4.14	Form of TransDigm Inc.'s 6.25% Senior Secured Notes due 2026	Incorporated by reference to TransDigm Group Incorporated's Form 8-K, filed February 13, 2019 (File No. 001-32833)
4.15	Form of TransDigm Inc.'s 5.50% Senior Subordinated Notes due 2027	Incorporated by reference to TransDigm Group Incorporated's Form 8-K, filed November 13, 2019 (File No. 001-32833)
4.16	Form of TransDigm Inc.'s 8.00% Senior Secured Notes due 2025	Incorporated by reference to TransDigm Group Incorporated's Form 8-K, filed April 8, 2020 (File No. 001-32833)
4.17	Form of TransDigm Inc.'s 4.625% Senior Subordinated Notes due 2029	Incorporated by reference to TransDigm Group Incorporated's Form 8-K, filed January 20, 2021 (File No. 001-32833)
4.18	Form of TransDigm Inc.'s 4.875% Senior Subordinated Notes due 2029	Incorporated by reference to TransDigm Group Incorporated's Form 8-K, filed April 21, 2021 (File No. 001-32833)

Exhibit No.	Description	Filed Herewith or Incorporated by Reference From
4.19	Description of Securities	Incorporated by reference to TransDigm Group Incorporated's Form 10-K, filed November 19, 2019 (File No. 001-32833)
10.1	Fifth Amended and Restated Employment Agreement, dated April 26, 2018, between TransDigm Group Incorporated and W. Nicholas Howley*	Incorporated by reference to TransDigm Group Incorporated's Form 8-K, filed April 30, 2018 (File No. 001-32833)
10.2	Option Agreement dated August 6, 2021 between the Company and W. Nicholas Howley*	Incorporated by reference to TransDigm Group Incorporated's Form 8-K, filed August 10, 2021 (File No. 001-32833)
10.3	Employment Agreement, dated July 27, 2018, between TransDigm Group Incorporated and Michael Lisman*	Incorporated by reference to TransDigm Group Incorporated's Form 8-K, filed July 30, 2018 (File No. 001-32833)
10.4	Amendment to Employment Agreement, dated November 15, 2021, between TransDigm Group Incorporated and Michael Lisman*	Filed Herewith
10.5	Second Amended and Restated Employment Agreement, dated April 26, 2018, between TransDigm Group Incorporated and Kevin Stein*	Incorporated by reference to TransDigm Group Incorporated's Form 8-K, filed April 30, 2018 (File No. 001-32833)
10.6	Third Amended and Restated Employment Agreement, dated November 6, 2018, between TransDigm Group Incorporated and Robert Henderson*	Incorporated by reference to TransDigm Group Incorporated's Form 10-K, filed November 9, 2018 (File No. 001-32833)
10.7	Employment Agreement, dated October 28, 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)
10.8	Form of Amendment to Employment Agreement, dated October 2015, between TransDigm Group Incorporated and Jorge Valladares*	Incorporated by reference to TransDigm Group Incorporated's Form 8-K, filed October 27, 2015 (File No. 001-32833)
10.9	Second Amendment to Employment Agreement, dated July 30, 2018, between TransDigm Group Incorporated and Jorge Valladares*	Incorporated by reference to TransDigm Group Incorporated's Form 8-K, filed August 3, 2018 (File No. 001-32833)
10.10	Amendment to Employment Agreement, dated November 16, 2021, between TransDigm Group Incorporated and Jorge Valladares*	Filed Herewith
10.11	Employment Agreement, dated November 10, 2018, between TransDigm Group Incorporated and Sarah Wynne*	Filed Herewith
10.12	Amendment to Employment Agreement, dated November 15, 2021, between TransDigm Group Incorporated and Sarah Wynne*	Filed Herewith
10.13	TransDigm Group Incorporated Fourth Amended and Restated 2003 Stock Option Plan*	Incorporated by reference to Amendment No. 1 to TransDigm Inc.'s and TransDigm Group Incorporated's Form S-4, filed November 7, 2006 (File No. 333-137937)

Exhibit No.	Description	Filed Herewith or Incorporated by Reference From
10.14	Amendment No. 1 to the 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)
10.15	Amendment No. 2 to the TransDigm Group Incorporated Fourth Amended and Restated 2003 Stock Option Plan*	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q, filed August 7, 2008 (File No. 001-32833)
10.16	Amendment No. 3 to the TransDigm Group Incorporated Fourth Amended and Restated 2003 Stock Option Plan*	Incorporated by reference to TransDigm Group Incorporated's Form 8-K, filed April 28, 2009 (File No. 001-32833)
10.17	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)
10.18	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.'s and TransDigm Group Incorporated's Form S-4, filed November 7, 2006 (File No. 333-137937)
10.19	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)
10.20	Amended and Restated TransDigm Group Incorporated 2014 Stock Option Plan*	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q, filed August 7, 2019 (File No. 001-32833)
10.21	TransDigm Group Incorporated 2019 Stock Option Plan*	Incorporated by reference to TransDigm Group Incorporated's Form 8-K, filed October 4, 2019 (File No. 001-32833)
10.22	TransDigm Group Incorporated 2016 Director Share Plan*	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q, filed February 10, 2016 (File No. 001-32833)
10.23	Form of Stock Option Agreement for options awarded in fiscal 2017*	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q, filed February 8, 2017 (File No. 001-32833)
10.24	Form of Stock Option Agreement for options awarded in fiscal 2018*	Incorporated by reference to TransDigm Group Incorporated's Form 10-K, filed November 9, 2018 (File No. 001-32833)
10.25	Form of Stock Option Agreement for options awarded in fiscal 2019*	Incorporated by reference to TransDigm Group Incorporated's Form 10-K, filed November 19, 2019 (File No. 001-32833)
10.26	Form of Stock Option Agreement for options awarded in fiscal 2020*	Incorporated by reference to TransDigm Group Incorporated's Form 10-K, filed November 12, 2020 (File No. 001-32833)
10.27	Form of Stock Option Agreement for options awarded in fiscal 2021*	Filed Herewith
10.28	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)

Exhibit No.	Description	Filed Herewith or Incorporated by Reference From
10.29	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)
10.30	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)
10.31	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)
10.32	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)
10.33	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)
10.34	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)
10.35	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)
10.36	Amendment No. 2 to the Second Amended and Restated Credit Agreement, dated as of March 6, 2017, among TransDigm Inc., as borrower, TransDigm Group Incorporated, as guarantor, 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 March 8, 2017 (File No. 001-32833)
10.37	Amendment No. 3 to the Second Amended and Restated Credit Agreement, dated as of August 22, 2017, among TransDigm Inc., as borrower, TransDigm Group Incorporated, as guarantor, 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 August 24, 2017 (File No. 001-32833)
10.38	Amendment No. 4 to the Second Amended and Restated Credit Agreement, dated as of November 30, 2017, among TransDigm Inc., as borrower, TransDigm Group Incorporated, as guarantor, 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 December 6, 2017 (File No. 001-32833)

Exhibit No.	Description	Filed Herewith or Incorporated by Reference From
10.39	Refinancing Facility Agreement to the Second Amended and Restated Credit Agreement, dated as of February 22, 2018, among TransDigm Inc., as borrower, TransDigm Group Incorporated, as guarantor, 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 February 22, 2018 (File No. 001-32833)
10.40	Amendment No. 5, Incremental Assumption Agreement and Refinancing Facility Agreement, dated as of May 30, 2018, relating to the Second Amended and Restated Credit Agreement, dated as of June 4, 2014, among TransDigm Inc., TransDigm Group Incorporated, each subsidiary of TransDigm Inc. party thereto, the lenders party thereto, and Credit Suisse AG, as administrative agent and collateral agent for the lenders	Incorporated by reference to TransDigm Group Incorporated's Form 8-K, filed May 31, 2018 (File No. 001-32833)
10.41	Amendment No. 6 and Incremental Revolving Credit Assumption Agreement, dated as of March 14, 2019, to the Second Amended and Restated Credit Agreement, dated as of June 4, 2014, among TransDigm Inc., TransDigm Group Incorporated, each subsidiary of TransDigm Inc. party thereto, the lenders party thereto, and Credit Suisse AG, as administrative agent and collateral agent for the lenders	Incorporated by reference to TransDigm Group Incorporated's Form 8-K, filed March 14, 2019 (File No. 001-32833)
10.42	Amendment No. 7 and Refinancing Facility Agreement, dated as of February 6, 2020, to the Second Amended and Restated Credit Agreement, dated as of June 4, 2014, among TransDigm Inc., TransDigm Group Incorporated, each subsidiary of TransDigm Inc. party thereto, the lenders party thereto, and Credit Suisse AG, as administrative agent and collateral agent for the lenders	Incorporated by reference to TransDigm Group Incorporated's Form 8-K, filed February 6, 2020 (File No. 001-32833)
10.43	Amendment No. 8 and Loan Modification Agreement, dated as of May 24, 2021, to the Second Amended and Restated Credit Agreement, dated as of June 4, 2014, among TransDigm Inc., TransDigm Group Incorporated, each subsidiary of TransDigm Inc. party thereto, the lenders party thereto, and Credit Suisse AG, as administrative agent and collateral agent for the lenders	Incorporated by reference to TransDigm Group Incorporated's Form 8-K, filed May 25, 2021 (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	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)
10.46	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
10.47	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)
10.48	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)
10.49	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 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 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)
10.50	Ninth Amendment to the Receivables Purchase Agreement dated as of August 1, 2017, among TransDigm Receivables LLC, TransDigm Inc., PNC Bank, National Association, as a Committed Purchaser, as Purchaser Agent for its Purchaser Group and as Administrator, Atlantic Asset Securitization LLC, as a Conduit Purchaser, Credit Agricole Corporate and Investment Bank, as a Committed Purchaser and as a Purchaser Agent for its and Atlantic's Purchaser Group, and Fifth Third Bank, as a Committed Purchaser and as Purchaser Agent for its Purchaser Group**	Incorporated by reference to TransDigm Group Incorporated's Form 10-K, filed November 13, 2017 (File No. 001-32833)
10.51	Tenth Amendment to the Receivables Purchase Agreement dated as of July 31, 2018, among TransDigm Receivables LLC, TransDigm Inc., PNC Bank, National Association, as a Committed Purchaser, as Purchaser Agent for its Purchaser Group and as Administrator, Atlantic Asset Securitization LLC, as a Conduit Purchaser, Credit Agricole Corporate and Investment Bank, as a Committed Purchaser and as a Purchaser Agent for its and Atlantic's Purchaser Group, and Fifth Third Bank, as a Committed Purchaser and as Purchaser Agent for its Purchaser Group**	Incorporated by reference to TransDigm Group Incorporated's Form 10-Q, filed August 8, 2018 (File No. 001-32833)
10.52	Eleventh Amendment to the Receivables Purchase Agreement dated as of July 30, 2019, among TransDigm Receivables LLC, TransDigm Inc., PNC Bank, National Association, as a Committed Purchaser, as Purchaser Agent for its Purchaser Group and as Administrator, Atlantic Asset Securitization LLC, as a Conduit Purchaser, Credit Agricole Corporate and Investment Bank, as a Committed Purchaser and as a Purchaser Agent for its and Atlantic's Purchaser Group, and Fifth Third Bank, as a Committed Purchaser and as Purchaser Agent for its Purchaser Group**	Incorporated by reference to TransDigm Group Incorporated's Form 10-K, filed November 19, 2019 (File No. 001-32833)

Exhibit No.	Description	Filed Herewith or Incorporated by Reference From
10.53	Twelfth Amendment to the Receivables Purchase Agreement dated as of July 22, 2020, among TransDigm Receivables LLC, TransDigm Inc., PNC Bank, National Association, as a Committed Purchaser, as Purchaser Agent for its Purchaser Group and as Administrator, Atlantic Asset Securitization LLC, as a Conduit Purchaser, Credit Agricole Corporate and Investment Bank, as a Committed Purchaser and as a Purchaser Agent for its and Atlantic's Purchaser Group, and Fifth Third Bank, as a Committed Purchaser and as Purchaser Agent for its Purchaser Group**	Incorporated by reference to TransDigm Group Incorporated's Form 10-K, filed November 12, 2020 (File No. 001-32833)
10.54	Thirteenth Amendment to the Receivables Purchase Agreement dated as of July 26, 2021, among TransDigm Receivables LLC, TransDigm Inc., PNC Bank, National Association, as a Committed Purchaser, as Purchaser Agent for its Purchaser Group and as Administrator, and Fifth Third Bank, as a Committed Purchaser and as Purchaser Agent for its Purchaser Group**	Filed Herewith
21.1	Subsidiaries of TransDigm Group Incorporated	Filed Herewith
22.1	Listing of Subsidiary Guarantors	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	Furnished 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	Furnished Herewith
101.INS	Inline XBRL Instance Document: The XBRL Instance Document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document	Filed Herewith
101.SCH	Inline XBRL Taxonomy Extension Schema	Filed Herewith
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase	Filed Herewith
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase	Filed Herewith
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase	Filed Herewith
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase	Filed Herewith
104	Cover Page Interactive Data File: the cover page XBRL tags are embedded within the Inline XBRL document and are contained within Exhibit 101	Filed Herewith

* Indicates management contract or compensatory plan contract or arrangement.

** Schedules and exhibits have been omitted pursuant to Item 601(a)(5) of Regulation S-K. The Company hereby undertakes to furnish on a supplemental basis a copy of any omitted schedule or exhibit upon request by the Securities and Exchange Commission.

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 16, 2021.

TRANSDIGM GROUP INCORPORATED

By:	/s/ Michael Lisman
Name:	**Michael Lisman**
Title:	**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.

Signature	Title	Date
/s/ Kevin Stein **Kevin Stein**	President, Chief Executive Officer and Director (Principal Executive Officer)	November 16, 2021
/s/ Michael Lisman **Michael Lisman**	Chief Financial Officer (Principal Financial Officer)	November 16, 2021
/s/ Sarah Wynne **Sarah Wynne**	Chief Accounting Officer (Principal Accounting Officer)	November 16, 2021
/s/ W. Nicholas Howley **W. Nicholas Howley**	Chairman	November 16, 2021
/s/ David Barr **David Barr**	Director	November 16, 2021
/s/ Jane M. Cronin **Jane M. Cronin**	Director	November 16, 2021
/s/ Mervin Dunn **Mervin Dunn**	Director	November 16, 2021
/s/ Michael Graff **Michael Graff**	Director	November 16, 2021
/s/ Sean P. Hennessy **Sean P. Hennessy**	Director	November 16, 2021
/s/ Raymond F. Laubenthal **Raymond F. Laubenthal**	Director	November 16, 2021
/s/ Gary E. McCullough **Gary E. McCullough**	Director	November 16, 2021
/s/ Michele Santana **Michele Santana**	Director	November 16, 2021
/s/ Robert J. Small **Robert J. Small**	Director	November 16, 2021
John Staer	Director	November 16, 2021

TRANSDIGM GROUP INCORPORATED AND SUBSIDIARIES
ANNUAL REPORT ON FORM 10-K:
FISCAL YEAR ENDED SEPTEMBER 30, 2021
ITEM 8 AND ITEM 15(a) (1)
FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA
INDEX

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of
TransDigm Group Incorporated

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of TransDigm Group Incorporated (the Company) as of September 30, 2021 and 2020, 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, 2021, and the related notes and financial statement schedule listed in the Index at Item 15(a) (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at September 30, 2021 and 2020, and the results of its operations and its cash flows for each of the three years in the period ended September 30, 2021, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the Company's internal control over financial reporting as of September 30, 2021, 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 16, 2021 expressed an unqualified opinion thereon.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

	Valuation of goodwill and indefinite-lived intangible assets
Description of the Matter	At September 30, 2021, the Company had goodwill and indefinite-lived intangible assets of $8.6 billion and $983 million, respectively. As discussed in Note 3 to the consolidated financial statements, goodwill and indefinite-lived intangible assets are tested for impairment annually as of the first day of the fourth quarter or more frequently if indicators of impairment exist. The Company's goodwill is initially assigned to its reporting units as of the acquisition date. The Company's indefinite-lived intangible assets consist of acquired trademarks and trade names. Management performs an initial assessment of qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit or indefinite-lived intangible asset is less than its carrying amount. If management concludes the qualitative assessment is not sufficient to conclude on whether it is more likely than not that the fair value is less than the carrying amount, a quantitative impairment test is performed. Management performed a quantitative assessment on the goodwill and indefinite-lived intangible assets at 16 of its reporting units. As part of the quantitative assessment, the Company determines the fair value of the reporting units and indefinite-lived intangible assets through the use of a discounted cash flow valuation model. Auditing management's quantitative impairment assessment was complex and judgmental for certain of the 16 reporting units and their indefinite-lived intangible assets due to the significant estimation required to determine fair value. In particular, the fair value estimates were sensitive to significant assumptions, such as changes in the discount rate, revenue growth rates and EBITDA margins, which are affected by expectations about future market or economic conditions.

How We Addressed the Matter in Our Audit

We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the Company's impairment process, including controls over management's review of the valuation model and the significant assumptions underlying the fair value determination, as described above.

To test the fair values of the Company's reporting units and indefinite-lived intangible assets, our audit procedures included, among others, assessing the use of the discounted cash flow valuation model and testing the significant assumptions discussed above and underlying data used by the Company in its analyses for certain of the 16 reporting units and their indefinite-lived intangible assets evaluated using the quantitative assessment. We utilized internal valuation specialists in assessing the fair value methodologies applied and evaluating the reasonableness of certain assumptions selected by management in the determination of the fair values of certain of the 16 reporting units and their indefinite-lived intangible assets. We compared the significant assumptions used by management to current industry and economic trends, recent historical performance, and other relevant factors. We assessed the historical accuracy of management's estimates and performed sensitivity analyses of significant assumptions to evaluate the changes in fair values that would result from changes in the assumptions.

Valuation of intangible assets and loss contract reserves in the Acquisition of Cobham Aero Connectivity

Description of the Matter

As discussed in Note 2 to the consolidated financial statements, during the second quarter of fiscal 2021, the Company completed the acquisition of the Cobham Aero Connectivity business ("CAC") for a total purchase price of $945 million. The acquisition was accounted for using the acquisition method of accounting. The Company made an initial allocation of the purchase price at the date of acquisition based upon its understanding of the fair value of the acquired assets and assumed liabilities resulting in the recognition of customer relationships and technology intangible assets of $101 million and $178 million, respectively, and loss contract reserves of $80.6 million for acquired ongoing long-term contracts with customers that were incurring losses.

Auditing management's accounting for its acquisition of CAC was complex because the customer relationships and technology intangible assets and loss contract reserves recognized were material to the consolidated financial statements and the estimates of fair value involved subjectivity. The subjectivity was primarily due to the sensitivity of the respective fair values to underlying assumptions about the future performance of the acquired business. The Company used discounted cash flow models to measure the intangible assets and loss contract reserves. The significant assumptions used to estimate the fair value of the intangible assets included discount rates and certain assumptions that form the basis of the forecasted results (e.g., revenue growth rates and EBITDA margins). The significant assumptions used to estimate the fair value of the loss contract reserves included discount rates and forecasted costs to be incurred under the long-term contracts and at-market bid prices for respective contracts. These significant assumptions are forward looking and could be affected by future economic and market conditions.

How We Addressed the Matter in Our Audit

We obtained an understanding, evaluated the design, and tested the operating effectiveness of controls over the Company's accounting for the acquisition of CAC, including recognition and measurement of the intangible assets acquired and loss contract reserves assumed. For example, we tested controls over the recognition and measurement of customer relationships, technology, and loss contract reserves, including management's review of the methods and significant assumptions used to develop such fair value estimates.

To test the estimated fair values of the customer relationships and technology intangible assets and the loss contract reserves, our audit procedures included, among others, evaluating the Company's selection of the valuation methodology, evaluating the methods and significant assumptions used by the Company's valuation specialist, and evaluating the completeness and accuracy of the underlying data supporting the significant assumptions and estimates. We also performed sensitivity analyses to evaluate the changes in the fair value of such intangible assets and loss contract reserves that would result from changes in the significant assumptions. We involved valuation and contract specialists to assist with our evaluation of the methodology used by the Company and certain significant assumptions included in the fair value estimates. For example, when evaluating the assumptions related to the revenue growth rates and EBITDA margins, we compared the assumptions to the past performance of CAC and current industry trends. When evaluating the assumptions used to determine the fair value of the loss contract reserves, we evaluated at-market bid prices, historical costs incurred under the long-term contract and forecasted costs to be incurred. Furthermore, we evaluated the Company's disclosures in the consolidated financial statements in relation to the CAC acquisition.

/s/ Ernst & Young LLP
We have served as the Company's auditor since 2004.

Cleveland, Ohio
November 16, 2021

TRANSDIGM GROUP INCORPORATED
CONSOLIDATED BALANCE SHEETS
AS OF SEPTEMBER 30, 2021 AND 2020
(Amounts in millions, except share amounts)

	2021	2020
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$ 4,787	$ 4,717
Trade accounts receivable—Net	791	720
Inventories—Net	1,185	1,283
Prepaid expenses and other	267	240
Total current assets	7,030	6,960
PROPERTY, PLANT AND EQUIPMENT—NET	770	752
GOODWILL	8,568	7,889
OTHER INTANGIBLE ASSETS—NET	2,791	2,610
DEFERRED INCOME TAXES	—	17
OTHER	156	167
TOTAL ASSETS	$ 19,315	$ 18,395
LIABILITIES AND STOCKHOLDERS' DEFICIT		
CURRENT LIABILITIES:		
Current portion of long-term debt	$ 277	$ 276
Short-term borrowings—trade receivable securitization facility	349	349
Accounts payable	227	218
Accrued and other current liabilities	810	773
Total current liabilities	1,663	1,616
LONG-TERM DEBT	19,372	19,384
DEFERRED INCOME TAXES	485	430
OTHER NON-CURRENT LIABILITIES	705	933
Total liabilities	22,225	22,363
TD GROUP STOCKHOLDERS' DEFICIT:		
Common stock - $.01 par value; authorized 224,400,000 shares; issued 59,403,100 and 58,612,028 at September 30, 2021 and September 30, 2020, respectively	1	1
Additional paid-in capital	1,830	1,581
Accumulated deficit	(3,705)	(4,359)
Accumulated other comprehensive loss	(248)	(401)
Treasury stock, at cost; 4,198,226 shares at September 30, 2021 and September 30, 2020, respectively	(794)	(794)
Total TD Group stockholders' deficit	(2,916)	(3,972)
NONCONTROLLING INTERESTS	6	4
Total stockholders' deficit	(2,910)	(3,968)
TOTAL LIABILITIES AND STOCKHOLDERS' DEFICIT	$ 19,315	$ 18,395

See notes to consolidated financial statements

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

	Fiscal Years Ended September 30,		
	2021	2020	2019
NET SALES	$ 4,798	$ 5,103	$ 5,223
COST OF SALES	2,285	2,456	2,414
GROSS PROFIT	2,513	2,647	2,809
SELLING AND ADMINISTRATIVE EXPENSES	685	727	748
AMORTIZATION OF INTANGIBLE ASSETS	137	169	135
INCOME FROM OPERATIONS	1,691	1,751	1,926
INTEREST EXPENSE—NET	1,059	1,029	859
REFINANCING COSTS	37	28	3
OTHER (INCOME) EXPENSE	(51)	(46)	1
GAIN ON SALE OF BUSINESSES—NET	(69)	—	—
INCOME FROM CONTINUING OPERATIONS BEFORE INCOME TAXES	715	740	1,063
INCOME TAX PROVISION	34	87	222
INCOME FROM CONTINUING OPERATIONS	681	653	841
INCOME FROM DISCONTINUED OPERATIONS, NET OF TAX	—	47	51
NET INCOME	681	700	892
LESS: NET INCOME ATTRIBUTABLE TO NONCONTROLLING INTERESTS	(1)	(1)	(2)
NET INCOME ATTRIBUTABLE TO TD GROUP	$ 680	$ 699	$ 890
NET INCOME APPLICABLE TO TD GROUP COMMON STOCKHOLDERS	$ 607	$ 514	$ 779
Earnings per share attributable to TD Group common stockholders:			
Earnings per share from continuing operations—basic and diluted	$ 10.41	$ 8.14	$ 12.94
Earnings per share from discontinued operations—basic and diluted	—	0.82	0.90
Earnings per share	$ 10.41	$ 8.96	$ 13.84
Cash dividends paid per common share	$ —	$ 32.50	$ 30.00
Weighted-average shares outstanding:			
Basic and diluted	58.4	57.3	56.3

See notes to consolidated financial statements

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

	Fiscal Years Ended September 30,		
	2021	**2020**	**2019**
Net income	$ 681	700	892
Less: Net income attributable to noncontrolling interests	(1)	(1)	(2)
Net income attributable to TD Group	680	699	890
Other comprehensive income (loss), net of tax:			
Foreign currency translation adjustments	90	76	(115)
Unrealized gain (loss) on derivatives	73	(130)	(239)
Pensions and other postretirement benefits	(10)	32	(29)
Other comprehensive income (loss), net of tax, attributable to TD Group	153	(22)	(383)
TOTAL COMPREHENSIVE INCOME ATTRIBUTABLE TO TD GROUP	$ 833	$ 677	$ 507

See notes to consolidated financial statements

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

	TD Group Stockholders								
	Common Stock					Treasury Stock			
	Number of Shares	Common Stock	Additional Paid-In Capital	Accumulated Deficit	Accumulated Other Comprehensive Income (Loss)	Number of Shares	Value	Non-controlling Interests	Total
BALANCE—September 30, 2018	56,895,686	$ 1	$ 1,209	$ (2,247)	$ 4	(4,161,326)	$ (775)	—	$ (1,808)
Cumulative effect of ASC 606, adopted October 1, 2018	—	—	—	3	—	—	—	—	3
Cumulative effect of ASU 2018-02, adopted October 1, 2018	—	—	—	2	(2)	—	—	—	—
Changes in noncontrolling interest of consolidated subsidiaries, net	—	—	—	—	—	—	—	8	8
Special dividends and vested dividend equivalents declared	—	—	—	(1,688)	—	—	—	—	(1,688)
Accrued unvested dividend equivalents and other	—	—	—	(80)	—	—	—	—	(80)
Compensation expense recognized for employee stock options	—	—	88	—	—	—	—	—	88
Exercise of employee stock options	726,750	—	82	—	—	—	—	—	82
Common stock issued	875	—	—	—	—	—	—	—	—
Net income attributable to TD Group	—	—	—	890	—	—	—	2	892
Foreign currency translation adjustments, net of tax	—	—	—	—	(115)	—	—	—	(115)
Unrealized loss on derivatives, net of tax	—	—	—	—	(237)	—	—	—	(237)
Pensions and other postretirement benefits adjustments, net of tax	—	—	—	—	(29)	—	—	—	(29)
BALANCE—September 30, 2019	57,623,311	$ 1	$ 1,379	$ (3,120)	$ (379)	(4,161,326)	$ (775)	$ 10	$ (2,884)
Changes in noncontrolling interest of consolidated subsidiaries, net	—	—	—	—	—	—	—	(6)	(6)
Special dividends and vested dividend equivalents declared	—	—	—	(1,864)	—	—	—	—	(1,864)
Accrued unvested dividend equivalents and other	—	—	—	(74)	—	—	—	—	(74)
Compensation expense recognized for employee stock options	—	—	86	—	—	—	—	—	86
Exercise of employee stock options	988,717	—	116	—	—	—	—	—	116
Treasury stock purchased	—	—	—	—	—	(36,900)	(19)	—	(19)
Net income attributable to TD Group	—	—	—	699	—	—	—	—	699
Foreign currency translation adjustments, net of tax	—	—	—	—	76	—	—	—	76
Unrealized loss on derivatives, net of tax	—	—	—	—	(130)	—	—	—	(130)
Pensions and other postretirement benefits adjustments, net of tax	—	—	—	—	32	—	—	—	32
BALANCE—September 30, 2020	58,612,028	$ 1	$ 1,581	$ (4,359)	$ (401)	(4,198,226)	$ (794)	$ 4	$ (3,968)
Changes in noncontrolling interest of consolidated subsidiaries, net	—	—	—	—	—	—	—	2	2
Accrued unvested dividend equivalents and other	—	—	—	(26)	—	—	—	—	(26)
Compensation expense recognized for employee stock options	—	—	121	—	—	—	—	—	121
Exercise of employee stock options	791,072	—	128	—	—	—	—	—	128
Net income attributable to TD Group	—	—	—	680	—	—	—	—	680
Foreign currency translation adjustments, net of tax	—	—	—	—	90	—	—	—	90
Unrealized gain on derivatives, net of tax	—	—	—	—	73	—	—	—	73
Pensions and other postretirement benefits adjustments, net of tax	—	—	—	—	(10)	—	—	—	(10)
BALANCE—September 30, 2021	59,403,100	$ 1	$ 1,830	$ (3,705)	$ (248)	(4,198,226)	$ (794)	$ 6	$ (2,910)

See notes to consolidated financial statements

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

	Fiscal Years Ended September 30,		
	2021	**2020**	**2019**
OPERATING ACTIVITIES:			
Net income	$ 681	$ 700	$ 892
Income from discontinued operations, net of tax	—	(47)	(51)
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation	115	114	91
Amortization of intangible assets and product certification costs	138	169	135
Amortization of debt issuance costs, original issue discount and premium	34	33	28
Amortization of inventory step-up	6	—	77
Amortization of loss contract reserves	(55)	(36)	(38)
Refinancing costs	37	28	3
Gain on sale of businesses, net	(69)	—	—
Non-cash stock compensation expense	129	93	93
Deferred income taxes	34	24	—
Foreign currency exchange loss (gain)	11	22	(5)
Gain on insurance proceeds from fire	(24)	—	—
Changes in assets/liabilities, net of effects from acquisitions and sales of businesses:			
Trade accounts receivable	(78)	352	(82)
Inventories	79	(62)	(36)
Income taxes receivable	(63)	(144)	(3)
Other assets	(33)	(16)	(27)
Accounts payable	3	(62)	(1)
Accrued interest	14	85	(4)
Accrued and other liabilities	(46)	(40)	(57)
Net cash provided by operating activities	913	1,213	1,015
INVESTING ACTIVITIES:			
Capital expenditures	(105)	(105)	(102)
Acquisition of businesses, net of cash acquired	(963)	—	(3,976)
Net proceeds from sale of businesses	259	904	189
Insurance proceeds for fixed assets damaged from fire	24	—	—
Net cash (used in) provided by investing activities	(785)	799	(3,889)
FINANCING ACTIVITIES:			
Proceeds from exercise of stock options	128	116	82
Dividends and dividend equivalent payments	(73)	(1,928)	(1,712)
Treasury stock purchases	—	(19)	—
Proceeds from issuances of senior secured and subordinated notes, net	1,932	4,114	4,480
Repayments of senior subordinated notes, net	(1,982)	(1,167)	(550)
Proceeds from revolving credit facility	200	200	—
Repayment on revolving credit facility	(200)	—	—
Proceeds from trade receivable securitization facility, net	—	—	49
Repayment on term loans	(75)	(75)	(77)
Financing costs and other, net	—	(11)	(1)
Net cash (used in) provided by financing activities	(70)	1,230	2,271
EFFECT OF EXCHANGE RATE CHANGES ON CASH AND CASH EQUIVALENTS	12	8	(3)
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	70	3,250	(606)
CASH AND CASH EQUIVALENTS, BEGINNING OF PERIOD	4,717	1,467	2,073
CASH AND CASH EQUIVALENTS, END OF PERIOD	$ 4,787	$ 4,717	$ 1,467
SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION:			
Cash paid during the period for interest	$ 1,008	$ 923	$ 878
Cash paid during the period for income taxes, net of refunds	$ 83	$ 223	$ 215

See notes to consolidated financial statements

TRANSDIGM GROUP INCORPORATED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
FISCAL YEARS ENDED SEPTEMBER 30, 2021, 2020 AND 2019

1. DESCRIPTION OF THE BUSINESS AND IMPACT OF COVID-19 PANDEMIC

Description of the Business – 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 every 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 products. 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."

TransDigm's 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, batteries and chargers, engineered latching and locking devices, engineered rods, engineered connectors and elastomer sealing solutions, databus and power controls, cockpit security components and systems, specialized and advanced cockpit displays, engineered audio, radio and antenna systems, specialized lavatory components, seat belts and safety restraints, engineered and customized interior surfaces and related components, advanced sensor products, switches and relay panels, thermal protection and insulation, lighting and control technology, parachutes, high performance hoists, winches and lifting devices, and cargo loading, handling and delivery systems.

COVID-19 Pandemic Restructuring Costs – The commercial aerospace industry continues to be significantly disrupted, both domestically and internationally, by the COVID-19 pandemic resulting in ongoing business challenges. While global vaccination efforts are underway and commercial air travel demand has shown slight signs of recovery in recent months, the continued impact of COVID-19, including any increases in infection rates, new variants, vaccination efficacy and renewed governmental action to slow the spread of COVID-19 cannot be estimated. Material actions to reduce costs in response to the impact that the pandemic has had on operating results include: (1) reducing the Company's workforce to align operations with customer demand through a reduction in force or through a realignment of certain business units; (2) implementing unpaid furloughs and salary reductions; (3) delaying non-essential capital projects and (4) minimizing discretionary spending.

For the fiscal year ended September 30, 2021, COVID-19 restructuring costs of approximately $36 million were incurred, of which $26 million was recorded in cost of sales and $10 million was recorded in selling and administrative expenses on the consolidated statements of income. For the fiscal year ended September 30, 2020, COVID-19 restructuring costs of approximately $46 million were incurred, of which $37 million was recorded in cost of sales and $9 million was recorded in selling and administrative expenses in the consolidated statements of income. These costs are primarily related to the Company's actions to reduce its workforce and consolidate certain facilities to align with customer demand.

Additionally, for the fiscal years ended September 30, 2021 and September 30, 2020, the Company incurred approximately $4 million and $5 million, respectively, in incremental costs related to the pandemic that are not expected to recur once the pandemic has subsided and are clearly separable from normal operations (e.g., additional cleaning and disinfecting of facilities by contractors above and beyond normal requirements, personal protective equipment).

As of September 30, 2021 and September 30, 2020, the restructuring accrual associated with the costs incurred in response to the COVID-19 pandemic was approximately $19 million and $13 million, respectively. This accrual is recorded as a component of accrued and other current liabilities on the consolidated balance sheets and payment is expected within the next twelve months. The increase in the accrual is primarily driven by costs to reduce its workforce that have been incurred but not paid; partially offset by payments against the accrual. The Company may incur additional restructuring and incremental costs related to the COVID-19 pandemic though at a reduced level in comparison to fiscal 2021 and 2020.

2. ACQUISITIONS AND DIVESTITURES

Acquisitions

Cobham Aero Connectivity – On November 24, 2020, the Company entered into a definitive agreement to acquire all the outstanding stock of Chelton Limited, Chelton Avionics Holdings, Inc. and Mastsystem Int'l Oy, collectively, Cobham Aero Connectivity (“CAC”), for a total purchase price of $945 million. The acquisition was substantially completed on January 5, 2021 and financed through existing cash on hand. The Company completed the remainder of the acquisition of CAC on February 12, 2021, also through existing cash on hand. CAC operates from two primary facilities (Marlow, United Kingdom and Prescott, Arizona) and is a leading provider of highly engineered antennas and radios for the aerospace end market. The products are primarily proprietary with significant aftermarket content and have a strong presence across major defense platforms as well as select commercial applications. CAC's operating results are included in TransDigm's Airframe segment.

The acquisition strengthens and expands 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, continually improving our cost structure, and providing highly engineered value-added products to customers). The purchase price paid for the 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.

The Company accounted for the CAC acquisition using the acquisition method and included the results of operations of the acquisition in its consolidated financial statements from the effective dates of the acquisition. The Company made an initial allocation of the purchase price at the date of acquisition based upon its understanding of the fair value of the acquired assets and assumed liabilities. As of September 30, 2021, the measurement period (not to exceed one year) is open; therefore, the assets acquired and liabilities assumed related to the CAC acquisition are subject to adjustment until the end of the measurement period. The allocation of the purchase price is preliminary and will likely change in future periods, perhaps materially, as fair value estimates of the assets acquired and liabilities assumed are finalized during the allowable one year measurement period. The Company is in the process of finalizing a third-party valuation of certain intangible assets, tangible assets and liabilities of CAC. The fair values of acquired intangibles and certain liabilities, such as loss contract reserves, are determined based on estimates and assumptions that are deemed reasonable by the Company. Significant assumptions used to determine the fair values of acquired intangible assets include the discount rates and certain assumptions that form the basis of the forecasted results of the acquired business including revenue growth rates, EBITDA margins, royalty rates and technology obsolescence rates. Significant assumptions used to determine the fair value of the loss contract reserves using the discounted cash flow model include discount rates and forecasted costs to be incurred under the long-term contracts and at-market bid prices for respective contracts. These assumptions are forward looking and could be affected by future economic and market conditions. Pro forma net sales and results of operations for the acquisition had it occurred at the beginning of the applicable the fiscal years ended September 30, 2021 or September 30, 2020 are not material and, accordingly, are not provided.

The preliminary allocation of the estimated fair value of assets acquired and liabilities assumed in the CAC acquisition as of the acquisition date, as well as measurement period adjustments recorded as of September 30, 2021, are summarized in the table below (in millions):

	Preliminary Allocation	Measurement Period Adjustments	Adjusted Preliminary Allocation
Assets acquired (excluding cash):			
Trade accounts receivable	$ 31	$ 1	$ 32
Inventories	27	2	29
Prepaid expenses and other	10	(3)	7
Property, plant and equipment	18	3	21
Goodwill	636	58	694 [1]
Other intangible assets	309	16	325 [1]
Other	34	(2)	32
Total assets acquired (excluding cash)	1,065	75	1,140
Liabilities assumed:			
Accounts payable	15	3	18
Accrued and other current liabilities	38	5 [2]	43
Deferred income taxes	38	(7)	31
Other non-current liabilities	29	74 [2]	103
Total liabilities assumed	120	75	195
Net assets acquired	$ 945	$ —	$ 945

(1) The Company expects that of the approximately $694 million of goodwill recognized for the acquisition, approximately $57 million will be deductible for tax purposes. The Company also expects that of the approximately $325 million of other intangible assets recognized for the acquisition, approximately $108 million will be deductible for tax purposes. The goodwill and intangible assets will be deductible over 15 years.

(2) Primarily relates to the recording of loss contract reserves associated with acquired ongoing long-term contracts with customers that were incurring negative gross margins as of the date of acquisition. Based on our review of these contracts, we concluded that the terms of certain contracts were unfavorable when compared to market terms as of the acquisition date. The loss contract reserves are preliminarily estimated to be $80.6 million and will be released over a three to five year period.

Esterline Technologies Corporation – On March 14, 2019, TransDigm completed the acquisition of all the outstanding stock of Esterline Technologies Corporation (“Esterline”) for $122.50 per share in cash, plus the repayment of Esterline debt. The purchase price, net of cash acquired of approximately $398.2 million, totaled approximately $3,923.9 million. Of the $3,923.9 million purchase price, $3,536.3 million was paid at closing and the remaining $387.6 million was classified as restricted cash for the redemption of Esterline’s senior notes outstanding due 2023 (the "2023 Notes"). The 2023 Notes were redeemed on April 15, 2019. Esterline, through its subsidiaries, was an industry leader in specialized manufacturing for the aerospace and defense industry primarily within three core disciplines: advanced materials, avionics and controls and sensors and systems. The acquisition of Esterline expands TransDigm's platform of proprietary and sole source content for the aerospace and defense industry. TransDigm evaluated the strategic fit and description of each Esterline reporting unit to determine the appropriate business segment for the reporting unit. Each Esterline reporting unit is included in one of TransDigm's segments: Power and Control, Airframe, or Non-aviation.

The total purchase price of Esterline was allocated to the underlying assets acquired and liabilities assumed based upon the respective fair value at the date of acquisition. To the extent the purchase price exceeded the fair value of the net identifiable tangible and intangible assets acquired, such excess was allocated to goodwill. Allocations were based on the acquisition method of accounting and third-party valuation appraisals.

The allocation of the fair value of the assets acquired and liabilities assumed in the Esterline acquisition as of the acquisition date of March 14, 2019 is summarized in the table below (in millions):

	Adjusted Final Allocation
Assets acquired (excluding cash):	
Trade accounts receivable	$ 384
Inventories	583
Prepaid expenses and other	423
Property, plant and equipment	469
Goodwill	2,256
Other intangible assets	1,301
Other	20
Total assets acquired (excluding cash)	5,436
Liabilities assumed:	
Accounts payable	146
Accrued and other current liabilities	751
Deferred income taxes	181
Other non-current liabilities	434
Total liabilities assumed	1,512
Net assets acquired	$ 3,924

Of the approximately $2.3 billion of goodwill recognized for the acquisition, approximately $25.6 million is deductible for tax purposes. Also, of the approximately $1.3 billion of other intangible assets recognized for the acquisition, approximately $48.9 million is deductible for tax purposes.

In connection with the Esterline acquisition, we acquired existing long-term contracts with customers that were incurring negative gross margins as of the date of acquisition. Based on our review of these contracts, we concluded that the terms of certain of these loss-making contracts were unfavorable when compared to market terms as of the acquisition date. As a result, we recognized loss contract reserves of $267.9 million as of the acquisition date based on the present value of the difference between the contractual cash flows of the existing long-term contracts and the estimated cash flows had the contracts been executed at market terms as of the acquisition date. These adjustments applied only to contracts generating a negative margin as of the date of acquisition. Significant assumptions used to determine the fair value of the loss contract reserves using the discounted cash flow model include discount rates, forecasted quantities of products to be sold under the long-term contracts and market prices for respective products. These were forward looking assumptions and could be affected by future economic and market conditions. Loss contract reserves are amortized and recorded as an offset to cost of sales over the life of the contracts as actual sales occur under the long-term contracts. The remaining loss contract reserves related to the Esterline acquisition were $160.1 million and $201.3 million at September 30, 2021 and 2020, respectively, of which $14.5 million and $31.9 million was classified in accrued and other current liabilities and $145.6 million and $169.4 million was classified in other non-current liabilities in the consolidated balance sheets at September 30, 2021 and 2020, respectively.

Loss contract reserves of approximately $41.8 million, $29.5 million and $27.3 million were amortized and recorded as an offset to cost of sales in the consolidated statements of income for the fiscal years ended September 30, 2021, 2020 and 2019, respectively. Esterline acquisition costs were expensed as incurred and totaled $26.9 million and $85.1 million for the fiscal years ended September 30, 2020 and 2019, respectively.

Divestitures

Third Quarter Fiscal 2021

ScioTeq and TREALITY Simulation Visual Systems – On June 30, 2021, TransDigm completed the divestiture of its ScioTeq and TREALITY Simulation Visual Systems businesses (“ScioTeq and TREALITY”) to OpenGate Capital for approximately $200 million in cash. ScioTeq and TREALITY were acquired by TransDigm as part of its acquisition of Esterline in March 2019 and were included in TransDigm’s Airframe segment.

Technical Airborne Components – On April 27, 2021, TransDigm completed the divestiture of the Technical Airborne Components business (“TAC”) to Searchlight Capital Partners for approximately $40 million in cash. TAC was included in TransDigm’s Airframe segment.

The net gain on sale recognized in fiscal 2021 as a result of the ScioTeq and TREALITY and TAC divestitures was approximately $68 million, which is classified as a component of gain on sale of businesses-net within the consolidated statements of income.

Second Quarter Fiscal 2021

Racal Acoustics – On January 29, 2021, TransDigm completed the divestiture of the Racal Acoustics business (“Racal”) to Invisio Communications AB ("Invisio") for approximately $20 million in cash. The gain on sale recognized as a result of the divestiture was immaterial and classified as a component of gain on sale of businesses-net within the consolidated statements of income. Racal was acquired by TransDigm as part of its acquisition of Esterline in March 2019 and was included in TransDigm's Non-aviation segment.

First Quarter Fiscal 2021

Avista Inc. – On November 17, 2020, TransDigm completed the divestiture of the Avista, Inc. business ("Avista") to Belcan, LLC ("Belcan") for approximately $8 million in cash. Avista was acquired by TransDigm as part of its acquisition of Esterline in March 2019 and was included in TransDigm's Airframe segment. The gain on sale recognized as a result of the divestiture was immaterial and classified as a component of gain on sale of businesses-net within the consolidated statements of income. During the fourth quarter of fiscal 2020, the Company determined Avista met the criteria to be classified as held for sale. Therefore, the assets and liabilities of Avista, which were not material, have been presented as held for sale in other assets, accrued and other current liabilities and other non-current liabilities, respectively, in the consolidated balance sheets as of September 30, 2020.

Fiscal 2020

Souriau-Sunbank Connection Technologies – On December 20, 2019, TransDigm completed the divestiture of the Souriau-Sunbank Connection Technologies business (“Souriau-Sunbank”) to Eaton Corporation plc (“Eaton”) for approximately $920 million. Souriau-Sunbank was acquired by TransDigm as part of its acquisition of Esterline in March 2019 and was included in TransDigm's Non-aviation segment. The results of operations of Souriau-Sunbank are presented in discontinued operations in the accompanying consolidated financial statements for all periods presented since the date acquired. Refer to Note 23, “Discontinued Operations” for additional information.

Fiscal 2019

Esterline Interface Technology Group – On September 20, 2019, TransDigm completed the divestiture of its EIT group of businesses to an affiliate of KPS Capital Partners, LP for approximately $190 million. EIT was acquired by TransDigm as part of its acquisition of Esterline in March 2019. The results of operations of EIT are presented in discontinued operations in the accompanying consolidated financial statements for all periods presented since the date acquired. Refer to Note 23, “Discontinued Operations” for additional information.

Each divestiture was executed with unrelated third parties.

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation and Consolidation—The accompanying consolidated financial statements were prepared in conformity with U.S. 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 amounts to conform to the current year presentation, none of which are material.

Revenue Recognition—Revenue is recognized from the sale of products when control transfers to the customer, which is demonstrated by our right to payment, a transfer of title, a transfer of the risk and rewards of ownership, or the customer acceptance, but most frequently upon shipment where the customer obtains physical possession of the goods. The majority of the Company's revenue is recorded at a point in time. Sales recognized over time are generally accounted for using an input measure to determine progress completed at the end of the period. Sales for service contracts generally are recognized as the services are provided. Refer to Note 5, “Revenue Recognition,” for further details.

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 fiscal years ended September 30, 2021, 2020 and 2019 was approximately $105.6 million, $130.9 million, and $116.8 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 Credit Losses—The Company's allowance for credit losses is the allowance for uncollectible accounts. The allowance for uncollectible accounts reduces the trade accounts receivable balance to the estimated net realizable value equal to the amount that is expected to be collected. The Company's method for developing its allowance for credit losses is based on historical write-off experience, the aging of receivables, an assessment of the creditworthiness of customers, economic conditions and other external market information. The allowance also incorporates a provision for the estimated impact of disputes with customers. All provisions for allowances for uncollectible accounts are included in selling and administrative expenses. The determination of the amount of the allowance for uncollectible accounts is subject to judgment and estimation by management. If circumstances change or economic conditions deteriorate or improve, the allowance for uncollectible accounts could increase or decrease. Refer to Note 7, "Trade Accounts Receivable," for further details.

Inventories—Inventories are stated at the lower of cost or net realizable value. 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. Refer to Note 8, "Inventories," for further details.

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. Amortization expense of assets accounted for as finance leases is included within depreciation expense.

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. Refer to Note 9, "Property, Plant and Equipment," for further details.

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. Debt issuance costs are presented in the consolidated balance sheets as a direct reduction from the carrying amount of the related debt liabilities. Refer to Note 12, "Debt," for further details.

Financial Instruments—Interest rate swap and cap agreements are used to manage interest rate risk associated with floating-rate borrowings under our credit facility. 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 variable 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 volatility on future interest expense. These agreements involve the receipt of variable 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 qualify as effective cash flow hedges under U.S. GAAP.

The Company transacts business in various foreign currencies, which subjects the Company's cash flows and results of operations to exposure related to changes in foreign currency exchange rates. These exposures arise primarily from purchases or sales of products and services from third parties. Foreign currency forward exchange contracts provide for the purchase or sale of foreign currencies at specified future dates at specified exchange rates, and are used to offset changes in the fair value of certain assets or liabilities or forecasted cash flows resulting from transactions denominated in foreign currencies.

For the interest rate swap and cap agreements and the foreign currency forward contracts designated as cash flow hedges, the effective portion of the gain or loss from the financial instruments is reported as a component of accumulated other comprehensive 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. As the interest rate swap and cap agreements are used to manage interest rate risk, any gains or losses from the derivative instruments that are reclassified into earnings are recognized in interest expense - net in the consolidated statements of income. As the foreign currency forward exchange contracts are used to manage foreign currency exposure primarily arising from purchases or sales from third parties, any gains or losses from the derivative instruments that are reclassified into earnings are recognized in cost of sales or net sales in the consolidated statements of income. Refer to Note 21, "Derivatives and Hedging Activities," for further details.

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 assumed will impact the determination of future operating results. Determining the fair value of assets acquired and liabilities assumed requires management's judgment and often involves the use of significant estimates and assumptions, including assumptions with respect to future cash inflows and outflows, revenue growth rates and EBITDA margins, discount rates, customer attrition rates, royalty rates, asset lives and market multiples, among other items. We determine the fair values of intangible assets acquired generally in consultation with third-party valuation advisors. 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 is the excess of the purchase price paid over the estimated fair value of the net assets of a business acquired. Other intangible assets consist of identifiable intangibles acquired or recognized in accounting for the acquisitions (trademarks, trade names, technology, customer relationships, order backlog and other intangible assets). 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 carrying value.

At the time of goodwill impairment testing, the Company first assesses qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying value, and whether it is therefore necessary to perform the quantitative goodwill impairment test. If, after considering all events and circumstances that support a qualitative evaluation the Company determines that it is not more-likely-than-not that the goodwill and/or indefinite-lived intangible assets are impaired, then performing the single-step quantitative analysis to determine if there is impairment would be unnecessary. Conversely, if it is more-likely-than-not that the goodwill and/or indefinite-lived intangible assets are impaired, then the Company would proceed with the single-step quantitative analysis to determine if there is a goodwill and/or indefinite-lived intangible asset impairment loss. In this application, the definition of "more-likely-than-not" is interpreted as a likelihood of more than 50%.

U.S. 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 had 46 reporting units with goodwill and 43 reporting units with indefinite-lived intangible assets as of the first day of the fourth quarter of fiscal 2021, the date of the annual impairment test. Based on its initial qualitative assessment over each of the reporting units, the Company identified 16 reporting units to test for impairment using a quantitative test for both goodwill and indefinite-lived intangible assets. In addition to the key assumptions reviewed summarized above, a key assumption used in response to the COVID-19 pandemic was the estimated length of time for the commercial aerospace sector to rebound to pre-pandemic levels. The estimated fair value of each of these reporting units was in excess of its respective carrying value, and therefore, no impairment was recorded on goodwill or indefinite-lived intangible assets. 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, all of the reporting units would continue to have fair values in excess of their respective carrying values. As a result of the impairment testing performed as of the first day of the fourth quarter, no indefinite-lived intangible assets or goodwill was determined to be impaired. As economic and market conditions have not changed significantly since the first day of the fourth quarter, this conclusion remains appropriate as of September 30, 2021.

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 from 1 to 1.5 years, customer relationships over 20 years and other intangible assets over 20 years. No indicators of impairment on the amortizable intangible assets were identified in fiscal 2021.

Stock-Based Compensation—The Company records stock-based compensation expense using the Black-Scholes pricing model based on certain valuation assumptions. Compensation expense is recorded over the vesting periods of the stock options, adjusted for expected forfeitures. The Company has classified stock-based compensation primarily within selling and administrative expenses to correspond with the classification of employees that receive stock option grants. The Company also evaluates any subsequent changes to the respective option holders terms under the modification rules of ASC 718. If determined to be a modification, the Black-Scholes pricing model is updated as of the date of the modification resulting in a cumulative catch up to expense, if necessary. Refer to Note 18, "Stock-Based Compensation," for further details.

Income Taxes—The provision for income taxes is calculated using the asset and liability method. Under the asset and liability method, deferred income taxes are recognized for the tax effect of temporary differences between the financial statement carrying amount of assets and liabilities and the amounts used for income tax purposes and for certain changes in valuation allowances. Valuation allowances are recorded to reduce certain deferred tax assets when, in our estimation, it is more likely than not that a tax benefit will not be realized. We recognize uncertain tax positions when we have determined it is more likely than not that a tax position will be sustained upon examination. However, new information may become available, or applicable laws or regulations may change, thereby resulting in a favorable or unfavorable adjustment to amounts recorded. Refer to Note 14, "Income Taxes," for further details.

Estimates—The preparation of financial statements in conformity with U.S. 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 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 the contingency is satisfied. Refer to Note 6, "Earnings Per Share," for further details.

Pension Benefits—The Company accounts for net periodic pension benefit cost using the end of the fiscal year as our measurement date. Management selects appropriate assumptions including the discount rate, rate of increase in future compensation levels and assumed long-term rate of return on plan assets. The assumptions are based upon historical results, the current economic environment and reasonable expectations of future events. Actual results which vary from our assumptions are accumulated and amortized over future periods, and accordingly, are recognized in expense in these periods. Significant differences between the assumptions and actual experience or significant changes in assumptions could impact the pension costs and the pension obligation. Refer to Note 13, "Retirement Plans," for further details.

4. RECENT ACCOUNTING PRONOUNCEMENTS

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 generally results in earlier recognition of allowances for losses. The Company adopted ASU 2016-13 on October 1, 2020. The adoption of this standard did not have a material impact on our consolidated financial statements and disclosures. Refer to Note 5, “Revenue Recognition,” for additional disclosures.

In January 2017, the FASB issued ASU 2017-04, “Simplifying the Test for Goodwill Impairment,” to eliminate Step 2 from the goodwill impairment test in order to simplify the subsequent measurement of goodwill. The Company adopted ASU 2017-04 on October 1, 2020. The adoption of this standard did not have a material impact on our consolidated financial statements and disclosures.

In December 2019, the FASB issued ASU 2019-12, “Income Taxes (ASC 740) - Simplifying the Accounting for Income Taxes,” which simplifies the accounting for income taxes by removing certain exceptions to the general principles in ASC 740. The amendments also improve consistent application of and simplify U.S. GAAP for other areas of ASC 740 by clarifying and amending existing guidance. This guidance is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2020. Early adoption of the amendments is permitted, including adoption in any interim period for which financial statements have not yet been issued. Depending on the amendment, adoption may be applied on the retrospective, modified retrospective or prospective basis. The adoption of this standard is not expected to have a material impact on our consolidated financial statements and disclosures. We will adopt as required on October 1, 2021.

In March 2020, the FASB issued ASU 2020-04, “Reference Rate Reform." Certain amendments were provided for in ASU 2021-01, "Reference Rate Reform (ASC 848): Scope," which was issued in January 2021. This ASU provides optional guidance for a limited period of time to ease potential accounting impacts associated with transitioning away from reference rates that are expected to be discontinued, such as the London Interbank Offered Rate ("LIBOR"). The amendments in this ASU apply only to contracts, hedging relationships, and other transactions that reference LIBOR or another reference rate expected to be discontinued. The amendments in this ASU are effective through December 31, 2022. The Company is currently evaluating the impact of adopting this standard on our consolidated financial statements and disclosures.

5. REVENUE RECOGNITION

TransDigm's sales are concentrated in the aerospace and defense industry. The Company’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.

The majority of the Company's revenue is recorded at a point in time. Revenue is recognized from the sale of products when control transfers to the customer, which is demonstrated by our right to payment, a transfer of title, a transfer of the risk and rewards of ownership, or the customer acceptance, but most frequently upon shipment where the customer obtains physical possession of the goods.

In some contracts, control transfers to the customer over time, primarily in contracts where the customer is required to pay for the cost of both the finished and unfinished goods at the time of cancellation plus a reasonable profit relative to the work performed for products that were customized for the customer. Therefore, we recognize revenue over time for those agreements that have a right to margin and where the products being produced have no alternative use.

Based on our production cycle, it is generally expected that goods related to the revenue will be shipped and billed within the current year. For revenue recognized over time, we estimate the amount of revenue attributable to a contract earned at a given point during the production cycle based on certain costs, such as materials and labor incurred to date, plus the expected profit, which is a cost-to-cost input method.

We consider the contractual consideration payable by the customer and assess variable consideration that may affect the total transaction price. Variable consideration is included in the estimated transaction price when there is a basis to reasonably estimate the amount, including whether the estimate should be constrained in order to avoid a significant reversal of revenue in a future period. These estimates are based on historical experience, anticipated performance under the terms of the contract and our best judgment at the time.

When contracts are modified to account for changes in contract specifications and requirements, the Company considers whether the modification either creates new or changes the existing enforceable rights and obligations. Contract modifications that are for goods or services that are not distinct from the existing contract, due to the significant integration with the original good or service provided, are accounted for as if they were part of that existing contract. The effect of a contract modification to an existing contract on the transaction price and our measure of progress for the performance obligation to which it relates, is recognized as an adjustment to revenue on a cumulative catch-up basis. When the modifications include additional performance obligations that are distinct and at relative stand-alone selling price, they are accounted for as a new contract and performance obligation, which are recognized prospectively.

The Company's payment terms vary by the type and location of the customer and the products or services offered. The Company does not offer any payment terms that would meet the requirements for consideration as a significant financing component.

Shipping and handling fees and costs incurred in connection with products sold are recorded in cost of sales in the consolidated statements of income, and are not considered a performance obligation to our customers.

The Company pays sales commissions that relate to contracts for products or services that are satisfied at a point in time or over a period of one year or less and are expensed as incurred. These costs are reported as a component of selling and administrative expenses in the consolidated statements of income.

In fiscal 2021 and 2020, no customer individually accounted for 10% or more of the Company's net sales. In fiscal 2019, one customer accounted for approximately 11% of the Company's net sales, which were split approximately 60% and 40% between the Airframe and Power & Control segments, respectively.

Net sales to foreign customers, primarily in Western Europe, Canada and Asia, were $1.7 billion during the fiscal years ended 2021 and 2020, respectively, and $1.8 billion during the fiscal year ended 2019.

Contract Assets and Liabilities - Contract assets reflect revenue recognized and performance obligations satisfied in advance of customer billing or reimbursable costs related to a specific contract. Contract liabilities relate to payments received in advance of the satisfaction of performance under the contract. We receive payments from customers based on the terms established in our contracts. The following table summarizes our contract assets and liabilities balances (in millions):

	September 30, 2021	September 30, 2020	Change
Contract assets, current [1]	$ 70	$ 36	$ 34
Contract assets, non-current [2]	2	6	(4)
Total contract assets	72	42	30
Contract liabilities, current [3]	25	18	7
Contract liabilities, non-current [4]	5	9	(4)
Total contract liabilities	30	27	3
Net contract assets	$ 42	$ 15	$ 27

(1) Included in prepaid expenses and other on the consolidated balance sheets.

(2) Included in other non-current assets on the consolidated balance sheets.

(3) Included in accrued and other current liabilities on the consolidated balance sheets.

(4) Included in other non-current liabilities on the consolidated balance sheets.

For the fiscal year ended September 30, 2021, the revenue recognized that was previously included in contract liabilities was not material.

Refer to Note 17, "Segments," for disclosures related to the disaggregation of revenue.

6. EARNINGS PER SHARE

The following table sets forth the computation of basic and diluted earnings per share (in millions, except per share data) using the two-class method:

	Fiscal Years Ended September 30, 2021	2020	2019
Numerator for earnings per share:			
Income from continuing operations	$ 681	$ 653	$ 841
Less: Net income attributable to noncontrolling interests	(1)	(1)	(2)
Net income from continuing operations attributable to TD Group	680	652	839
Less: Special dividends declared or paid on participating securities, including dividend equivalent payments	(73)	(185)	(111)
Income from discontinued operations, net of tax	—	47	51
Net income applicable to TD Group common stockholders - basic and diluted	$ 607	$ 514	$ 779
Denominator for basic and diluted earnings per share under the two-class method:			
Weighted-average common shares outstanding	54.8	53.9	53.1
Vested options deemed participating securities	3.6	3.4	3.2
Total shares for basic and diluted earnings per share	58.4	57.3	56.3
Earnings per share from continuing operations—basic and diluted	$ 10.41	$ 8.14	$ 12.94
Earnings per share from discontinued operations—basic and diluted	—	0.82	0.90
Earnings per share	$ 10.41	$ 8.96	$ 13.84

7. TRADE ACCOUNTS RECEIVABLE

Trade accounts receivable consist of the following (in millions):

	September 30, 2021	September 30, 2020
Trade accounts receivable—gross	$ 821	$ 757
Allowance for uncollectible accounts	(30)	(37)
Trade accounts receivable—Net	$ 791	$ 720

At September 30, 2021, one customer individually accounted for approximately 10% of the Company’s trade accounts receivable-gross. In addition, approximately 38% of the Company’s trade accounts receivable-gross was due from entities that operate principally outside of the United States. Credit is extended based on an evaluation of each customer’s financial condition and collateral is generally not required.

The decrease in the allowance for uncollectible accounts for the fiscal year ended September 30, 2021 is primarily driven by a decrease in estimated losses from certain commercial aerospace customers that were more adversely affected by the COVID-19 pandemic. The allowance for uncollectible accounts is assessed individually at each operating unit by the operating unit’s management team.

Refer to Note 3, “Summary of Significant Accounting Policies,” for additional information regarding the Company’s allowance for uncollectible accounts.

8. INVENTORIES

Inventories consist of the following (in millions):

	September 30, 2021	September 30, 2020
Raw materials and purchased component parts	$ 850	$ 881
Work-in-progress	322	358
Finished goods	207	222
Total	1,379	1,461
Reserves for excess and obsolete inventory	(194)	(178)
Inventories—Net	$ 1,185	$ 1,283

9. PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment consist of the following (in millions):

	September 30, 2021	September 30, 2020
Land and improvements	$ 103	$ 103
Buildings and improvements	409	350
Machinery, equipment and other	832	782
Construction-in-progress	61	57
Total	1,405	1,292
Accumulated depreciation	(635)	(540)
Property, plant and equipment—Net	$ 770	$ 752

10. INTANGIBLE ASSETS

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

	2021			2020		
	Gross Carrying Amount	Accumulated Amortization	Net	Gross Carrying Amount	Accumulated Amortization	Net
Trademarks & trade names	$ 983	$ —	$ 983	$ 958	$ —	$ 958
Technology	2,009	679	1,330	1,842	589	1,253
Order backlog [1]	16	11	5	93	93	—
Customer relationships	545	78	467	443	52	391
Other	18	12	6	18	10	8
Total	$ 3,571	$ 780	$ 2,791	$ 3,354	$ 744	$ 2,610

[1] Fully amortized order backlog associated with the Esterline acquisition was written down from the gross carrying amount and accumulated amortization in the second quarter of fiscal 2021 due to being fully amortized. There was no impact on the net balance.

As disclosed in Note 2, "Acquisitions and Divestitures," the estimated fair value of the net identifiable tangible and intangible assets acquired is based on the acquisition method of accounting and is subject to adjustment upon completion of the third-party valuation. Material adjustments may occur. The fair value of the net identifiable tangible and intangible assets acquired will be finalized within the measurement period (not to exceed one year). Intangible assets acquired during the fiscal year ended September 30, 2021 are summarized in the table below (in millions), principally all relate to the CAC acquisition:

	Gross Amount	Amortization Period
Intangible assets not subject to amortization:		
Goodwill	$ 703	
Trademarks and trade names	35	
	738	
Intangible assets subject to amortization:		
Technology	178	20 years
Order backlog	16	1 year
Customer relationships	101	20 years
	295	
Total	$ 1,033	

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

Annual Amortization Expense:

Fiscal years ended September 30,		
2021	$	137
2020		169
2019		135

Estimated Amortization Expense:

Fiscal years ending September 30,		
2022	$	143
2023		143
2024		143
2025		143
2026		143

The following is a summary of changes in the carrying value of goodwill by segment for the fiscal years ended September 30, 2020 and 2021 were as follows (in millions):

	Power & Control	Airframe	Non-aviation	Total
Balance at September 30, 2019	$ 4,121	$ 3,598	$ 101	$ 7,820
Purchase price allocation adjustments (1)	(1)	39	—	38
Currency translation adjustments	21	10	—	31
Balance at September 30, 2020	4,141	3,647	101	7,889
Goodwill acquired during the period	9	694	—	703
Goodwill divested during the period	(4)	(32)	(8)	(44)
Currency translation adjustments	3	17	—	20
Balance at September 30, 2021	$ 4,149	$ 4,326	$ 93	$ 8,568

(1) Primarily relates to opening balance sheet adjustments recorded by the reporting units acquired from Esterline up to the expiration of the one year measurement period in March 2020.

11. ACCRUED AND OTHER CURRENT LIABILITIES

Accrued and other current liabilities consist of the following (in millions):

	September 30, 2021	September 30, 2020
Interest	$ 191	$ 178
Compensation and related benefits	167	173
Interest rate swap agreements (Note 21)	100	56
Dividend equivalent payments—current (Note 18)	46	72
Loss contract reserves	46	42
Product warranties	29	32
Contract liabilities, current (Note 5)	25	18
Current operating lease liabilities (Note 19)	20	22
Environmental and other litigation reserves	14	15
Other	172	165
Accrued and other current liabilities	$ 810	$ 773

12. DEBT

The Company's debt consists of the following (in millions):

	September 30, 2021			
	Gross Amount	Debt Issuance Costs	Original Issue Discount or Premium	Net Amount
Short-term borrowings—trade receivable securitization facility	$ 350	$ (1)	$ —	$ 349
Term loans	$ 7,374	$ (39)	$ (17)	$ 7,318
Revolving credit facility	200	—	—	200
8.00% senior secured notes due 2025 ("2025 Secured Notes")	1,100	(7)	—	1,093
6.375% senior subordinated notes due 2026 ("6.375% 2026 Notes")	950	(5)	—	945
6.875% senior subordinated notes due 2026 ("6.875% 2026 Notes")	500	(4)	(2)	494
6.25% secured notes due 2026 ("2026 Secured Notes")	4,400	(45)	4	4,359
7.50% senior subordinated notes due 2027 ("7.50% 2027 Notes")	550	(4)	—	546
5.50% senior subordinated notes due 2027 ("5.50% 2027 Notes")	2,650	(18)	—	2,632
4.625% senior subordinated notes due 2029 ("4.625% 2029 Notes")	1,200	(10)	—	1,190
4.875% senior subordinated notes due 2029 ("4.875% 2029 Notes")	750	(7)	—	743
Government refundable advances	29	—	—	29
Finance lease obligations	100	—	—	100
	19,803	(139)	(15)	19,649
Less: current portion	278	(1)	—	277
Long-term debt	$ 19,525	$ (138)	$ (15)	$ 19,372

	September 30, 2020			
	Gross Amount	Debt Issuance Costs	Original Issue Discount or Premium	Net Amount
Short-term borrowings—trade receivable securitization facility	$ 350	$ (1)	$ —	$ 349
Term loans	$ 7,449	$ (48)	$ (23)	$ 7,378
Revolving credit facility	200	—	—	200
6.50% senior subordinated notes due 2024 ("2024 Notes")	1,200	(5)	—	1,195
6.50% senior subordinated notes due 2025 ("2025 Notes")	750	(3)	3	750
2025 Secured Notes	1,100	(9)	—	1,091
6.375% 2026 Notes	950	(6)	—	944
6.875% 2026 Notes	500	(4)	(3)	493
2026 Secured Notes	4,400	(55)	5	4,350
7.50% 2027 Notes	550	(5)	—	545
5.50% 2027 Notes	2,650	(21)	—	2,629
Government refundable advances	28	—	—	28
Finance lease obligations	57	—	—	57
	19,834	(156)	(18)	19,660
Less: current portion	277	(1)	—	276
Long-term debt	$ 19,557	$ (155)	$ (18)	$ 19,384

Fiscal 2021 Activity

Issuance of 4.625% Senior Subordinated Notes due 2029 – On January 14, 2021, the Company entered into a purchase agreement in connection with a private offering of $1,200 million of 4.625% Senior Subordinated Notes due 2029 at an issue price of 100% of the principal amount. The 4.625% 2029 Notes were issued pursuant to an indenture, dated January 20, 2021, among TransDigm Inc., as issuer, TransDigm Group, TransDigm UK and the other subsidiaries of TransDigm Inc. named therein, as guarantors.

The 4.625% 2029 Notes bear interest at the rate of 4.625% per annum, which accrues from January 14, 2021 and is payable in arrears on January 15th and July 15th of each year, commencing on July 15, 2021. The 4.625% 2029 Notes mature on January 15, 2029, unless earlier redeemed or repurchased, and are subject to the terms and conditions set forth in the indenture.

The Company capitalized $11.3 million and expensed $0.1 million representing debt issuance costs associated with the 4.625% 2029 Notes during the fiscal year ended September 30, 2021.

Repurchase of 6.50% Senior Subordinated Notes due 2024 – On January 14, 2021, the Company announced a cash tender offer for any and all of its outstanding 6.50% Senior Subordinated Notes due 2024. On February 16, 2021, the Company redeemed the principal amount of $1,200 million, plus accrued interest of approximately $6.3 million and early redemption premium of $19.5 million.

The Company expensed refinancing costs of $23.6 million, consisting of the $19.5 million early redemption premium and the write off of $4.1 million in unamortized debt issuance costs during the fiscal year ended September 30, 2021 in conjunction with the redemption of the 2024 Notes.

Issuance of 4.875% Senior Subordinated Notes due 2029 – On April 12, 2021, the Company entered into a purchase agreement in connection with a private offering of $750 million in 4.875% Senior Subordinated Notes due 2029 at an issue price of 100% of the principal amount. The 4.875% 2029 Notes were issued pursuant to an indenture, dated April 21, 2021, among TransDigm Inc., as issuer, TransDigm Group, TransDigm UK and the other subsidiaries of TransDigm Inc. named therein, as guarantors.

The 4.875% 2029 Notes bear interest at a rate of 4.875% per annum, which accrues from April 12, 2021 and is payable in arrears on May 1st and November 1st of each year, commencing on November 1, 2021. The 4.875% 2029 Notes mature on May 1, 2029, unless earlier redeemed or repurchased, and are subject to the terms and conditions set forth in the indenture.

The Company capitalized $7.1 million representing debt issuance costs associated with the 4.875% 2029 Notes during the fiscal year ended September 30, 2021.

Repurchase of 6.50% Senior Subordinated Notes due 2025 – On April 12, 2021, the Company announced a cash tender offer for any and all of its outstanding 6.50% Senior Subordinated Notes due 2025. On May 14, 2021, the Company redeemed the principal amount of $750 million, plus accrued interest of approximately $24.4 million and an early redemption premium of $12.2 million.

The Company expensed refinancing costs of $12.1 million, consisting of the $12.2 million early redemption premium and the write off of $2.1 million in unamortized debt issuance costs, offset by the write off of $2.2 million in unamortized premiums during the fiscal year ended September 30, 2021 in conjunction with the redemption of the 2025 Notes.

Amendment No. 8 and Loan Modification Agreement – On May 24, 2021, the Company entered into Amendment No. 8 and Loan Modification Agreement (herein, "Amendment No. 8") to the Second Amended and Restated Credit Agreement dated as of June 4, 2014 (the "Credit Agreement").

Amendment No. 8, among other things, (i) extends the maturity date of the revolving credit commitments and revolving loans under its existing Credit Agreement to May 24, 2026, and (ii) the LIBOR interest rate per annum applicable to the revolving loans under its existing Credit Agreement is 2.50%, a decrease from the 3.00% rate that applied previously to the amendment. The other terms and conditions that apply to the revolving loans are substantially the same as the terms and conditions that applied to the revolving loans immediately prior to Amendment No. 8.

The Company expensed $0.7 million in refinancing costs associated with Amendment No. 8 during the fiscal year ended September 30, 2021.

Revolving Credit Facility

The revolving credit facility bears interest at a rate of 2.50% plus LIBOR. At September 30, 2021, the applicable interest rate was 2.58%. As of September 30, 2021, the Company had $31.1 million in letters of credit outstanding and $528.9 million of borrowings available under the revolving credit facility. On October 6, 2021, the Company repaid $200 million of the revolving credit facility, in addition to $0.1 million of accrued interest, increasing the borrowings available under the revolving commitments to $728.9 million.

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 the domestic operations' 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.

On July 27, 2021, the Company amended the Securitization Facility to extend the maturity date to July 26, 2022. As of September 30, 2021, the Company has borrowed $350 million under the Securitization Facility, which bears interest at a rate of 1.20% plus LIBOR. At September 30, 2021, the applicable interest rate was 1.33%. The Securitization Facility is collateralized by substantially all of the Company's domestic operations' trade accounts receivable.

Government Refundable Advances

Government refundable advances consist of payments received from the Canadian government to assist in research and development related to commercial aviation. The requirement to repay this advance is based on year-over-year commercial aviation revenue growth for certain product lines at CMC Electronics, which is a wholly-owned subsidiary of TransDigm. As of September 30, 2021 and 2020, the outstanding balance of these advances were $28.9 million and $28.4 million, respectively.

Obligations under Finance Leases

The Company leases certain buildings and equipment under finance leases. The present value of the minimum finance lease payments, net of the current portion, represents a balance of $100.4 million and $56.8 million at September 30, 2021 and 2020, respectively. Refer to Note 19, "Leases," for further disclosure of the Company's lease obligations.

Term Loans

As of September 30, 2021 and 2020, TransDigm had $7,374 million and $7,449 million in fully drawn term loans and $760 million in revolving commitments, of which $529 million and $521 million was available to the Company as of September 30, 2021 and 2020, respectively. The term loans consist of three tranches as follows (in millions):

			Aggregate Principal as of September 30,	
Term Loan Facility	**Maturity Date**	**Interest Rate**	**2021**	**2020**
Tranche E	May 30, 2025	LIBOR + 2.25%	$ 2,177	$ 2,199
Tranche F	December 9, 2025	LIBOR + 2.25%	$ 3,454	$ 3,489
Tranche G	August 22, 2024	LIBOR + 2.25%	$ 1,743	$ 1,761

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 LIBOR 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 LIBOR is not subject to a floor. At September 30, 2021 and 2020, the applicable interest rates for all existing tranches were 2.33% and 2.41%, respectively.

Refinancing Costs

During the fiscal year ended September 30, 2021, the Company expensed refinancing costs of $37 million, primarily representing the early redemption premium paid in connection with the repurchase of the $1,200 million 6.50% 2024 Notes and $750 million 6.50% 2025 Notes, and also the execution of Amendment No. 8 and Loan Modification Agreement. During the fiscal year ended September 30, 2020, the Company expensed refinancing costs of $28 million primarily representing the early redemption premium paid in connection with the repurchase of the $1,150 million 6.00% 2022 Notes, and also the execution of Amendment No. 7 and the Refinancing Facility Agreement. During the fiscal year ended September 30, 2019, the Company expensed refinancing costs of $3 million representing the early redemption premium paid in connection with the repurchase of the $550 million 2020 Senior Subordinated Notes and issuance of the $4.0 billion 2026 Senior Secured Notes.

Interest Rate Swap and Cap Agreements

Refer to Note 21, "Derivatives and Hedging Activities," 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.

Secured Notes

TransDigm Inc.’s 2025 Secured Notes and 2026 Secured Notes jointly and severally guaranteed, on a senior basis, by TD Group, TransDigm UK and all of TransDigm Inc.'s Domestic Restricted Subsidiaries, as defined in the applicable Indentures. The Secured Notes contain many of the restrictive covenants included in the Credit Agreement. TransDigm is in compliance with all the covenants contained in the notes.

Subordinated Notes

TransDigm Inc.'s 6.375% 2026 Notes, 7.50% 2027 Notes, 5.50% 2027 Notes, 4.625% 2029 Notes, and 4.875% 2029 Notes are jointly and severally guaranteed, on a senior subordinated basis, by TD Group, TransDigm UK and all of TransDigm Inc.'s Domestic Restricted Subsidiaries, as defined in the applicable Indenture. TransDigm UK's 6.875% 2026 Notes are jointly and severally guaranteed, on a senior subordinated basis, by TD Group, TransDigm Inc. and all of TransDigm Inc.'s Domestic Restricted Subsidiaries, as defined in the applicable Indenture. The Notes contain many of the restrictive covenants included in the Credit Agreement. TransDigm is in compliance with all the covenants contained in the notes.

Debt Repayment Schedule

At September 30, 2021, future maturities of long-term debt (includes finance leases) are as follows (in millions):

Fiscal years ending September 30,		
2022	$	277
2023		80
2024		1,770
2025		2,151
2026		10,268
Thereafter		5,257
Total	$	19,803

13. RETIREMENT PLANS

The Company maintains certain non-contributory defined benefit pension plans (collectively, referred to as the “pension plans”). The pension plans provide benefits of stated amounts for each year of service. 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. In addition, the Company makes actuarially computed contributions to these plans as necessary to adequately fund benefits. The Company’s funding policy is consistent with the minimum funding requirements of the Employee Retirement Income Security Act of 1974 (“ERISA”).

The Company sponsors a number of U.S. defined benefit pension plans (collectively, referred to as the “U.S. plans”), with the largest plan being the Esterline Technologies Retirement Plan (the “ERP”). The ERP’s pension benefits are primarily earned under a cash balance formula with annual pay credits ranging from 2% to 6%. During the first quarter of fiscal 2021, the Company announced of its intent to freeze the ERP effective December 31, 2020, and amended the plan to, among other things, close participation by new or rehired employees and freeze all future benefit accruals as of the effective date. On March 30, 2021, the Company approved an amendment of its intent to terminate the ERP effective June 30, 2021. The weighted-average interest crediting rate decreased from 5.50% in fiscal year 2020 to a fixed rate of 4.71% as of the Plan’s effective termination date, in accordance with IRS regulations. The Company anticipates the termination process to be completed within the next 12 months, with the ERP expected to be fully liquidated by the end of fiscal year 2022.

As of September 30, 2021, the ERP’s pension obligation decreased by lump-sum settlement payments of $7.9 million that were distributed to participants from pension plan assets. As a result of the settlement, we were required to remeasure the ERP’s pension obligation. In connection with the remeasurement, we updated the effective discount rate assumption for the ERP’s pension obligation from 2.47% to 2.56% as of September 30, 2021. The increase in unrecognized actuarial losses from the remeasurement due to settlement payments that occurred during fiscal year 2021 was offset by increases to unrecognized actuarial gains from the freezing of all future benefit accruals of the ERP. During fiscal year 2021, the net amount of unrecognized actuarial losses recorded in accumulated other comprehensive loss on the Company’s consolidated balance sheets reclassified to other (income) expense on the consolidated statements of income related to the remeasurement was immaterial.

The Company also sponsors a number of non-U.S. defined benefit pension plans (collectively, referred to as the “non-U.S. plans”), primarily in Canada, France, Germany and the United Kingdom. These defined benefit plans generally provide benefits to employees based on formulas recognizing length of service and earnings. The Company also sponsors other retirement benefit plans for its employees in Canada. Other retirement benefit plans are non-contributory health care and life insurance plans.

The accumulated benefit obligation and projected benefit obligation for the U.S. plans are $350.6 million and $350.9 million, respectively, with plan assets of $341.1 million as of September 30, 2021. The underfunded status for the Company’s U.S. plans is $9.8 million at September 30, 2021. As of September 30, 2021, a $7.9 million decrease to the projected benefit obligation resulted from settlements that occurred in fiscal 2021. Contributions to the Company’s qualified U.S. plans totaled $1.4 million in fiscal 2021. No contributions were made to non-qualified U.S. plans in fiscal 2021. Contributions to the Company’s qualified and non-qualified U.S. plans totaled $1.7 million and $19.8 million, respectively, in fiscal 2020. There is an expected funding requirement of $0.6 million in fiscal 2022 for the qualified U.S. pension plans maintained by the Company.

The accumulated benefit obligation and projected benefit obligation for the non-U.S. plans are $217.2 million and $224.1 million, respectively, with plan assets of $205.9 million as of September 30, 2021. The underfunded status for these non-U.S. plans is $18.2 million at September 30, 2021. As of September 30, 2021, a $20.4 million decrease to the projected benefit obligation is due to divestitures that occurred in fiscal 2021. Contributions to the non-U.S. plans totaled $8.6 million and $8.3 million in fiscal 2021 and 2020, respectively. The expected funding requirement for fiscal 2022 for the non-U.S. plans is $2.3 million.

	U.S. Defined Benefit Pension Plans		**Non-U.S. Defined Benefit Pension Plans**	
Principal assumptions as of year end	**2021**	**2020**	**2021**	**2020**
Discount rate	2.56%	2.47%	2.40%	1.90%
Rate of increase in future compensation levels	N/A [(1)]	4.45%	3.06%	2.90%
Assumed long-term rate of return on plan assets	5.74%	5.99%	3.20%	3.69%

(1) As a result of the plan freeze to the ERP for all future benefit accruals and participation by new or rehired employees on or after January 1, 2021, the assumed rate of increase in future compensation levels is not applicable as of September 30, 2021, as pay increases are not valued once a defined benefit pension plan is frozen.

	U.S. Post-Retirement Pension Plans		**Non-U.S. Post-Retirement Pension Plans**	
Principal assumptions as of year end	**2021**	**2020**	**2021**	**2020**
Discount rate	2.36%	1.99%	2.87%	2.28%
Initial weighted average health care trend rate	7.30%	7.27%	5.70%	5.50%
Ultimate weighted average health care trend rate	6.00%	6.00%	4.20%	4.10%

The Company uses discount rates developed from a yield curve established from high-quality corporate bonds and matched to plan-specific projected benefit payments. Although future changes to the discount rate are unknown, had the discount rate increased or decreased by 25 basis points, pension liabilities in total would have decreased $8.4 million or increased $9.0 million, respectively. Had the discount rate increased or decreased by 25 basis points, fiscal 2021 net periodic benefit income for the pension plans would have decreased $0.4 million or increased $0.6 million, respectively. In determining the expected long-term rate of return on the defined benefit pension plans’ assets, the Company considers the historical rates of return, the nature of investments, the asset allocation, and expectations of future investment strategies. Had the expected return on assets increased or decreased by 25 basis points, fiscal 2021 net periodic benefit income would have increased $1.3 million or decreased $1.4 million, respectively. Other than the expected settlement of the ERP in fiscal 2022, management is not aware of any legislative or other initiatives or circumstances that will significantly impact the Company’s pension obligations in fiscal 2022.

Plan assets are invested in a diversified portfolio of equity and debt securities consisting primarily of common stocks, bonds and government securities. The objective of these investments is to maintain sufficient liquidity to fund current benefit payments and achieve targeted risk-adjusted returns. Management periodically reviews allocations of plan assets by investment type and evaluates external sources of information regarding the long-term historical returns and expected future returns for each investment type.

Due to the freeze and subsequent termination of the ERP that occurred during fiscal 2021, management approved changes to the Plan's investment policy to align our pension plan assets with our projected benefit obligation to reduce volatility by targeting an investment strategy of approximately 85 to 95% in fixed-income securities and up to approximately 20% in return-seeking assets, consisting of primarily equity securities and real estate.

Allocations by investment type are as follows**:**

		Actual	
Plan assets allocation as of fiscal year end:	**Target**	**2021**	**2020**
Return-seeking assets (e.g., equity securities and real estate)	0%-20%	20.7%	39.1%
Fixed-income securities (e.g., debt securities)	85%- 95%	78.3%	57.0%
Cash	—%	1.0%	3.9%
Total		100.0%	100.0%

The following table presents the fair value of the Company's pension plan assets as of September 30, 2021, by asset category segregated by level within the fair value hierarchy, as described in Note 20, "Fair Value Measurements" (in millions):

	Fair Value Hierarchy		
	Level 1	**Level 2**	**Total**
Investments measured at fair value by category: [5]			
Return-seeking assets: [1]			
U.S. equity securities	$ 6	$ —	$ 6
Non-U.S. equity securities	34	—	34
Fixed-income securities: [2]			
Non-U.S. foreign commercial and government bonds	—	53	53
Cash and cash equivalents [3]	5	—	5
	$ 45	$ 53	$ 98
Investments measured at net asset value by category: [4]			
Return-seeking assets: [1]			
Commingled trust funds - Non-U.S. securities			65
Non-U.S. equity securities			9
Fixed-income securities: [2]			
U.S. government bonds and securities			91
U.S corporate bonds			223
Non-U.S. corporate bonds			20
Non-U.S. foreign commercial and government bonds			41
Total			$ 547

The following table presents the fair value of the Company's pension plan assets as of September 30, 2020, by asset category segregated by level within the fair value hierarchy, as described in Note 20, "Fair Value Measurements" (in millions):

	Fair Value Hierarchy		
	Level 1	Level 2	Total
Investments measured at fair value by category: [5]			
Return-seeking assets: [1]			
U.S. equity securities	$ 4	$ —	$ 4
Non-U.S. equity securities	48	—	48
Fixed-income securities: [2]			
Non-U.S. foreign commercial and government bonds	—	58	58
Cash and cash equivalents [3]	22	—	22
	$ 74	$ 58	$ 132
Investments measured at net asset value by category: [4]			
Return-seeking assets: [1]			
Commingled trust funds - Non-U.S. securities			153
Non-U.S. equity securities			9
Fixed-income securities: [2]			
U.S. government bonds and securities			80
U.S corporate bonds			123
Non-U.S. corporate bonds			18
Non-U.S. foreign commercial and government bonds			31
Total			$ 546

(1) Level 1 return-seeking assets, which are primarily equity securities and real estate, are actively traded on U.S. and non-U.S. exchanges and are either valued using the market approach at quoted market prices on the measurement date or at the net asset value of the shares held by the plan on the measurement date based on quoted market prices.

(2) Level 2 fixed-income securities, which are primarily debt securities, are primarily valued using the market approach at either quoted market prices, pricing models that use observable market data, or bids provided by independent investment brokerage firms.

(3) Cash and cash equivalents include cash which is used to pay benefits and cash invested in a short-term investment fund that holds securities with values based on quoted market prices, but for which the funds are not valued on quoted market basis.

(4) These investments are valued at the net asset value ("NAV") of units held. The NAV is used to estimate fair value and is based on the fair value of the underlying investments held by the fund less its liability.

(5) No investments measured using Level 3 inputs.

Net periodic pension benefit (income) cost for the Company's U.S. and non-U.S. defined benefit pension plans at the end of each fiscal year consisted of the following (in millions):

	Defined Benefit Pension Plans					
	2021		2020		2019	
	U.S. Pension Plans	Non-U.S. Pension Plans	U.S. Pension Plans	Non-U.S. Pension Plans	U.S. Pension Plans	Non-U.S. Pension Plans
Service cost	$ 2	$ 5	$ 9	$ 6	$ 5	$ 3
Interest cost	6	5	10	5	7	5
Expected return on plan assets	(19)	(7)	(19)	(8)	(10)	(6)
Amortization of net loss	1	2	1	1	—	—
Curtailment/settlements (gain) loss	—	(2)	(1)	(1)	—	—
Net periodic pension benefit (income) cost	$ (10)	$ 3	$ —	$ 3	$ 2	$ 2

Net periodic pension benefit cost for the Company’s U.S. and non-U.S. post-retirement pension plans was less than $1 million for each of the fiscal years ended 2021, 2020 and 2019. The components of net periodic pension benefit cost other than service cost are included in other (income) expense in the consolidated statements of income.

The funded status of the defined benefit pension and post-retirement plans at the end of fiscal 2021 and 2020 were as follows (in millions):

	Defined Benefit Pension Plans				Post-Retirement Pension Plans			
	September 30, 2021		September 30, 2020		September 30, 2021		September 30, 2020	
	U.S. Pension Plans	Non-U.S. Pension Plans	U.S. Pension Plans	Non-U.S. Pension Plans	U.S. Pension Plans	Non-U.S. Pension Plans	U.S. Pension Plans	Non-U.S. Pension Plans
Benefit Obligations								
Beginning balance	$ 366	$ 248	$ 379	$ 270	$ 1	$ 14	$ 1	$ 14
Currency translation adjustment	—	10	—	5	—	1	—	—
Service cost	2	5	9	6	—	1	—	—
Interest cost	6	5	10	5	—	—	—	—
Plan participant contributions	—	1	—	1	—	—	—	—
Actuarial (gain) loss	—	(11)	10	13	—	(3)	—	1
Curtailments	—	(4)	—	(2)	—	—	—	—
Settlements	(8)	(1)	(20)	(40)	—	—	—	—
Divestitures	—	(20)	—	—	—	—	—	—
Other adjustments	1	—	—	—	1	—	—	—
Benefits paid	(16)	(9)	(22)	(10)	—	(1)	—	(1)
Ending balance	$ 351	$ 224	$ 366	$ 248	$ 2	$ 12	$ 1	$ 14
Plan Assets - Fair Value								
Beginning balance	$ 342	$ 204	$ 318	$ 234	$ —	$ —	$ —	$ —
Currency translation adjustment	—	9	—	3	—	—	—	—
Realized and unrealized gain on plan assets	22	14	44	8	—	—	—	—
Plan participant contributions	—	1	—	1	—	—	—	—
Company contributions	—	8	21	8	—	1	—	1
Settlements	(8)	(1)	(19)	(40)	—	—	—	—
Divestitures	—	(20)	—	—	—	—	—	—
Other adjustments	1	—	—	—	—	—	—	—
Benefits paid	(16)	(9)	(22)	(10)	—	(1)	—	(1)
Ending balance	$ 341	$ 206	$ 342	$ 204	$ —	$ —	$ —	$ —
Funded Status								
Fair value of plan assets	$ 341	$ 206	$ 342	$ 204	$ —	$ —	$ —	$ —
Benefit obligations	(351)	(224)	(366)	(248)	(2)	(12)	(1)	(14)
Net amount recognized	$ (10)	$ (18)	$ (24)	$ (44)	$ (2)	$ (12)	$ (1)	$ (14)
Amount Recognized on Consolidated Balance Sheet								
Other (non-current assets)	$ —	$ 6	$ —	$ 4	$ —	$ —	$ —	$ —
Accrued liabilities (current)	(3)	—	(1)	(1)	—	(1)	—	(1)
Other non-current liabilities	(7)	(24)	(23)	(47)	(2)	(11)	(1)	(13)
Net amount recognized	$ (10)	$ (18)	$ (24)	$ (44)	$ (2)	$ (12)	$ (1)	$ (14)
Amounts Recognized in Accumulated Other Comprehensive Income								
Net actuarial loss (gain)	$ 10	$ 14	$ 12	$ 35	$ (1)	$ (2)	$ —	$ 2
Prior service cost	1	1	1	1	1	—	—	—
Ending balance	$ 11	$ 15	$ 13	$ 36	$ —	$ (2)	$ —	$ 2

The accumulated benefit obligation for all pension plans was $567.8 million and $595.3 million as of September 30, 2021 and September 30, 2020, respectively.

Estimated future benefit payments expected to be paid from the pension and post-retirement benefit plans or from the Company's assets are as follows (in millions):

Fiscal years ending September 30,		
2022 [(1)]	$	350
2023		12
2024		12
2025		12
2026		13
2027 - 2031		65

(1) Expected benefit payments in fiscal year 2022 primarily relates to the expected liquidation of the ERP.

Defined Contribution Plans

The Company sponsors certain defined contribution employee savings plans that cover substantially all of the Company's U.S. 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 fiscal years ended September 30, 2021, 2020 and 2019 was approximately $28.3 million, $25.3 million and $24.5 million, respectively.

14. INCOME TAXES

The Company's income from continuing operations before income taxes includes the following components for the periods shown below (in millions):

	Fiscal Years Ended September 30,		
	2021	2020	2019
United States	$ 516	$ 635	$ 878
Foreign	199	105	185
	$ 715	$ 740	$ 1,063

The Company's income tax provision (benefit) on income from continuing operations consists of the following for the periods shown below (in millions):

	Fiscal Years Ended September 30,		
	2021	2020	2019
Current			
Federal	$ (21)	$ 26	$ 154
State	14	3	15
Foreign	7	34	54
	—	63	223
Deferred			
Federal	7	29	15
State	(2)	3	2
Foreign	29	(8)	(18)
	34	24	(1)
	$ 34	$ 87	$ 222

A reconciliation of the federal statutory income tax rate to the effective income tax rate for the periods shown below is as follows:

	Fiscal Years Ended September 30,		
	2021	2020	2019
Federal statutory income tax rate	21.0 %	21.0 %	21.0 %
Provision to return adjustments	2.2 %	(0.4)%	(0.3)%
Remeasurement of deferred tax assets and liabilities related to enacted statutory rate changes	2.1 %	0.4 %	(0.5)%
Gain on sale of businesses	1.4 %	— %	— %
Global intangible low-taxed income	1.3 %	0.4 %	1.0 %
Foreign tax credits	(1.2)%	(0.6)%	(1.7)%
Research and development credits	(1.2)%	(0.6)%	(0.6)%
Foreign-derived intangible income	(1.5)%	(2.8)%	(1.5)%
Resolution and settlements to uncertain tax positions	(3.2)%	(0.3)%	(0.3)%
Changes in valuation allowances impacting results [1]	(8.2)%	4.2 %	6.2 %
Stock compensation	(8.7)%	(10.7)%	(5.4)%
Other—net	0.7 %	1.1 %	3.0 %
Effective income tax rate	4.7 %	11.7 %	20.9 %

[1] Primarily relates to the Company's business interest expense limitation pursuant to IRC §163(j) as modified by the Tax Cuts and Jobs Act. Such provision, as modified, was effective for the Company beginning in fiscal 2019. In general, the deduction for interest expense is limited to 30% (50% as modified by the CARES Act for the Company's fiscal 2020 and 2021) of the sum of the Company's adjusted taxable income ("ATI") and its business interest income. Interest expense disallowed by such limitation, in a taxable year, may be carried forward indefinitely. Based upon available evidence, a valuation allowance was recorded for the resulting carryforward to reflect the Company's belief that it is more likely than not that such deferred tax assets will not be realized. In fiscal 2021, the Company made a tax election on its most recently filed U.S. federal income tax return allowing for the utilization of its net interest limitation carryforward. The Company recognized approximately $69.0 million of benefit from the release of the valuation allowance, applicable to such carryforward, for the fiscal year ended September 30, 2021.

The components of the deferred taxes consist of the following (in millions):

	September 30, 2021	September 30, 2020
Deferred tax assets (liabilities):		
Intangible assets	$ (814)	$ (730)
Property, plant and equipment	(32)	(59)
Employee benefits	107	110
Interest rate swaps and caps	69	92
Net operating losses	58	54
Loss contract reserves	51	55
Inventories	45	41
U.S. income tax credits	31	17
Interest expense limitation	28	87
Non-U.S. income tax credits	20	21
Environmental reserves	11	12
Product warranty reserves	7	10
Other	8	9
Total	(411)	(281)
Add: Valuation allowance	(74)	(132)
Total net deferred tax assets (liabilities)	$ (485)	$ (413)

At September 30, 2021, the Company has state net operating loss carryforwards of approximately $1,491.8 million, German net operating loss carryforwards of $41.2 million and United Kingdom net operating loss carryforwards of approximately $39.6 million that expire in various tax years from 2021 to 2039. The Company has U.S. and non-U.S. tax credit carryforwards of $50.7 million that expire beginning in 2025.

The deferred tax assets for the interest expense limitation, net operating losses, and tax credit carryforwards are reduced by a valuation allowance for the amount of such assets that the Company believes will not be realized.

The Company and its subsidiaries file income tax returns in the U.S. federal jurisdiction and various state, local and foreign jurisdictions. The Company is no longer subject to U.S. federal examinations for years before fiscal 2017. The Company is currently under examination for its federal income taxes in Canada for fiscal years 2013 through 2019, in France for fiscal years 2018 through 2019 and in Germany for fiscal years 2014 through 2017. The Company expects the examinations in France to be completed during fiscal 2022. In addition, the Company is subject to state income tax examinations for fiscal years 2015 and later.

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

	2021	2020
Balance at October 1	$ 41	$ 37
Additions based on tax positions related to the prior year	—	7
Additions based on tax positions related to the current year	2	2
Reductions based on tax positions related to the prior year	(18)	(1)
Settlement with tax authorities	(4)	(2)
Lapse in statute of limitations	(2)	(2)
Balance at September 30	$ 19	$ 41

Unrecognized tax benefits at September 30, 2021 and 2020, the recognition of which would have an effect on the effective tax rate for each fiscal year, amounted to $19.1 million and $40.9 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, 2021 and 2020. As of September 30, 2021 and 2020, the Company accrued $4.9 million and $8.7 million, respectively, for the potential payment of interest and penalties. Within the next 12 months, it is reasonably possible that unrecognized tax benefits could be reduced by approximately $3.0 million resulting from the resolution or closure of tax examinations. Any increase in the amount of unrecognized tax benefits within the next 12 months is not expected to be material.

15. COMMITMENTS AND 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.

Litigation Claims – We, as a nominal defendant, and certain of our current or former directors, are defendants in a shareholder derivative action captioned *Sciabacucchi v Howley, et al.* (Del. Chancery Court). The case was filed on November 1, 2021. The plaintiff alleges that the defendants breached their fiduciary duties, that the directors engaged in corporate waste and that the directors and our former Executive Chair and Chief Executive Officer were unjustly enriched in connection with the compensation paid to them. The plaintiff seeks attorney fees and equitable remedies such as rescission of compensation and changes in corporate policies, as well as unspecified monetary damages. Although we are only a nominal defendant in the derivative action, we could have indemnification obligations and/or be required to advance the costs and expenses of the officer and director defendants in the action. We do not expect this matter to have a material adverse impact on our financial condition or results of operations.

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 or results of operations.

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 offset 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 sheets includes current environmental remediation obligations at September 30, 2021 and 2020 of $8.2 million and $7.9 million classified as a component of accrued and other current liabilities, respectively, and non-current environmental remediation obligations at September 30, 2021 and 2020 of $40.7 million and $43.1 million classified as a component of other non-current liabilities, respectively.

Leach International Europe (Facility Fire) – On August 8, 2019, a fire caused significant damage to the Niort, France operating facility of the Leach International Europe subsidiary, which is reported within the Company's Power & Control segment. The facility as well as certain machinery, equipment and inventory sustained damage. The Company suspended operations at the Niort facility as a result of the fire; however, had transferred certain operations to temporary facilities until operations were fully restored at the rebuilt facility. The new facility was completed in December 2020 and was fully operational as of March 2021.

The Company's insurance covers damage to the facility, equipment, inventory, and other assets, at replacement cost, as well as business interruption losses and other incremental costs resulting from the disruption of operations caused by the fire, subject to a $1 million deductible and certain sub-limits based on the nature of the covered item. Anticipated insurance recoveries related to losses and incremental costs incurred were recognized when receipt was probable. Anticipated insurance recoveries in excess of net book value of the damaged property and inventory were recorded once all contingencies relating to the claim had been resolved.

During fiscal 2021, the insurance claim, inclusive of property, business interruption and incremental costs of working, was settled for $88 million, net of the $1 million deductible. A gain of $24 million was recorded to other income during fiscal 2021, of which $19 million represents the insurance proceeds received in excess of the carrying value of the damaged fixed assets and inventory and $5 million represents the insurance proceeds received in excess of previously recorded receivables for business interruption and incremental costs of working.

Of the approximately $58 million in cash proceeds received in fiscal 2021 relating to the insurance claim and final settlement of the claim, $24 million was included in net cash used in investing activities and $34 million was included in net cash provided by operating activities within the consolidated statements of cash flows based on the nature of the insurance reimbursements. In fiscal 2020, approximately $28 million in cash proceeds was received as an initial advance under the property insurance claim. All of the proceeds received in fiscal 2020 were included in net cash provided by operating activities within the consolidated statements of cash flows based on the nature of the insurance reimbursements.

16. CAPITAL STOCK

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, 2021 and 2020 was 59,403,100 and 58,612,028, respectively. The total number of shares held in treasury was 4,198,226 at September 30, 2021 and 2020. There were no shares of preferred stock outstanding at September 30, 2021 and 2020. The terms of the preferred stock have not been established.

On November 8, 2017, our Board of Directors, authorized a stock repurchase program permitting repurchases of our outstanding shares not to exceed $650 million in the aggregate, subject to any restrictions specified in the Credit Agreement and/or Indentures governing the existing Notes. During March 2020, the Company repurchased 36,900 shares of its common stock at a gross cost of $18.9 million at the weighted average cost of $512.67 under the program. No repurchases were made under the program during the fiscal year ended September 30, 2021. As of September 30, 2021, the remaining amount of repurchases allowable under the program was $631.1 million subject to any restrictions specified in the Credit Agreement and/or Indentures governing the existing Notes.

17. 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, batteries and chargers, databus and power controls, advanced sensor products, switches and relay panels, high performance hoists, winches and lifting devices, and cargo loading, handling and delivery 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, engineered rods, engineered connectors and elastomer sealing solutions, cockpit security components and systems, specialized and advanced cockpit displays, engineered audio, radio and antenna systems, specialized lavatory components, seat belts and safety restraints, engineered and customized interior surfaces and related components, thermal protection and insulation, lighting and control technology and parachutes. 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, hydraulic/electromechanical actuators and fuel valves for land based gas turbines, and refueling systems for heavy equipment used in mining, construction and other industries and turbine controls for the energy and oil and gas markets. Primary customers of this segment are off-road vehicle suppliers and subsystem suppliers, child restraint system suppliers, satellite and space system suppliers, manufacturers of heavy equipment used in mining, construction and other industries and turbine original equipment manufacturers, gas pipeline builders and electric utilities.

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 non-cash compensation charges incurred in connection with the Company’s stock incentive plans, restructuring costs related to the Company's cost reduction measures in response to the COVID-19 pandemic, foreign currency gains and losses, acquisition-integration costs, acquisition and divestiture transaction-related expenses, and refinancing costs. COVID-19 restructuring costs represent actions taken by the Company to reduce its workforce to align with customer demand, as well as incremental costs related to the pandemic that are not expected to recur once the pandemic has subsided and are clearly separable from normal operations (e.g., additional cleaning and disinfecting of facilities by contractors above and beyond normal requirements, personal protective equipment). Acquisition and divestiture-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 for both acquisitions and divestitures 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 U.S. 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 U.S. 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 immaterial for the periods presented below. Corporate consists of our corporate offices. Corporate office expenses consist primarily of compensation, benefits, professional services and other administrative costs incurred by the corporate offices. Corporate assets consist primarily of cash and cash equivalents. Corporate expenses and assets reconcile reportable segment data to the consolidated totals. An immaterial amount of corporate expenses are allocated to the operating segments.

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

	Fiscal Years Ended September 30, 2021	2020	2019
Net sales to external customers			
Power & Control			
Commercial and non-aerospace OEM	$ 527	$ 623	$ 686
Commercial and non-aerospace aftermarket	576	673	769
Defense	1,447	1,399	1,281
Total Power & Control	2,550	2,695	2,736
Airframe			
Commercial and non-aerospace OEM	591	783	836
Commercial and non-aerospace aftermarket	550	689	865
Defense	942	781	628
Total Airframe	2,083	2,253	2,329
Total Non-aviation	165	155	158
Net sales	$ 4,798	$ 5,103	$ 5,223

The following table reconciles EBITDA As Defined by segment to consolidated income from continuing operations before income taxes (in millions):

	Fiscal Years Ended September 30, 2021	2020	2019
EBITDA As Defined			
Power & Control	$ 1,319	$ 1,345	$ 1,395
Airframe	878	955	1,063
Non-aviation	62	54	51
Total segment EBITDA As Defined	2,259	2,354	2,509
Less: Unallocated corporate expenses	70	76	90
Total Company EBITDA As Defined	2,189	2,278	2,419
Depreciation and amortization expense	253	283	225
Interest expense, net	1,059	1,029	859
Acquisition and divestiture-related costs	35	31	169
Non-cash stock compensation expense	129	93	93
Refinancing costs	37	28	3
COVID-19 pandemic restructuring costs	40	54	—
Gain on sale of businesses, net	(69)	—	—
Other, net	(10)	20	7
Income from continuing operations before income taxes	$ 715	$ 740	$ 1,063

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

	Fiscal Years Ended September 30,		
	2021	2020	2019
Capital expenditures			
Power & Control	$ 65	$ 89	$ 50
Airframe	37	10	48
Non-aviation	2	4	3
Corporate	1	2	1
	$ 105	$ 105	$ 102
Depreciation and amortization			
Power & Control	$ 107	$ 117	$ 99
Airframe	139	157	119
Non-aviation	6	7	6
Corporate	1	2	2
	$ 253	$ 283	$ 226

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

	September 30, 2021	September 30, 2020
Total assets		
Power & Control	$ 6,980	$ 7,005
Airframe	7,472	6,575
Non-aviation	229	251
Corporate	4,634	4,564
	$ 19,315	$ 18,395

Geographic Area Information

Net sales are measured based on the geographic destination of sales. Long-lived assets consist of property, plant and equipment - net and operating lease right-of-use assets. Net sales and long-lived assets of individual countries outside of the United States are not material.

The following table presents net sales by geographic area (in millions):

	September 30, 2021	September 30, 2020
Net sales		
United States	$ 3,096	$ 3,407
Foreign Countries	1,702	1,696
	$ 4,798	$ 5,103

The following table presents long-lived assets by geographic area (in millions):

	September 30, 2021	September 30, 2020
Long-lived assets		
United States	$ 608	$ 600
Foreign Countries	256	255
	$ 864	$ 855

18. STOCK-BASED COMPENSATION

The Company's equity 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 equity compensation plans provide for the granting of stock options.

Non-cash stock compensation expense recognized by the Company during the fiscal years ended September 30, 2021, 2020 and 2019 was $128.9 million, $92.7 million and $93.4 million, respectively.

The weighted-average grant date fair value of options granted during the fiscal years ended September 30, 2021, 2020 and 2019 was $193.47, $157.41 and $114.43, respectively.

Compensation expense is recognized based upon probability assessments of awards that are expected to vest in future periods, adjusted for expected forfeitures. Such probability assessments are subject to revision and, therefore, unrecognized compensation expense is subject to future changes in estimate. As of September 30, 2021, there was approximately $55.0 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 1.3 years.

On September 25, 2020, the Compensation Committee of the Board of Directors determined to allow the portion of options granted in fiscal 2020 with a scheduled vesting date in 2020 to vest, effective September 30, 2020, notwithstanding that performance criteria for such options would not be met. This action impacted options granted to approximately 85 individuals, including all of the independent directors and certain executive officers. This action was treated as a modification for accounting purposes under ASC 718. An additional $2.5 million of stock compensation expense for fiscal 2020 resulted from this modification.

On November 10, 2020, the Compensation Committee of the Board of Directors approved the Company's established performance criteria required to be achieved for the options granted in fiscal 2020 and in fiscal 2021 with a scheduled vesting date of September 30, 2021. This action resulted in a modification for accounting purposes under ASC 718 for the options granted in fiscal 2020, consisting of 64 individuals, including all of the independent directors and certain executive officers. An additional $8.5 million of stock compensation expense for fiscal 2021 resulted from this modification.

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

	Fiscal Years Ended September 30,		
	2021	2020	2019
Risk-free interest rate	0.42% to 0.86%	0.26% to 1.65%	2.33% to 3.03%
Expected life of options	5.5 years	5 to 5.5 years	5.5 years
Expected dividend yield of stock	—	—	—
Expected volatility of stock	36%	25% to 39%	25%

The risk-free interest rate is based upon the U.S. Treasury bond rates as of the grant or modification 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 TransDigm's common stock up to the date of grant or date of modification. The Company estimates stock option forfeitures based on historical data. The total number of stock options expected to vest is adjusted by actual and estimated forfeitures. Changes to the actual and estimated forfeitures will result in a cumulative adjustment in the period of change. Notwithstanding the special cash dividends declared and paid from time to time, 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, 2021, 2020 and 2019 was $92.0 million, $97.2 million and $37.7 million, respectively. The significant increase in the total fair value of options vested during fiscal years 2021 and 2020 compared to fiscal year 2019 resulted from substantially more options vesting and increase in the grant date fair value, particularly between fiscal 2019 and fiscal 2020.

2019 Stock Option Plan

In August 2019, the Board of Directors of TD Group adopted a new stock option plan, which was subsequently approved by stockholders on October 3, 2019. The 2019 stock option plan permits TD Group to award stock options to our key employees, directors or consultants. The total number shares of TD Group common stock reserved for issuance or delivery under the 2019 stock option plan is 4,000,000, 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. No grants have been made from TD Group's 2019 stock option plan as of September 30, 2021.

2014 Stock Option Plan

In July 2014, the Board of Directors of TD Group adopted the 2014 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—Generally all of the options granted through September 30, 2021 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, generally all of the options granted will vest based on the Company's achievement of established operating performance goals. As of September 30, 2021, the operating performance goals have not been determined on the portion of options granted in fiscal 2021 and 2020 with a scheduled vesting date of September 30, 2022 and beyond due to the uncertainty on the Company's financial results from the COVID-19 pandemic. 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, 2021:

	Number of Options	Weighted-Average Exercise Price Per Option	Weighted-Average Remaining Contractual Term	Aggregate Intrinsic Value
Outstanding at September 30, 2020	3,613,857	$ 364.79		
Granted	811,308	573.65		
Exercised	(101,638)	328.42		
Forfeited	(120,604)	464.43		
Expired	—	—		
Outstanding at September 30, 2021	4,202,923	$ 403.12	7.1 years	$ 930,737,298
Expected to vest	725,302	$ 351.88	6.9 years	$ 197,784,390
Exercisable at September 30, 2021	2,458,305	$ 352.13	6.5 years	$ 669,740,614

At September 30, 2021, there were 626,294 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 reserved 8,119,668 shares of its common stock for issuance to key employees, directors or consultants under the plan. Awards under the plan were in the form of options, restricted stock or other stock-based awards. Options granted under the plan expire no later than the tenth anniversary of the applicable date of grant of the options, and 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 vested over three years. No restricted stock units remained outstanding as of September 30, 2018.

Performance Vested Stock Options—All of the options granted 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 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, 2021:

	Number of Options	Weighted-Average Exercise Price Per Option	Weighted-Average Remaining Contractual Term	Aggregate Intrinsic Value
Outstanding at September 30, 2020	2,235,680	$ 170.97		
Granted	—	—		
Exercised	(687,075)	137.75		
Forfeited	—	—		
Expired	—	—		
Outstanding at September 30, 2021	1,548,605	$ 185.71	2.9 years	$ 679,627,029
Exercisable at September 30, 2021	1,548,605	$ 185.71	2.9 years	$ 679,627,029

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. All shares had been issued as of September 30, 2013. As of September 30, 2020, 829 options were outstanding and exercisable at a weighted average price per option of $130.09. As of September 30, 2021, no shares were outstanding or exercisable under our 2003 stock incentive plan.

The total intrinsic value of performance options exercised during the fiscal years ended September 30, 2021, 2020 and 2019 was $355.3 million, $394.2 million and $240.2 million, respectively.

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 existing stock option plans 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 were $72.5 million, $184.9 million and $111.0 million during the fiscal years ended September 30, 2021, 2020 and 2019, respectively. At September 30, 2021, there was $45.9 million recorded in accrued and other current liabilities and $30.9 million accrued in other non-current liabilities on the consolidated balance sheets related to future dividend equivalent payments.

19. LEASES

The Company leases certain manufacturing facilities, offices, land, equipment and vehicles. Such leases, some of which are noncancellable and, in many cases, include renewals, expire at various dates. Such options to renew are included in the lease term when it is reasonably certain that the option will be exercised. The Company's lease agreements typically do not contain any significant residual value guarantees or restrictive covenants, and payments within certain lease agreements are adjusted periodically for changes in an index or rate.

The Company determines if an arrangement is a lease at inception. Operating lease assets and liabilities are recognized at the commencement date of the lease based on the present value of lease payments over the lease term. Lease assets represent the Company's right to use an underlying asset for the lease term and lease liabilities represent the Company's obligation to make lease payments arising from the lease. The discount rate implicit within our leases is generally not determinable and therefore we determine the discount rate based on our incremental borrowing rate. The incremental borrowing rate for our leases is determined based on the lease term and the currency in which lease payments are made. The length of a lease term includes options to extend or terminate the lease when it is reasonably certain that the Company will exercise those options. The Company made an accounting policy election to not recognize lease assets or liabilities for leases with a term of 12 months or less. Additionally, when accounting for leases, the Company combines payments for leased assets, related services and other components of a lease.

The components of lease expense for the fiscal years ended September 30, 2021 and 2020 are as follows (in millions):

		Fiscal Years Ended September 30,	
	Classification	**2021**	**2020**
Operating lease cost	Cost of Sales or Selling and Administrative Expenses	$ 29	$ 29
Finance lease cost			
Amortization of leased assets	Cost of Sales	4	3
Interest on lease liabilities	Interest Expense - Net	6	4
Total lease cost		$ 39	$ 36

Supplemental cash flow information related to leases for the fiscal years ended September 30, 2021 and 2020 is as follows (in millions):

	Fiscal Years Ended September 30, 2021	Fiscal Years Ended September 30, 2020
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash outflows from operating leases	$ 29	$ 29
Operating cash outflows from finance leases	6	4
Financing cash outflows from finance leases	2	2
Lease assets obtained in exchange for new lease obligations:		
Operating leases	$ 41	$ 32
Financing leases	25	—

Supplemental balance sheet information related to leases is as follows (in millions):

	Classification	September 30, 2021	September 30, 2020
Operating Leases			
Operating lease right-of-use assets	Other assets	$ 94	$ 103
Current operating lease liabilities	Accrued and other current liabilities	20	22
Long-term operating lease liabilities	Other non-current liabilities	79	87
Total operating lease liabilities		$ 99	$ 109
Finance Leases			
Finance lease right-of-use assets, net	Property, plant and equipment - net	$ 104	$ 67
Current finance lease liabilities	Accrued and other current liabilities	2	2
Long-term finance lease liabilities	Other non-current liabilities	98	55
Total finance lease liabilities		$ 100	$ 57

As of September 30, 2021, the Company has the following remaining lease term and weighted average discount rates:

Weighted-average remaining lease term	
Operating leases	8.1 years
Finance leases	21.7 years
Weighted-average discount rate	
Operating leases	6.0%
Finance leases	7.2%

Maturities of lease liabilities at September 30, 2021 are as follows (in millions):

	Operating Leases	Finance Leases
2022	$ 24	$ 8
2023	19	9
2024	16	9
2025	13	9
2026	10	9
Thereafter	45	171
Total future minimum lease payments	127	215
Less: imputed interest	28	115
Present value of lease liabilities reported	$ 99	$ 100

20. FAIR VALUE MEASUREMENTS

The following table presents 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 millions):

		September 30, 2021		September 30, 2020	
	Level	Carrying Amount	Fair Value	Carrying Amount	Fair Value
Assets:					
Cash and cash equivalents	1	$ 4,787	$ 4,787	$ 4,717	$ 4,717
Interest rate cap agreements [1]	2	8	8	—	—
Liabilities:					
Interest rate swap agreements [2]	2	100	100	56	56
Interest rate swap agreements [3]	2	180	180	328	328
Foreign currency forward exchange contracts [2]	2	4	4	1	1
Short-term borrowings - trade receivable securitization facility [4]	2	349	349	349	349
Long-term debt, including current portion:					
Term loans [4]	2	7,318	7,268	7,378	7,004
Revolving credit facility [4]	2	200	200	200	200
2024 Notes [4]	1	—	—	1,195	1,194
2025 Notes [4]	1	—	—	750	743
2025 Secured Notes [4]	1	1,093	1,170	1,091	1,194
6.375% 2026 Notes [4]	1	945	981	944	948
6.875% 2026 Notes [4]	1	494	527	493	500
2026 Secured Notes [4]	1	4,359	4,593	4,350	4,604
7.50% 2027 Notes [4]	1	546	578	545	569
5.50% 2027 Notes [4]	1	2,632	2,730	2,629	2,554
4.625% 2029 Notes [4]	1	1,190	1,196	—	—
4.875% 2029 Notes [4]	1	743	751	—	—
Government refundable advances	2	29	29	28	28
Finance lease obligations	2	100	100	57	57

[1] Included in other assets on the consolidated balance sheets.

[2] Included in accrued and other current liabilities on the consolidated balance sheets.

[3] Included in other non-current liabilities on the consolidated balance sheets.

[4] The carrying amount of the debt instrument is presented net of the debt issuance costs, premium and discount. Refer to Note 12, "Debt," for gross carrying amounts.

The Company values its financial instruments using an industry standard market approach, in which prices and other relevant information are generated by market transactions involving identical or comparable assets or liabilities. No financial instruments were recognized or disclosed using unobservable inputs (i.e., Level 3).

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 Company’s derivative contracts consist of foreign currency exchange contracts and interest rate swap and cap agreements. These derivative contracts are over-the-counter, and their fair value is determined using modeling techniques that include market inputs such as interest rates, yield curves, and currency exchange rates. These contracts are categorized as Level 2 in the fair value hierarchy.

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 significant 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 carrying value due to the short-term nature of these instruments at September 30, 2021 and 2020.

21. DERIVATIVES AND HEDGING ACTIVITIES

The Company is exposed to, among other things, the impact of changes in foreign currency exchange rates and 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. These derivative financial instruments do not subject the Company to undue risk, as gains and losses on these instruments generally offset gains and losses on the underlying assets, liabilities, or anticipated transactions that are being hedged. 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.

All derivative financial instruments are recorded at fair value in the consolidated balance sheets. For a derivative that has not been designated as an accounting hedge, the change in the fair value is recognized immediately through earnings. For a derivative that has been designated as an accounting hedge of an existing asset or liability (a fair value hedge), the change in the fair value of both the derivative and underlying asset or liability is recognized immediately through earnings. For a derivative designated as an accounting hedge of an anticipated transaction (a cash flow hedge), the change in the fair value is recorded on the consolidated balance sheets in accumulated other comprehensive loss to the extent the derivative is effective in mitigating the exposure related to the anticipated transaction. The change in the fair value related to the ineffective portion of the hedge, if any, is immediately recognized in earnings. The amount recorded within accumulated other comprehensive loss is reclassified into earnings in the same period during which the underlying hedged transaction affects earnings.

Interest Rate Swap and Cap Agreements – Interest rate swap and cap agreements are used to manage interest rate risk associated with floating-rate borrowings under our credit facility. 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 qualify as effective cash flow hedges under U.S. 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 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. As the interest rate swap and cap agreements are used to manage interest rate risk, any gains or losses from the derivative instruments that are reclassified into earnings are recognized in interest expense-net in the consolidated statements of income.

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

Aggregate Notional Amount (in millions)	Start Date	End Date	Related Term Loans	Conversion of Related Variable Rate Debt to Fixed Rate of:
$500	6/29/2018	3/31/2025	Tranche E	5.25% (3.0% plus the 2.25% margin percentage)
$750	6/30/2020	6/30/2022	Tranche E	4.75% (2.5% plus the 2.25% margin percentage)
$1,500	6/30/2022	3/31/2025	Tranche E	5.35% (3.1% plus the 2.25% margin percentage)
$700	3/31/2023	9/30/2025	Tranche F	3.55% (1.3% plus the 2.25% margin percentage)
$1,400	6/30/2021	3/31/2023	Tranche F	5.25% (3.0% plus the 2.25% margin percentage)
$500	12/30/2016	12/31/2021	Tranche G	4.15% (1.9% plus the 2.25% margin percentage)
$400	9/30/2017	9/30/2022	Tranche G	4.15% (1.9% plus the 2.25% margin percentage)
$900	12/31/2021	6/28/2024	Tranche G	5.35% (3.1% plus the 2.25% margin percentage)
$400	9/30/2022	6/28/2024	Tranche G	5.25% (3.0% plus the 2.25% 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:
$750	6/30/2020	6/30/2022	Tranche E	Three month LIBOR rate of 2.50%
$700	3/31/2023	9/30/2025	Tranche F	Three month LIBOR rate of 1.25%
$400	12/30/2016	12/31/2021	Tranche G	Three month LIBOR rate of 2.50%

Certain derivative asset and liability balances are offset where master netting agreements provide for the legal right of setoff. For classification purposes, we record the net fair value of each type of derivative position that is expected to settle in less than one year with each counterparty as a net current asset or liability and each type of long-term position as a net non-current asset or liability. The amounts shown in the table below represent the gross amounts of recognized assets and liabilities, the amounts offset in the consolidated balance sheets and the net amounts of assets and liabilities presented therein (in millions):

	September 30, 2021		September 30, 2020	
	Asset	Liability	Asset	Liability
Interest rate cap agreements	$ 8	$ —	$ —	$ —
Interest rate swap agreements	—	(280)	—	(384)
Net derivatives as classified in the consolidated balance sheet [1]	$ 8	$ (280)	$ —	$ (384)

[1] Refer to Note 20, "Fair Value Measurements," for the consolidated balance sheets classification of our interest rate swap agreements.

Based on the fair value amounts of the interest rate swap and cap agreements determined as of September 30, 2021, the estimated net amount of existing gains and losses and caplet amortization expected to be reclassified into interest expense-net within the next 12 months is approximately $101.8 million.

On June 18, 2021, the Company entered into two interest rate cap agreements and one interest rate swap agreement. The agreements each have an effective date of March 31, 2023 and mature on September 30, 2025. The two interest rate cap agreements will offset the variable interest rates on the Company's floating rate debt exposures based on an aggregate notional amount of $700 million. The two interest rate caps offset the variability in expected future cash flows on the Company's variable rate debt attributable to fluctuations above the three month LIBOR of 1.25%. The interest rate swap agreement hedges the variable interest rates on the Company's floating rate debt exposures for a fixed rate based on a notional amount of $700 million. The interest rate swap agreement converts the variable interest rate on the aggregate notional amount of the Company's floating rate debt to a fixed rate of 3.55% (1.3% plus the 2.25% margin percentage) over the term of the interest rate swap agreement.

Foreign Currency Forward Exchange Contracts – The Company transacts business in various foreign currencies, which subjects the Company's cash flows and earnings to exposure related to changes in foreign currency exchange rates. These exposures arise primarily from purchases or sales of products and services from third parties. Foreign currency forward exchange contracts provide for the purchase or sale of foreign currencies at specified future dates at specified exchange rates, and are used to offset changes in the fair value of certain assets or liabilities or forecasted cash flows resulting from transactions denominated in foreign currencies. At September 30, 2021, the Company had outstanding foreign currency forward exchange contracts to sell U.S. dollars with notional amounts of $125.7 million. The maximum duration of the Company's foreign currency cash flow hedge contracts at September 30, 2021 is 12 months. These notional values consist of contracts for the Canadian dollar and the European euro and are stated in U.S. dollar equivalents at spot exchange rates at the respective trade dates. Amounts related to foreign currency forward exchange contracts included in accumulated other comprehensive loss in stockholders' deficit are reclassified into net sales when the hedged transaction settles.

During the fiscal year ended September 30, 2021, the gains reclassified on settlements of foreign currency forward exchange contracts designated as cash flow hedges into net sales in the consolidated statements of income was $3.6 million. The gains were previously recorded as a component of accumulated other comprehensive loss in stockholders' deficit. During the fiscal year ended September 30, 2021, the gains recorded as a component of other (income) expense related to the ineffective portion of the foreign currency forward exchange contracts designated as cash flow hedges were immaterial.

As of September 30, 2021, the Company expects to record a net loss of approximately $3.6 million on foreign currency forward exchange contracts designated as cash flow hedges to net sales over the next 12 months.

22. ACCUMULATED OTHER COMPREHENSIVE LOSS

The following table presents the components of accumulated other comprehensive loss, net of taxes, for the fiscal years ended September 30, 2021, 2020 and 2019 (in millions):

	Unrealized (losses) gains on derivatives designated and qualifying as cash flow hedges [1]	Defined benefit pension plan activity [2]	Currency translation adjustment	Total
Balance at September 30, 2019	$ (172)	$ (40)	$ (167)	$ (379)
Current-period other comprehensive (loss) gain	(130)	32	76	(22)
Balance at September 30, 2020	(302)	(8)	(91)	(401)
Current-period other comprehensive gain (loss) before reclassification	68	(10)	90	148
Amounts reclassified from AOCI related to derivative instruments	5	—	—	5
Net current-period other comprehensive gain (loss)	73	(10)	90	153
Balance at September 30, 2021	$ (229)	$ (18)	$ (1)	$ (248)

(1) Represents unrealized (losses) gains on derivatives designated and qualifying as cash flow hedges, net of tax (benefit) expense of $(23) million, $36 million and $70 million for the fiscal years ended September 30, 2021, 2020 and 2019, respectively.

(2) Defined benefit pension plan and other post-retirement plan activity represents pension liability adjustments, net of tax (benefit) expense of $(8) million, $(1) million and $9 million for the fiscal years ended September 30, 2021, 2020 and 2019, respectively. Amounts reclassified from AOCI related to defined benefit pension plan and other post-retirement plan activity were immaterial for the fiscal year ended September 30, 2021.

A summary of reclassifications out of accumulated other comprehensive loss for the fiscal year ended September 30, 2021 is provided below (in millions):

Description of reclassifications out of accumulated other comprehensive loss	Amount Reclassified
Amortization from redesignated interest rate swap and cap agreements [1]	$ 2
Gains from settlement of foreign currency forward exchange contracts [2]	4
Deferred tax expense on reclassifications out of accumulated other comprehensive loss	(1)
Amounts reclassified into earnings, net of tax	$ 5

(1) This component of accumulated other comprehensive loss is included in interest expense-net. Refer to Note 21, "Derivatives and Hedging Activities," for additional information.

(2) This component of accumulated other comprehensive loss is included in net sales. Refer to Note 21, "Derivatives and Hedging Activities," for additional information.

23. DISCONTINUED OPERATIONS

The table below summarizes income from discontinued operations, net of tax, for the fiscal years ended September 30, 2020 and 2019 (in millions):

	Fiscal Years Ended September 30,	
	2020	2019
Net sales	$ 79	$ 294
Income from discontinued operations, before income taxes	11	—
Income tax provision (benefit)	4	(13)
Income from discontinued operations, net of tax	7	13
Gain from sale of discontinued operations, net of tax	40	38
Income from discontinued operations, net of tax [(1)]	$ 47	$ 51

(1) No divestitures occurring in the fiscal year ended September 30, 2021 met the criteria to qualify as discontinued operations under U.S. GAAP as none represented a strategic shift that has or will have a major affect on TransDigm's operations and financial results. Refer to Note 2, "Acquisitions and Divestitures," for additional disclosures on the Company's fiscal 2021 divestitures.

Fiscal Year 2020 Divestitures & Discontinued Operations – On December 20, 2019, TransDigm completed the divestiture of Souriau-Sunbank to Eaton for approximately $920 million. Souriau-Sunbank was acquired by TransDigm as part of its acquisition of Esterline in March 2019 and was included in TransDigm's Non-aviation segment. The divestiture represented a strategic shift in TransDigm's business and, in accordance with U.S. GAAP, qualified as discontinued operations. Therefore, the results of operations of Souriau-Sunbank are presented in discontinued operations in the accompanying consolidated financial statements for all periods presented since the date acquired.

Income from discontinued operations, net of tax, for the fiscal year ended September 30, 2020 was $47 million and included $7 million from the results of operations of Souriau-Sunbank and a gain on the sale of Souriau-Sunbank, net of tax, of $40 million.

Fiscal Year 2019 Divestitures & Discontinued Operations – On September 20, 2019, TransDigm completed the divestiture of its EIT group of businesses to an affiliate of KPS Capital Partners, LP for approximately $190 million. EIT was acquired by TransDigm as part of its acquisition of Esterline Technologies Corporation in March 2019 and was included in TransDigm's Non-aviation segment. The divestiture represented a strategic shift in TransDigm's business and, in accordance with U.S. GAAP, qualified as discontinued operations. Therefore, the results of operations of EIT were presented in discontinued operations in the accompanying consolidated financial statements for all periods presented since the date acquired.

Income from discontinued operations, net of tax, for the fiscal year ended September 30, 2019 was $51 million and included $13 million from the results of operations of Souriau-Sunbank and the EIT group of businesses and a gain on the sale of the EIT group of businesses, net of tax, of $38 million.

Souriau-Sunbank's net sales, (loss) from discontinued operations, before income taxes, and income tax (benefit) were $199 million, $(17) million and $(14) million, respectively, for the fiscal year ended September 30, 2019. The EIT group of businesses net sales, income from discontinued operations, before income taxes, and income tax expense were $95 million, $17 million and $1 million, respectively, for the fiscal year ended September 30, 2019.

Cash related to discontinued operations, which was excluded from the consolidated statement of cash flows, included net cash provided by operating activities of $35 million and net cash used in investing activities of $11 million.

TRANSDIGM GROUP INCORPORATED
VALUATION AND QUALIFYING ACCOUNTS
FOR THE FISCAL YEARS ENDED SEPTEMBER 30, 2021, 2020, AND 2019
(Amounts in millions)

Column A	Column B	Column C		Column D	Column E
		Additions			
Description	Balance at Beginning of Period	Charged to Costs and Expenses	Acquisitions & Purchase Price Adjustments	Divestitures & Deductions from Reserve [1]	Balance at End of Period
Year Ended September 30, 2021					
Allowance for uncollectible accounts	$ 37	$ —	$ —	$ (7)	$ 30
Inventory valuation reserves	178	42	10	(36)	194
Valuation allowance for deferred tax assets	132	(58)	—	—	74
Year Ended September 30, 2020					
Allowance for uncollectible accounts	$ 17	$ 21	$ 3	$ (4)	$ 37
Inventory valuation reserves	124	34	37	(17)	178
Valuation allowance for deferred tax assets	118	15	(1)	—	132
Year Ended September 30, 2019					
Allowance for uncollectible accounts	$ 5	$ 5	$ 9	$ (2)	$ 17
Inventory valuation reserves	99	17	17	(9)	124
Valuation allowance for deferred tax assets	47	40	31	—	118

(1) The amounts in this column represent the impact from divestitures, 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, 2021

EXHIBIT NO.	DESCRIPTION
3.121	Certificate of Formation, filed September 30, 2021, of North Hills Signal Processing Overseas LLC
3.122	Limited Liability Company Agreement of North Hills Signal Processing Overseas LLC
10.4	Amendment to Employment Agreement, dated November 15, 2021, between TransDigm Group Incorporated and Michael Lisman*
10.10	Amendment to Employment Agreement, dated November 16, 2021, between TransDigm Group Incorporated and Jorge Valladares*
10.11	Employment Agreement, dated November 10, 2018, between TransDigm Group Incorporated and Sarah Wynne*
10.12	Amendment to Employment Agreement, dated November 15, 2021, between TransDigm Group Incorporated and Sarah Wynne*
10.27	Form of Stock Option Agreement for options awarded in fiscal 2021*
10.54	Thirteenth Amendment to the Receivables Purchase Agreement dated as of July 26, 2021, among TransDigm Receivables LLC, TransDigm Inc., PNC Bank, National Association, as a Committed Purchaser, as Purchaser Agent for its Purchaser Group and as Administrator, and Fifth Third Bank, as a Committed Purchaser and as Purchaser Agent for its Purchaser Group**
21.1	Subsidiaries of TransDigm Group Incorporated
22.1	Listing of Subsidiary Guarantors
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.SCH	Inline XBRL Taxonomy Extension Schema
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase
104	Cover Page Interactive Data File: the cover page XBRL tags are embedded within the Inline XBRL document and are contained within Exhibit 101

* Indicates management contract or compensatory plan contract or arrangement.

** Schedules and exhibits have been omitted pursuant to Item 601(a)(5) of Regulation S-K. The Company hereby undertakes to furnish on a supplemental basis a copy of any omitted schedule or exhibit upon request by the Securities and Exchange Commission.

STATE *of* DELAWARE
LIMITED LIABILITY COMPANY
CERTIFICATE *of* FORMATION

Exhibit 3.121

• **First:** The name of the limited liability company is North Hills Signal Processing Overseas LLC

• **Second:** The address of its registered office in the State of Delaware is 1209 Orange Street in the City of Wilmington Zip Code 19801.

The name of its Registered agent at such address is The Corporation Trust Company.

• **Third:** (Insert any other matters the members determine to include herein.)

In Witness Whereof, the undersigned have executed this Certificate of Formation this 30 day of September, 2021.

By: Halle Martin
Authorized Person(s)

Name: Halle Martin
Typed or Printed

State of Delaware
Secretary of State
Division of Corporations
Delivered 09:26 AM 09/30/2021
FILED 09:26 AM 09/30/2021
SR 20213385510 - File Number 945989

LIMITED LIABILITY COMPANY AGREEMENT

OF

NORTH HILLS SIGNAL PROCESSING OVERSEAS LLC

A DELAWARE LIMITED LIABILITY COMPANY

The undersigned, being the sole member of North Hills Signal Processing Overseas LLC, a Delaware limited liability company (the "Company"), does hereby execute this Limited Liability Company Agreement of the Company (this "Limited Liability Company Agreement"), effective as of this 30th day of September 2021. The Company was converted from a Delaware corporation to a Delaware limited liability company on the 30th day of September 2021, upon the filing of its Certificate of Conversion and Certificate of Formation with the Secretary of State of the State of Delaware.

ARTICLE I

MEMBER

North Hills Signal Processing Corp. is the sole member of the Company (the "Member").

ARTICLE II

OFFICE

The principal office of the Company shall be located at 1301 E. 9th St., 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 (as amended, the "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

PLEDGE OF MEMBERSHIP INTEREST

Notwithstanding any other provision in this Limited Liability Company Agreement, the Member shall be entitled to pledge its membership interest, including all interests, economic rights, control rights and status rights as a member, to, and otherwise grant a lien and security interest in its membership interest and all of its right, title and interest under this Limited Liability Company Agreement in favor of, any lender to the Company or an affiliate of the Company (or an agent on behalf of such lender) without any further consents, approvals or actions required by such lender (or agent), the Member, the Company or any other person under this Limited Liability Company Agreement or otherwise. So long as any such pledge of or security interest in the Member's membership interest is in effect, no consent of the Company or the Member shall be required to permit a pledgee thereof to be substituted for the Member under this Limited Liability Company Agreement upon the exercise of such pledgee's rights with respect to such membership interest. Notwithstanding anything contained herein to the contrary, and without complying with any other procedures set forth in this Limited Liability Company Agreement, upon the exercise of remedies in connection with a pledge or hypothecation, (a) the lender (or agent) or transferee of such lender (or agent), as the case may be, shall become a member under this Limited Liability Company Agreement and shall succeed to all of the rights and powers, including the right to participate in the management of the business and affairs of the Company, and shall be bound by all of the obligations, of a member under this Limited Liability Company Agreement without taking any further action on the part of such lender (or agent) or transferee, as the case may be, and (b) following such exercise of remedies, the pledging Member shall cease to be a member and shall have no further rights or powers under this Limited Liability Company Agreement. The execution and delivery of this Limited Liability Company Agreement by the Member shall constitute any necessary approval of such Member under the Act to the foregoing provisions of this Article 8. So long as any pledge of the Member's membership interest is in effect, this provision shall inure to the benefit of such pledgee and its successors, assigns and designated agents, as an intended third party beneficiary, and no amendment, modification or waiver of, or consent with respect to this provision shall in any event be effective without the prior written consent of such pledgee. All of the foregoing shall be subject to the limitations and other provisions applicable to the exercise of remedies contained in each of the Collateral Agreements. For purposes of the foregoing, "Collateral Agreements" means (1) the 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 as further amended and restated as of February 28, 2013 (as further amended, supplemented, or otherwise modified from time to time), among the Member, certain affiliates of the Member and Credit Suisse AG, as collateral agent, (2) the Pledge and Security Agreement dated as of February 13, 2019 (as amended, supplemented or otherwise modified from time to time), among the Member, certain affiliates of the Member and The Bank of New York Mellon Trust Company, N.A., as the U.S. collateral agent, and (3) the Pledge and Security Agreement dated as of April 8, 2020 (as amended, supplemented or otherwise modified from time to time), among the Member, certain affiliates of the member and The Bank of New York Mellon Trust Company, N.A., as the U.S. collateral agent.

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ARTICLE IX

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 X

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 XI

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 XI 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 XII

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 XIII

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 North Hills Processing Overseas 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 XIV

MISCELLANEOUS

This Limited Liability Company Agreement is made by the Member for the exclusive benefit of the Company, the Member, and 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.

North Hills Signal Processing Corp., its sole member

By: /s/ Halle F. Martin

Name: Halle F. Martin

Its: Secretary

AMENDMENT TO EMPLOYMENT AGREEMENT

THIS AMENDMENT TO EMPLOYMENT AGREEMENT (this “Amendment”), dated as of November 15, 2021, is made by and between TransDigm Group Incorporated, a Delaware corporation (the “Company”), and Michael Lisman (“Executive”).

WHEREAS, the Company and Executive are parties to an Employment Agreement (the “Employment Agreement”) setting forth certain terms and conditions of Executive’s employment with the Company; and

WHEREAS, the Company and Executive desire to amend the Employment Agreement on the terms and conditions set forth herein.

NOW, THEREFORE, in consideration of the foregoing and of the respective covenants and agreements set forth below, the parties hereto agree as follows:

1. Amendments. Section 6(b)(iii) of the Employment Agreement is hereby deleted and restated in its entirety as follows:

(iii) 18.0 times the difference of (A) the Monthly COBRA Continuation Coverage Rate determined as of the Date of Termination for the Executive’s applicable health plan coverage as in effect on such date, less (B) the monthly cost to Executive that is being charged for such coverage as of the Date of Termination.

2. Counterparts. This Amendment may be executed in several counterparts, each of which shall be deemed to be an original, but all of which together shall constitute one and the same agreement.

3. Governing Law. This Amendment shall be governed, construed, interpreted and enforced in accordance with the substantive laws of the State of Ohio.

4. Full Force and Effect**.** Except as expressly amended by this Amendment, all other terms and conditions of the Employment Agreement shall remain in full force and effect and unmodified hereby.

IN WITNESS WHEREOF, the parties have executed this Amendment on the date and year first above written.

TRANSDIGM GROUP INCORPORATED

By: /s/ Kevin Stein
Name: Kevin Stein
Title: Chief Executive Officer

EXECUTIVE

/s/ Michael Lisman
Michael Lisman

AMENDMENT TO EMPLOYMENT AGREEMENT

THIS AMENDMENT TO EMPLOYMENT AGREEMENT (this “Amendment”), dated as of November 16, 2021, is made by and between TransDigm Group Incorporated, a Delaware corporation (the “Company”), and Jorge Valladares (“Executive”).

WHEREAS, the Company and Executive are parties to an Employment Agreement (the “Employment Agreement”) setting forth certain terms and conditions of Executive’s employment with the Company; and

WHEREAS, the Company and Executive desire to amend the Employment Agreement on the terms and conditions set forth herein.

NOW, THEREFORE, in consideration of the foregoing and of the respective covenants and agreements set forth below, the parties hereto agree as follows:

1. Amendments.

(a) Section 5(b) of the Employment Agreement is hereby deleted and restated in its entirety as follows:

(b) Notice of Termination. Any termination of the Executive’s employment by the Company or by the Executive under this Section 5 (other than termination pursuant to subsection (a)(i)) shall be communicated by a written notice from the Chief Executive Officer of the Company or the Executive to the other indicating the specific termination provision in this Agreement relied upon, (and, in the case of Resignation for Good Reason, setting forth in reasonable detail the facts and circumstances claimed to provide a basis for termination of the Executive’s employment under Section 5(a)(iv), and specifying a Date of Termination which, in the case of Resignation for Good Reason or Resignation without Good Reason pursuant to Section 5(a)(iv) or 5(a)(vi), respectively, shall be at least 90 days following the date of such notice (a “Notice of Termination”). In the event of the Executive’s Resignation for Good Reason pursuant to Section 5(a)(iv), the Company shall have the right, if the basis for such Good Reason is curable, to cure the same within 30 days following the receipt of the Notice of Termination, and Good Reason shall not be deemed to exist if the Company cures the event giving rise to Good Reason within such 30 day period. The Executive shall continue to receive her Annual Base Salary, annual bonus and all other compensation and perquisites referenced in Section 4 through the Date of Termination.

(b) Section 5(b) of the Employment Agreement is hereby deleted and restated in its entirety as follows:

(b) Termination without Cause, Resignation for Good Reason or Termination by Reason of Death or Disability. Subject to Sections 6(c) and (d) and the restrictions contained herein, in the event of the Executive’s Termination without Cause (pursuant to Section 5(a)(v)), Resignation for Good Reason (pursuant to Section 5(a)(iv)) or termination by reason of death or Disability (pursuant to Section 5(a)(i) or (ii), respectively), the Company shall pay to the Executive the amounts described in subsection (a). In addition, subject to Sections 6(c) and (d) and the restrictions contained herein, and in the case of Termination without Cause (pursuant to Section 5(a)(v), Resignation for Good Reason (pursuant to Section 5(a)(iv) or Disability (pursuant to Section 5(a)(ii)) subject to the Executive’s execution and non-revocation of a customary release in favor of the Company (the “Release”) no later than thirty (30) days following the Date of Termination, the Company shall pay to the Executive (or his beneficiary in the event of his death) an amount equal to the “Severance Amount” described below. For purposes of this Agreement the Severance Amount is equal to the sum of:

(i) 1.25 times his Annual Base Salary,

(ii) 1.25 times the greater of (A) the total of all bonuses paid (or payable) to executive in respect of the fiscal year ending immediately prior to the Date of Termination, excluding any bonuses that are extraordinary in nature (e.g., a transaction related bonus) or (B) the target bonuses for the fiscal year in which the Date of Termination falls, determined in accordance with the Company's bonus program or programs, if any, and

(iii) 18.0 times the difference of (A) the Monthly COBRA Continuation Coverage Rate determined as of the Date of Termination for the Executive's applicable health plan coverage as in effect on such date, less (B) the monthly cost to Executive that is being charged for such coverage as of the Date of Termination.

The Severance Amount as so determined shall be payable to the Executive (or his beneficiary) in substantially equal installments over the 12 month period following the Date of Termination (the "Payment Period") commencing no later than thirty (30) days following the execution and non-revocation of the Release, in accordance with the Company's regular payroll practices. The first installment payment shall include all amounts that would have otherwise been paid to the Executive during the period beginning on the Date of Termination and ending on the first installment payment date. Notwithstanding the foregoing, in the event that the end of the thirty (30) day notice and revocation period for the Release would result in the first installment payment occurring in the taxable year following the year in which the Date of Termination occurs, the first installment payment shall be made in the taxable year following the year in which the Date of Termination occurs.

2. Counterparts. This Amendment may be executed in several counterparts, each of which shall be deemed to be an original, but all of which together shall constitute one and the same agreement.

3. Governing Law. This Amendment shall be governed, construed, interpreted and enforced in accordance with the substantive laws of the State of Ohio.

4. Full Force and Effect**.** Except as expressly amended by this Amendment, all other terms and conditions of the Employment Agreement shall remain in full force and effect and unmodified hereby.

IN WITNESS WHEREOF, the parties have executed this Amendment on the date and year first above written.

TRANSDIGM GROUP INCORPORATED

By: /s/ Kevin Stein
Name: Kevin Stein
Title: Chief Executive Officer

EXECUTIVE

/s/ Jorge Valladares
Jorge Valladares

EMPLOYMENT AGREEMENT

THIS AGREEMENT, dated as of November 10, 2018, is made by and between TransDigm Group Incorporated, a Delaware corporation (the "Company"), and Sarah Wynne (the "Executive").

RECITALS:

WHEREAS, the Executive holds the position of Chief Accounting Officer of the Company; and

WHEREAS, the parties would like to enter into an employment agreement on the terms and subject to the conditions set forth in this Agreement.

NOW, THEREFORE, in consideration of the foregoing and of the respective covenants and agreements set forth below, the parties hereto agree as follows:

1. Certain Definitions.

(a) "Annual Base Salary" shall have the meaning set forth in Section 4(a).

(b) "Board" shall mean the Board of Directors of the Company.

(c) "Cause" shall mean either of the following: (i) the repeated failure by the Executive, after written notice from the Board, substantially to perform her material duties and responsibilities as an officer or employee or director of the Company or any of its subsidiaries (other than any such failure resulting from incapacity due to reasonably documented physical or mental illness), or (ii) any willful misconduct by the Executive that has the effect of materially injuring the business of the Company or any of its subsidiaries, including, without limitation, the disclosure of material secret or confidential information of the Company or any of its subsidiaries.

(d) "COBRA" shall mean the Consolidated Omnibus Budget Reconciliation Act of 1985, as may be amended from time to time.

(e) "Code" shall mean the Internal Revenue Code of 1986, as amended. Reference to a Section of the Code includes all rulings, regulations, notices, announcements, decisions, orders and other pronouncements that are issued by the United States Department of the Treasury, the Internal Revenue Service, or any court of competent jurisdiction that are lawful and pertinent to the interpretation, application or effectiveness of such Section.

(f) "Common Stock" shall mean the common stock of the Company, $0.01 par value per share.

(g) "Company" shall have the meaning set forth in the preamble hereto.

(h) "Compensation Committee" shall mean the Compensation Committee of the Board whose members shall be appointed by the Board from time to time.

(i) "Date of Termination" shall mean (i) if the Executive's employment is terminated by reason of her death, the date of her death, and (ii) if the Executive's employment is terminated pursuant to Sections 5(a)(ii) - (vi), the date specified in the Notice of Termination.

(j) "Disability" shall mean the Executive's absence from employment with the Company due to: (i) her inability to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment which can be expected to result in death or can be expected to last for a continuous period of not less than twelve months; or (ii) such medically determinable physical or mental impairment, which can be expected to result in death or can be expected to last for a continuous period of not less than twelve months, and for which the Executive is receiving income replacement benefits for a period of not less than three months under an accident and health plan covering the Company's employees.

(k) "Effective Date" shall mean the date of this Agreement.

(l) "Equity Compensation Agreements" shall mean any written agreements between the Company and the Executive pursuant to which the Executive holds or is granted options to purchase Common Stock, including, without limitation, agreements evidencing options granted under any option plan adopted or maintained by the Company for employees generally, and any management deferred compensation or similar plans of the Company.

(m) "Exchange Act" shall mean the Securities Exchange Act of 1934, as amended.

(n) "Executive" shall have the meaning set forth in the preamble hereto.

(o) "Good Reason" shall mean the occurrence of any of the following: (i) a material diminution in the Executive's title, duties or responsibilities, without her prior written consent, or (ii) a reduction of the Executive's aggregate cash compensation (including bonus opportunities), benefits or perquisites, without her prior written consent, or (iii) any material breach of this Agreement by the Company.

(p) "Notice of Termination" shall have the meaning set forth in Section 5(b).

(q) "Payment Period" shall have the meaning set forth in Section 6(b).

(r) "Specified Employee" shall have the meaning set forth in Code Section 409A

(s) "Term" shall have the meaning set forth in Section 2.

2. Employment. The Company shall employ the Executive, for the period set forth in this Section 2, in the position(s) set forth in Section 3 and upon the other terms and conditions herein provided. The term of employment under this Agreement (the "Term") shall be for the period beginning on the Effective Date and ending on December 31, 2024 unless earlier terminated as provided in Section 5.

3. Position and Duties. During the Term, the Executive shall serve as Chief Accounting Officer of each of the Company and its subsidiary, TransDigm, Inc. ("TransDigm"), with such customary responsibilities, duties and authority as may from time to time be assigned to the Executive by the Chief Financial Officer. During the Term, the Executive shall devote substantially all her working time and efforts to the business and affairs of the Company and TransDigm; provided, that it shall not be considered a violation of the foregoing for the Executive to (i) with the prior consent of the Board (which consent shall not unreasonably be withheld), serve on corporate, industry, civic or charitable boards or committees, and (ii) manage her personal investments, so long as none of such activities significantly interferes with the Executive's duties hereunder.

4. Compensation and Related Matters.

(a) Annual Base Salary. During the Term (commencing as of January 1, 2020), the Executive shall receive a base salary at a rate of $400,000 per annum, payable in accordance with the Company's normal payroll practices, which shall be reviewed by the Compensation Committee annually and may be increased, but not decreased, upon such review (the "Annual Base Salary").

(b) Bonus. For each fiscal year during the Term (commencing as of fiscal 2020), the Executive shall be eligible to participate in the Company's annual cash bonus plan in accordance with terms and provisions which shall be consistent with the Company's executive bonus policy in effect as of the date hereof. The Executive's target bonus for fiscal year 2020 and thereafter will be 55% of her Annual Base Salary, and may be increased, but not decreased, from time to time.

(c) Non-Qualified Deferred Compensation. During the Term, the Executive shall be eligible to participate in any non-qualified deferred compensation plan or program (if any) offered by the Company to its executives.

(d) Long Term Incentive Compensation. During the Term, the Executive shall be entitled to participate in the Option Plan or any successor plan thereto.

(e) Benefits. During the Term, the Executive shall be entitled to participate in the other employee benefit plans, programs and arrangements of the Company now (or, to the extent determined by the Board or Compensation Committee, hereafter) in effect which are applicable to the senior officers of the Company generally, subject to and on a basis consistent with the terms, conditions and overall administration thereof (including the right of the Company to amend, modify or terminate such plans).

(f) Expenses. Pursuant to the Company's customary policies in force at the time of payment, the Executive shall be reimbursed for all expenses properly incurred by the Executive on the Company's behalf in the performance of the Executive's duties hereunder.

(g) Vacation. The Executive shall be entitled to an amount of annual vacation days, and to compensation in respect of earned but unused vacation days in accordance with the Company's vacation policy as in effect as of the Effective Date. The Executive shall also be entitled to paid holidays in accordance with the Company's practices with respect to same as in effect as of the Effective Date.

5. Termination.

(a) The Executive's employment hereunder may be terminated by the Company or the Executive, as applicable, without any breach of this Agreement only under the following circumstances and in accordance with subsection (b):

(i) Death. The Executive's employment hereunder shall terminate upon her death.

(ii) Disability. If the Company determines in good faith that the Executive has incurred a Disability, the Company may give the Executive written notice of its intention to terminate the Executive's employment. In such event, the Executive's employment with the Company shall terminate effective on the 30th day after receipt of such notice by the Executive, provided that within such 30 day period the Executive shall not have returned to full-time performance of her duties. The Executive shall continue to receive her Annual Base Salary until the 90th day following the date of the Notice of Termination.

(iii) Termination for Cause. The Company may terminate the Executive's employment hereunder for Cause.

(iv) Resignation for Good Reason. The Executive may terminate her employment hereunder for Good Reason.

(v) Termination without Cause. The Company may terminate the Executive's employment hereunder without Cause.

(vi) Resignation without Good Reason. The Executive may resign her employment hereunder without Good Reason.

(b) Notice of Termination. Any termination of the Executive's employment by the Company or by the Executive under this Section 5 (other than termination pursuant to subsection (a)(i)) shall be communicated by a written notice from the Chief Executive Officer of the Company or the Executive to the other indicating the specific termination provision in this Agreement relied upon, (and, in the case of Resignation for Good Reason, setting forth in reasonable detail the facts and circumstances claimed to provide a basis for termination of the Executive's employment under Section 5(a)(iv), and specifying a Date of Termination which, in the case of Resignation for Good Reason or Resignation without Good Reason pursuant to Section 5(a)(iv) or 5(a)(vi), respectively, shall be at least 90 days following the date of such notice (a "Notice of Termination"). In the event of the Executive's Resignation for Good Reason pursuant to Section 5(a)(iv), the Company shall have the right, if the basis for such Good Reason is curable, to cure the same within 30 days following the receipt of the Notice of Termination, and Good Reason shall not be deemed to exist if the Company cures the event giving rise to Good Reason within such 30 day period. The Executive shall continue to receive her Annual Base Salary, annual bonus and all other compensation and perquisites referenced in Section 4 through the Date of Termination.

6. Severance Payments.

(a) Termination for any Reason. In the event the Executive's employment with the Company is terminated for any reason, the Company shall pay the Executive (or her beneficiary in the event of her death) any unpaid Annual Base Salary that has accrued as of the Date of Termination, any unreimbursed expenses due to the Executive in accordance with the Company's expense reimbursement policy and an amount equal to compensation for accrued but unused sick days and vacation days. The Company shall permit the Executive to elect to continue health plan coverage in accordance with the requirements of applicable law (e.g. COBRA coverage), at the applicable monthly cost charged for such coverage (the "Monthly COBRA Coverage Continuation Rate"). The Company may require the Executive to complete and file any election forms that are generally required of other employees to obtain COBRA coverage; and the Executive's COBRA coverage may be terminable in accordance with applicable law. The Executive shall also be entitled to accrued, vested benefits under the Company's benefit plans and programs as provided therein. The Executive shall be entitled to the additional payments and benefits described below only as set forth herein.

(b) Termination without Cause, Resignation for Good Reason or Termination by Reason of Death or Disability. Subject to Sections 6(c) and (d) and the restrictions contained herein, in the event of the Executive's Termination without Cause (pursuant to Section 5(a)(v)), Resignation for Good Reason (pursuant to Section 5(a)(iv)) or termination by reason of death or Disability (pursuant to Section 5(a)(i) or (ii), respectively), the Company shall pay to the Executive the amounts described in subsection (a). In addition, subject to Sections 6(c) and (d) and the restrictions contained herein, and in the case of Termination without Cause (pursuant to Section 5(a)(v), Resignation for Good Reason (pursuant to Section 5(a)(iv) or Disability (pursuant to Section 5(a)(ii)) subject to the Executive's execution and non-revocation of a customary release in favor of the Company (the "Release") no later than thirty (30) days following the Date of Termination, the Company shall pay to the Executive (or her beneficiary in the event of her death) an amount equal to the "Severance Amount" described below. For purposes of this Agreement the Severance Amount is equal to the sum of:

(i) 1.25 times her Annual Base Salary,

(ii) 1.25 times the greater of (A) the total of all bonuses paid (or payable) to executive in respect of the fiscal year ending immediately prior to the Date of Termination, excluding any bonuses that are extraordinary in nature (e.g., a transaction related bonus) or (B) the target bonuses for the fiscal year in which the Date of Termination falls, determined in accordance with the Company's bonus program or programs, if any, and

(iii) 15.0 times the difference of (A) the Monthly COBRA Continuation Coverage Rate determined as of the Date of Termination for the Executive's applicable health plan coverage as in effect on such date, less (B) the monthly cost to Executive that is being charged for such coverage as of the Date of Termination.

The Severance Amount as so determined shall be payable to the Executive (or her beneficiary) in substantially equal installments over the 12 month period following the Date of Termination (the "Payment Period") commencing no later than thirty (30) days following the execution and non-revocation of the Release, in accordance with the Company's regular payroll practices. The first installment payment shall include all amounts that would have otherwise been paid to the Executive during the period beginning on the Date of Termination and ending on the first installment payment date. Notwithstanding the foregoing, in the event that the end of the thirty (30) day notice and revocation period for the Release would result in the first installment payment occurring in the taxable year following the year in which the Date of Termination occurs, the first installment payment shall be made in the taxable year following the year in which the Date of Termination occurs.

(c) Benefits Provided Upon Termination of Employment. If the Executive's termination or resignation does not constitute a "separation from service," as such term is defined under Code Section 409A, the Executive shall nevertheless be entitled to receive all of the payments and benefits that the Executive is entitled to receive under this Agreement on account of her termination of employment. However, the payments and benefits that the Executive is entitled to under this Agreement shall not be provided to the Executive until such time as the Executive has incurred a "separation from services" within the meaning of Code Section 409A.

(d) Payments on Account of Termination to a Specified Employee. Notwithstanding the foregoing provisions of Sections 6(a) or 6(b), in the event that the Executive is determined to be a Specified Employee at the time of her termination of employment under this Agreement (or, if later, her "separation from service" under Code Section 409A), to the extent that a payment, reimbursement or benefit under Section 6(b) is considered to provide for a "deferral of compensation" (as determined under Code Section 409A), then such payment, reimbursement or benefit shall not be paid or provided until six months after the Executive's separation from service, or her death, whichever occurs first. Any payments, reimbursements or benefits that are withheld under this provision for the first six months shall be payable in a lump sum on the 181st day after such termination of employment (or, if later, separation from service). The restrictions in this Section 6(d) shall be interpreted and applied solely to the minimum extent necessary to comply with the requirements of Code Section 409A(a)(2)(B). Accordingly, payments, benefits or reimbursements under Section 6(b) or any other part of this Agreement may nevertheless be provided to Executive with the six-month period following the date of Executive's termination of employment under this Agreement (or, if later, her "separation from service" under Code Section 409A), to the extent that it would nevertheless be permissible to do so under Code Section 409A because those payments, reimbursements or benefits are (i) described in Treasury Regulations Section 1.409A-1(b)(9)(iii) (i.e., payments within the limitations therein that are being made on account of an involuntary termination or termination for good reason, within the meaning of the Treasury Regulations), or (ii) described in Treasury Regulation Section 1.409A-1(b)(4) (i.e., payments which are treated as short-term deferrals within the meaning of the Treasury Regulations), or (iii) benefits described in Treasury Regulations Section 1.409A-1(b)(9)(v) (e.g. health care benefits).

7. Competition; Nonsolicitation.

(a) During the Term and, following any termination of Executive’s employment, for a period equal to (i) the Payment Period, in the case of a termination of employment for which payments are made pursuant to Section 6(b) hereof, or (ii) 24 months from the date of such termination in the event of a voluntary termination of employment by the Executive without Good Reason, or a termination by the Company for Cause, the Executive shall not, without the prior written consent of the Board, directly or indirectly engage in, or have any interest in, or manage or operate any person, firm, corporation, partnership or business (whether as director, officer, employee, agent, representative, partner, security holder, consultant or otherwise) that engages in any business (other than a business that constitutes less than 5% of the relevant entity’s net revenue and a proportionate share of its operating income) which competes with any business of the Company or any entity owned by it anywhere in the world; provided, however, that the Executive shall be permitted to acquire a stock interest in such a corporation provided such stock is publicly traded and the stock so acquired does not represent more than one percent of the outstanding shares of such corporation.

(b) During the Term and for a period of two years following any termination of the Executive’s employment, the Executive shall not, directly or indirectly, on her own behalf or on behalf of any other person or entity, whether as an owner, employee, service provider or otherwise, solicit or induce any person who is or was employed by, or providing consulting services to, the Company or any of its subsidiaries during the twelve-month period prior to the date of such termination, to terminate their employment or consulting relationship with the Company or any such subsidiary.

(c) In the event the agreement in this Section 7 shall be determined by any court of competent jurisdiction to be unenforceable by reason of its extending for too great a period of time or over too great a geographical area or by reason of its being too extensive in any other respect, it shall be interpreted to extend only over the maximum period of time for which it may be enforceable, and/or over the maximum geographical area as to which it may be enforceable and/or to the maximum extent in all other respects as to which it may be enforceable, all as determined by such court in such action.

8. Nondisclosure of Proprietary Information.

(a) Except as required in the faithful performance of the Executive’s duties hereunder or pursuant to subsection (c), the Executive shall, in perpetuity, maintain in confidence and shall not directly, indirectly or otherwise, use, disseminate, disclose or publish, or use for her benefit or the benefit of any person, firm, corporation or other entity any confidential or proprietary information or trade secrets of or relating to the Company, including, without limitation, information with respect to the Company’s operations, processes, products, inventions, business practices, finances, principals, vendors, suppliers, customers, potential customers, marketing methods, costs, prices, contractual relationships, regulatory status, compensation paid to employees or other terms of employment, except for such information which is or becomes publicly available other than as a result of a breach by the Executive of this Section 8, or deliver to any person, firm, corporation or other entity any document, record, notebook, computer program or similar repository of or containing any such confidential or proprietary information or trade secrets. The parties hereby stipulate and agree that as between them the foregoing matters are important, material and confidential proprietary information and trade secrets and affect the successful conduct of the businesses of the Company (and any successor or assignee of the Company).

(b) Upon termination of the Executive’s employment with the Company for any reason, the Executive shall promptly deliver to the Company all correspondence, drawings, manuals, letters, notes, notebooks, reports, programs, plans, proposals, financial documents, or any other documents concerning the Company’s customers, business plans, marketing strategies, products or processes and/or which contain proprietary information or trade secrets.

(c) The Executive may respond to a lawful and valid subpoena or other legal process but shall give the Company the earliest possible notice thereof, shall, as much in advance of the return date as possible, make available to the Company and its counsel the documents and other information sought and shall assist such counsel in resisting or otherwise responding to such process.

9. Injunctive Relief. It is recognized and acknowledged by the Executive that a breach of the covenants contained in Sections 7 and 8 will cause irreparable damage to the Company and its goodwill, the exact amount of which will be difficult or impossible to ascertain, and that the remedies at law for any such breach will be inadequate. Accordingly, the Executive agrees that in the event of a breach of any of the covenants contained in Sections 7 and 8, in addition to any other remedy which may be available at law or in equity, the Company shall be entitled to specific performance and injunctive relief.

10. Survival. The expiration or termination of the Term shall not impair the rights or obligations of any party hereto which shall have accrued hereunder prior to such expiration.

11. Binding on Successors. This Agreement shall be binding upon and inure to the benefit of the Company, the Executive and their respective successors, assigns, personnel and legal representatives, executors, administrators, heirs, distributees, devisees, and legatees, as applicable.

12. Governing Law. This Agreement shall be governed, construed, interpreted and enforced in accordance with the substantive laws of the State of Ohio.

13. Validity. The invalidity or unenforceability of any provision or provisions of this Agreement shall not affect the validity or enforceability of any other provision of this Agreement, which shall remain in full force and effect.

14. Notices. Any notice, request, claim, demand, document or other communication hereunder to any party shall be effective upon receipt (or refusal of receipt) and shall be in writing and delivered personally or sent by telex, telecopy, or certified or registered mail, postage prepaid, as follows:

(a) If to the Company, to:

TransDigm Group Incorporated
The Tower at Erieview
1301 E. 9th Street, Suite 3000
Cleveland, Ohio 44114
Attention: W. Nicholas Howley, CEO and Chairman

(b) If to the Executive, to her at the address set forth below under her signature;

or at any other address as any party shall have specified by notice in writing to the other party in accordance with this Section 14.

15. Counterparts. This Agreement may be executed in several counterparts, each of which shall be deemed to be an original, but all of which together shall constitute one and the same agreement.

16. Entire Agreement; Prior Employment Agreement. The terms of this Agreement, together with the Equity Compensation Agreements are intended by the parties to be the final expression of their agreement with respect to the employment of the Executive by the Company and may not be contradicted by evidence of any prior or contemporaneous agreement. The parties further intend that this Agreement, and the aforementioned contemporaneous documents, shall constitute the complete and exclusive statement of its terms and that no extrinsic evidence whatsoever may be introduced in any judicial, administrative, or other legal proceeding to vary the terms of this Agreement.

17. Amendments; Waivers. This Agreement may not be modified, amended, or terminated except by an instrument in writing, signed by the Executive and the Chief Executive Officer. By an instrument in writing similarly executed, the Executive or the Company may waive compliance by the other party or parties with any provision of this Agreement that such other party was or is obligated to comply with or perform; provided, however, that such waiver shall not operate as a waiver of, or estoppel with respect to, any other or subsequent failure. No failure to exercise and no delay in exercising any right, remedy or power hereunder shall preclude any other or further exercise of any other right, remedy or power provided herein or by law or in equity.

18. No Inconsistent Actions. The parties hereto shall not voluntarily undertake or fail to undertake any action or course of action inconsistent with the provisions or essential intent of this Agreement. Furthermore, it is the intent of the parties hereto to act in a fair and reasonable manner with respect to the interpretation and application of the provisions of this Agreement.

19. Arbitration. Any dispute or controversy arising under or in connection with this Agreement shall be settled exclusively by arbitration, conducted before a panel of three arbitrators in Cleveland, Ohio, in accordance with the rules of the American Arbitration Association then in effect. Judgment may be entered on the arbitrator's award in any court having jurisdiction; provided, however, that the Company shall be entitled to seek a restraining order or injunction in any court of competent jurisdiction to prevent any continuation of any violation of the provisions of Section 7 or 8 of this Agreement and the Executive hereby consents that such restraining order or injunction may be granted without the necessity of the Company's posting any bond; and provided further, that the Executive shall be entitled to seek specific performance of her right to be paid until the Date of Termination during the pendency of any dispute or controversy arising under or in connection with this Agreement. Each of the parties hereto shall bear its share of the fees and expenses of any arbitration hereunder.

20. Indemnification and Insurance; Legal Expenses. During the Term and so long as the Executive has not breached any of her obligations set forth in Sections 7 and 8, the Company shall indemnify the Executive to the fullest extent permitted by the laws of the State of Delaware, as in effect at the time of the subject act or omission, and shall advance to the Executive reasonable attorneys' fees and expenses as such fees and expenses are incurred (subject to an undertaking from the Executive to repay such advances if it shall be finally determined by a judicial decision which is not subject to further appeal that the Executive was not entitled to the reimbursement of such fees and expenses) and he shall be entitled to the protection of any insurance policies the Company shall elect to maintain generally for the benefit of its directors and officers ("Directors and Officers Insurance") against all costs, charges and expenses incurred or sustained by her in connection with any action, suit or proceeding to which he may be made a party by reason of her being or having been a director, officer or employee of the Company or any of its subsidiaries or her serving or having served any other enterprise as a director, officer or employee at the request of the Company (other than any dispute, claim or controversy arising under or relating to this Agreement). The Company covenants to maintain during the Term for the benefit of the Executive (in her capacity as an officer and director of the Company) Directors and Officers Insurance providing customary benefits to the Executive.

(SIGNATURE PAGE FOLLOWS)

IN WITNESS WHEREOF, the parties have executed this Agreement on the date and year first above written.

TRANSDIGM GROUP INCORPORATED

By: /s/ Kevin Stein
Name: Kevin Stein
Title: Chief Executive Officer

EXECUTIVE

/s/ Sarah Wynne
Sarah Wynne

AMENDMENT TO EMPLOYMENT AGREEMENT

THIS AMENDMENT TO EMPLOYMENT AGREEMENT (this “Amendment”), dated as of November 15, 2021, is made by and between TransDigm Group Incorporated, a Delaware corporation (the “Company”), and Sarah Wynne (“Executive”).

WHEREAS, the Company and Executive are parties to an Employment Agreement (the “Employment Agreement”) setting forth certain terms and conditions of Executive’s employment with the Company; and

WHEREAS, the Company and Executive desire to amend the Employment Agreement on the terms and conditions set forth herein.

NOW, THEREFORE, in consideration of the foregoing and of the respective covenants and agreements set forth below, the parties hereto agree as follows:

1. Amendments. Section 6(b)(iii) of the Employment Agreement is hereby deleted and restated in its entirety as follows:

> (iii) 18.0 times the difference of (A) the Monthly COBRA Continuation Coverage Rate determined as of the Date of Termination for the Executive’s applicable health plan coverage as in effect on such date, less (B) the monthly cost to Executive that is being charged for such coverage as of the Date of Termination.

2. Counterparts. This Amendment may be executed in several counterparts, each of which shall be deemed to be an original, but all of which together shall constitute one and the same agreement.

3. Governing Law. This Amendment shall be governed, construed, interpreted and enforced in accordance with the substantive laws of the State of Ohio.

4. Full Force and Effect**.** Except as expressly amended by this Amendment, all other terms and conditions of the Employment Agreement shall remain in full force and effect and unmodified hereby.

IN WITNESS WHEREOF, the parties have executed this Amendment on the date and year first above written.

TRANSDIGM GROUP INCORPORATED

By: /s/ Kevin Stein
Name: Kevin Stein
Title: Chief Executive Officer

EXECUTIVE

/s/ Sarah Wynne
Sarah Wynne

FORM OF OPTION AGREEMENT (2021) – EXECUTIVE OFFICER FIVE-YEAR GRANT AND EXTENSION GRANT

STOCK OPTION GRANT NOTICE AND STOCK OPTION AGREEMENT

TransDigm Group Incorporated, a Delaware corporation (the "***Company***"), pursuant to its 2014 Stock Option Plan (the "***Plan***"), hereby grants to the holder listed below ("***Participant***"), an option to purchase the number of shares of the Company's common stock, par value $0.01 ("***Stock***"), set forth below (the "***Option***"). This Option is subject to all of the terms and conditions set forth herein and in the Stock Option Agreement, including any applicable country-specific terms, attached hereto as Exhibit A (the "***Agreement***") and the Plan, which are incorporated herein by reference. Unless otherwise defined herein, the terms defined in the Plan shall have the same defined meanings in this Grant Notice and the Stock Option Agreement.

Participant:	______________________________
Grant Date:	______________________________
Exercise Price per Share:	$______________________________
Total Number of Shares Subject to the Option:	______________________________Shares
Expiration Date:	______________________________

Type of Option:	Incentive Stock Option Non-Qualified Stock Option
Vesting Schedule:	Subject to the terms of the Stock Option Agreement (including without limitation all exhibits thereto), the Option shall be eligible to become exercisable upon the achievement of performance objectives over the period set forth in Exhibit B hereto (provided that the Participant is an Eligible Person (as defined in the Plan) at all times during the period beginning on the Grant Date and ending on the applicable vesting date):

By his or her signature, the Participant agrees to be bound by the terms and conditions of the Plan, the Stock Option Agreement and this Grant Notice. The Participant has reviewed the Agreement, including any applicable country-specific terms, the Plan and this Grant Notice in their entirety, has had an opportunity to obtain the advice of counsel prior to executing this Grant Notice and fully understands all provisions of this Grant Notice, the Agreement and the Plan. The Participant agrees that as a condition to receiving the Option, the Participant shall comply with the Stock Retention Guidelines set forth on Exhibit C. The Participant hereby agrees to accept as binding, conclusive and final all decisions or interpretations of the Committee upon any questions arising under the Plan or relating to the Option.

TRANSDIGM GROUP INCORPORATED

By: ______________________________

Print Name: ______________________________

Title: ______________________________

Address: ______________________________

PARTICIPANT

By: ______________________________

Print Name: ______________________________

Address: ______________________________

EXHIBIT A

TO STOCK OPTION GRANT NOTICE

STOCK OPTION AGREEMENT

Pursuant to the Stock Option Grant Notice (the "***Grant Notice***") to which this Stock Option Agreement, including the Appendix containing any applicable country-specific provisions (together, this "***Agreement***"), is attached, TransDigm Group Incorporated, a Delaware corporation (the "***Company***"), has granted to the Participant an option (the "***Option***")[1] under the Company's 2014 Stock Option Plan (the "***Plan***") to purchase the number of shares of Stock indicated in the Grant Notice.

ARTICLE I.

GENERAL

1.1 Defined Terms. Wherever the following terms are used in this Agreement they shall have the meanings specified below, unless the context clearly indicates otherwise. Capitalized terms not specifically defined herein shall have the meanings specified in the Plan and/or the Grant Notice.

(a) "***Administrator***" shall mean the Board or the Compensation Committee or other committee of the Board responsible for conducting the general administration of the Plan in accordance with Section 3 of the Plan; provided that if the Participant is an Independent Director, "Administrator" shall mean the Board.

(b) "***Consultant***" shall mean an individual who renders services to the Company as a consultant and has been so designated by the Committee.

(c) "***Credit Agreement***" shall mean that certain credit agreement dated as of June 4, 2014 among TransDigm, Inc., TransDigm Group Incorporated and the lenders party thereto, as in effect as of the Grant Date and without reference to any amendment to the Credit Agreement made following the Grant Date.

(d) "***Diluted Shares***" as of a given date shall mean the total diluted weighted-average of common shares of the Company outstanding as of such date.

(e) "***EBITDA***" for a given fiscal year of the Company shall mean Consolidated EBITDA (as defined in the Credit Agreement) of the Company for such fiscal year on a pro forma basis adjusted for acquisitions or divestitures.

(f) "***Independent Director***" shall mean a non-employee director of the Company.

(g) "***Net Debt***" shall mean, as of the last day of a given fiscal year of the Company, the excess of (a) Consolidated Total Indebtedness (as defined in the Credit Agreement) of the Company over (b) the amount of cash and cash equivalents set forth on the Company's balance sheet.

(h) "***Termination of Consultancy***" shall mean the time when the engagement of the Participant as a Consultant to the Company or a Subsidiary is terminated for any reason, with or without cause, including, but not by way of limitation, by resignation, discharge, death or retirement, but excluding: (i) terminations where there is a simultaneous employment or continuing employment of the Participant by the Company or any Subsidiary, and (ii) terminations where there is a simultaneous re-establishment of a consulting relationship or continuing consulting relationship between the Participant and the Company or any Subsidiary. The Administrator, in its absolute discretion, shall determine the effect of all matters and questions relating to Termination of Consultancy. Notwithstanding any other provision of the Plan, the Company or any Subsidiary has an absolute and unrestricted right to terminate a Consultant's service at any time for any reason whatsoever, with or without cause, except to the extent expressly provided otherwise in writing.

[1] For the avoidance of doubt, the term "Option" as used herein only describes options granted pursuant to the Stock Option Grant Notice to which this Agreement is an Exhibit.

(i) “***Termination of Directorship***” shall mean the time when the Participant, if he or she is or becomes an Independent Director, ceases to be a Director for any reason, including, but not by way of limitation, a termination by resignation, failure to be elected, death or retirement. The Board, in its sole and absolute discretion, shall determine the effect of all matters and questions relating to Termination of Directorship with respect to Independent Directors.

(j) “***Termination of Employment***” shall mean the time when the employee-employer relationship between the Participant and the Company or any Subsidiary is terminated for any reason, with or without Cause, including, but not by way of limitation, a termination by resignation, discharge, death, disability or retirement; but excluding: (i) terminations where there is a simultaneous reemployment or continuing employment of the Participant by the Company or any Subsidiary, and (ii) terminations where there is a simultaneous establishment of a consulting relationship or continuing consulting relationship between the Participant and the Company or any Subsidiary. The Administrator, in its absolute discretion, shall determine the effect of all matters and questions relating to Termination of Employment, including, but not by way of limitation, the question of whether a particular leave of absence constitutes a Termination of Employment; provided, however, that, notwithstanding any other provision of this Agreement, if this Option is an Incentive Stock Option, unless otherwise determined by the Administrator in its discretion, a leave of absence, change in status from an employee to an independent contractor or other change in the employee-employer relationship shall constitute a Termination of Employment if, and to the extent that, such leave of absence, change in status or other change interrupts employment for the purposes of Section 422(a)(2) of the Code and the then applicable regulations and revenue rulings under said Section.

(k) “***Termination of Services***” shall mean the time when (i) every relationship between the Participant and the Company has been terminated by a Termination of Consultancy, Termination of Directorship and/or Termination of Employment, as applicable, and (ii) the Participant is no longer an Eligible Person under the Plan. For purposes of the Option, the Participant’s Termination of Services will be deemed to occur as of the date the Participant is no longer actively providing services to the Company or any Subsidiary (regardless of the reason for such termination and whether or not later found to be invalid or in breach of employment or other laws in the jurisdiction where the Participant is employed or the terms of the Participant’s employment or service agreement, if any), and unless otherwise determined by the Company, (i) the Participant’s right to vest in the Option under the Plan, if any, will terminate as of such date and will not be extended by any notice period (e.g., the Participant’s period of service would not include any contractual notice period or any period of “garden leave” or similar period mandated under employment laws or common law in the jurisdictions where the Participant provides services or the terms of the Participant’s employment or service agreement, if any); and (ii) the period (if any) during which the Participant may exercise the Option after such Termination of Services will commence on the date the Participant ceases to actively provide services and will not be extended by any notice period mandated under employment laws or common law in the jurisdiction where the Participant provides services or the terms of the Participant’s employment or service agreement, if any; the Company shall have the exclusive discretion to determine when the Participant is no longer actively providing services for purposes of the Options (including whether the Participant may still be considered to be providing services while on a leave of absence).

1.2 Incorporation of Terms of Plan. The Option is subject to the terms and conditions of the Plan which are incorporated herein by reference. In the event of any inconsistency between the Plan and this Agreement, the terms of the Plan shall control.

ARTICLE II.

GRANT OF OPTION

2.1 Grant of Option. In consideration of the Participant’s future employment with or service to the Company or a Subsidiary and for other good and valuable consideration, effective as of the Grant Date set forth in the Grant Notice (the “***Grant Date***”), the Company irrevocably grants to the Participant the Option to purchase any part or all of an aggregate of the number of shares of Stock set forth in the Grant Notice, subject to the terms and conditions set forth in the Plan and this Agreement. Unless designated as a Non-Qualified Stock Option in the Grant Notice, the Option shall be an Incentive Stock Option to the maximum extent permitted by law.

2.2 Exercise Price. The exercise price of the shares of Stock subject to the Option shall be as set forth in the Grant Notice, without commission or other charge; *provided*, *however*, that the price per share of the shares of Stock subject to the Option shall not be less than 100% of the Fair Market Value of a share of Stock on the Grant Date. Notwithstanding the foregoing, if this Option is designated as an Incentive Stock Option and the Participant owns (within the meaning of Section 424(d) of the Code) more than 10% of the total combined voting power of all classes of stock of the Company or any "subsidiary corporation" of the Company or any "parent corporation" of the Company (each within the meaning of Section 424 of the Code), the price per share of the shares of Stock subject to the Option shall not be less than 110% of the Fair Market Value of a share of Stock on the Grant Date.

2.3 Consideration to the Company. In consideration of the grant of the Option by the Company, the Participant agrees to render faithful and efficient services to the Company or any Subsidiary. Nothing in the Plan or this Agreement shall confer upon the Participant any right to continue in the employ or service of the Company or any Subsidiary or shall interfere with or restrict in any way the rights of the Company and its Subsidiaries, which rights are hereby expressly reserved, to discharge or terminate the services of the Participant at any time for any reason whatsoever, with or without Cause, except to the extent expressly provided otherwise in a written agreement between the Company or a Subsidiary and the Participant.

ARTICLE III.

PERIOD OF EXERCISABILITY

3.1 Commencement of Exercisability.

(a) Subject to Sections 3.1(b), 3.1(c) and 3.3, the Option shall become vested and exercisable in such amounts and at such times as set forth in the Grant Notice.

(b) No portion of the Option which has not become vested and exercisable at the date of the Participant's Termination of Services shall thereafter become vested and exercisable, except as follows or as may be otherwise provided by the Administrator or as set forth in a written agreement between the Company and the Participant:

If the Participant incurs a Termination of Services under any of the circumstances described in Section 5(a)(i) (death) of that certain Employment Agreement between the Participant and the Company effective _______________ (the "Employment Agreement"), Section 5(a)(ii) (Disability) of the Employment Agreement, Section 5(a)(iv) (Resignation for Good Reason of the Employment Agreement) or Section 5(a)(v) (Termination without Cause) of the Employment Agreement or if the Participant retires from employment after at least 15 years of service after age 60 or after at least ten years of service after age 65, in each such case vesting will continue after termination of employment as provided below:

Termination Date	**Percent of Remaining Options That May Continue to Vest**
Prior to October 1, 2021	0%
On or after October 1, 2021 but prior to October 1, 2022	20%
On or after October 1, 2022 but prior to October 1, 2023	40%
On or after October 1, 2023 but prior to October 1, 2024	60%
On or after October 1, 2024 but prior to October 1, 2025	80%
On or after October 1, 2025	100%

The percentage of remaining Options permitted to vest will be spread ratably over the vesting schedule.

(c) Notwithstanding Section 3.1(a) of this Agreement and Section 8 of the Plan (but subject to Section 3.1(b) of this Agreement), in the event of a Change in Control, Options shall become fully vested and exercisable. Notwithstanding the foregoing, the Administrator may, in good faith and in such manner as it may deem equitable, in its sole discretion, adjust the foregoing Fair Market Value requirements in the event of a dividend or other distribution (whether in the form of cash, Stock, other securities or property), recapitalization, reclassification, stock split, reverse stock split, reorganization, merger, consolidation, split-up, spin-off, combination, repurchase or exchange of Stock or other securities of the Company, issuance of warrants or other rights to purchase Stock or other securities of the Company, or any unusual or nonrecurring transactions or events affecting the Company or the financial statements of the Company if the adjustment is determined by the Administrator to be appropriate in order to prevent dilution or enlargement of the benefits or potential benefits intended to be made available under the Plan or with respect to the Option. For purposes of this Section 3.1, shall take into account the consideration received by the stockholders in connection with a Change in Control or in connection with any other sale of common stock or other equity interests in the Company or any Subsidiary, after taking into account all post-closing adjustments relating to a Change in Control, and assuming the exercise of all vested options and warrants outstanding as of the effective date of such Change in Control (after giving effect to any dilution of securities or instruments arising in connection with such Change in Control); *provided however*, that if the stockholders retain any portion of the common stock following such Change in Control or other sale, the Fair Market Value of such portion of the retained common stock immediately following such Change in Control or other sale shall be deemed "consideration received" for purposes of calculating the proceeds and *provided further* that the Fair Market Value of any non-cash consideration (including stock) received in connection with a Change in Control shall be determined as of the date of such Change in Control.

3.2 Duration of Exercisability. The installments provided for in the vesting schedule set forth in the Grant Notice are cumulative. Each such installment which becomes vested and exercisable pursuant to the vesting schedule set forth in the Grant Notice shall remain vested and exercisable until it becomes unexercisable under Section 3.3.

3.3 Expiration of Option. The Option may not be exercised to any extent by anyone after the first to occur of the following events:

(a) The expiration of ten years from the Grant Date; or

(b) If this Option is designated as an Incentive Stock Option and the Participant owned (within the meaning of Section 424(d) of the Code), at the time the Option was granted, more than 10% of the total combined voting power of all classes of stock of the Company or any "subsidiary corporation" of the Company or any "parent corporation" of the Company (each within the meaning of Section 424 of the Code), the expiration of five years from the Grant Date; or

(c) The opening of business on the day of the Participant's Termination of Services by reason of the Participant's Termination of Services by reason of a termination by the Company or a Subsidiary for Cause (as defined in the Participant's employment agreement, if applicable), unless the Committee, in its discretion, determines that a longer period is appropriate; or

(d) The expiration of six months from the date of the Participant's Termination of Services, unless such termination occurs by reason of (i) the Participant's death, (ii) the Participant's Disability, (iii) the Participant's retirement (pursuant to Section 3.3(e)), (iv) the Participant's termination for Cause (as defined in the Participant's employment agreement, if applicable) or (v) if the Participant has an employment agreement that defines a termination for "cause" and/or "Good Reason," a termination by the Company or a Subsidiary without Cause (as defined in the Participant's employment agreement) or a termination by the Participant for Good Reason (as defined in the Participant's employment agreement, if applicable), *provided*, *however*, that any portion of this Option that is an Incentive Stock Option shall cease to be an Incentive Stock Option on the expiration of three months from the Participant's Termination of Services (and shall thereafter be a Non-Qualified Stock Option), *provided*, *further*, that to the extent that the Participant is prohibited from selling shares of Stock pursuant to the Company's insider trading policy at all times during such six-month period, with the exception of an open trading window of less than seven days, the Option shall expire on the seventh day following the opening of the first open trading window thereafter; or

(e) The expiration of one year from the date of the Participant's Termination of Services by reason of the retirement, after a minimum of ten years of service, of a Participant who is at least 55 years old, *provided*, *however*, that to the extent that the Participant is prohibited from selling shares of Stock pursuant to the Company's insider trading policy at all times during such one-year period, with the exception of an open trading window of less than seven days, the Option shall expire on the seventh day following the opening of the first open trading window thereafter; or

(f) The expiration date set forth in clause (a), (i) if the Participant has an employment agreement that defines a termination for "Cause" and/or "Good Reason," and upon a Participant's Termination of Services by the Company or a Subsidiary without Cause (as defined in Participant's employment agreement) or a Termination of Services by the Participant for Good Reason (as defined in Participant's employment agreement) or (ii) upon the Participant's death or Disability or (iii) upon the Participant's retirement from employment after at least 15 years of service after age 60 or after at least ten years of service after age 65.

Notwithstanding the foregoing, if any Option vests after the Participant's Termination of Services for reasons set forth herein pursuant to Section 3.1 and the Participant has a limit of six months or one year following such Termination of Services to exercise the Option pursuant to paragraph (d) or (e), the Participant shall have six months after the Option vests to exercise such Option.

3.4 Tax Obligations. The Participant acknowledges that, to the extent that the aggregate Fair Market Value (determined as of the time the Option is granted) of all shares of Stock with respect to which Incentive Stock Options, including the Option, are exercisable for the first time by the Participant in any calendar year exceeds $100,000, the Option and such other options shall be Non-Qualified Stock Options to the extent necessary to comply with the limitations imposed by Section 422(d) of the Code. The Participant further acknowledges that the rule set forth in the preceding sentence shall be applied by taking the Option and other "incentive stock options" into account in the order in which they were granted, as determined under Section 422(d) of the Code and the Treasury Regulations thereunder. The Participant acknowledges that an Incentive Stock Option exercised more than three months after the Participant's Termination of Employment, other than by reason of death or Disability, will be taxed as a Non-Qualified Stock Option.

Regardless of any action the Company or Participant's employer, whether it be the Company or a Subsidiary (the "***Employer***") takes with respect to any or all income tax, social insurance, payroll tax, fringe benefits, payment on account or other tax related items related to Participant's participation in the Plan and legally applicable to Participant ("***Tax-Related Items***"), the Participant acknowledges that the ultimate liability for all Tax-Related Items is and remains the Participant's responsibility and may exceed the amount actually withheld by the Company or the Employer. The Participant further acknowledges that the Company and/or the Employer (a) make no representations or undertakings regarding the treatment of any Tax-Related Items in connection with any aspect of the Option, including, but not limited to, the grant, vesting or exercise of the Option, the subsequent sale of shares of Stock acquired pursuant to such exercise and the receipt of any dividends; and (b) do not commit to and are under no obligation to structure the terms of the grant or any aspect of the Option to reduce or eliminate the Participant's liability for Tax-Related Items or achieve any particular tax result. Further, if Participant has become subject to tax in more than one jurisdiction between the Grant Date and the date of any relevant taxable or tax withholding event, as applicable, the Participant acknowledges that the Company and/or the Employer (or former Employer, as applicable) may be required to withhold or account for Tax-Related Items in more than one jurisdiction.

Prior to the relevant taxable or tax withholding event, as applicable, the Participant will pay or make adequate arrangements satisfactory to the Company and/or the Employer to satisfy all Tax-Related Items. In this regard, Participant authorizes the Company and/or the Employer, or their respective agents, at their discretion, to satisfy the obligations with regard to all Tax-Related Items by one or a combination of the following: (i) withholding from the Participant's wages or other cash compensation paid to the Participant by the Company and/or the Employer; or (ii) withholding from proceeds of the sale of shares of Stock acquired at exercise of the Option either through a voluntary sale or through a mandatory sale arranged by the Company (on the Participant's behalf pursuant to this authorization); or (iii) withholding in shares of Stock to be issued at exercise of the Option.

Depending on the withholding method, the Company and/or the Employer may withhold or account for Tax-Related Items by considering statutory withholding rates or other withholding rates, including maximum applicable rates in the Participant's jurisdiction. If the Tax-Related Items are satisfied by withholding in shares of Stock, for tax purposes, the Participant will be deemed to have been issued the full number of shares of Stock subject to the exercised Option, notwithstanding that a number of shares of Stock are held back solely for the purpose of satisfying the Tax-Related Items.

Finally, the Participant shall pay to the Company or the Employer any amount of Tax-Related Items that the Company or the Employer may be required to withhold or account for as a result of Participant's participation in the Plan that cannot be satisfied by the means previously described. The Company may refuse to issue or deliver the shares of Stock or the proceeds of the sale of shares of Stock, if the Participant fails to comply with his or her obligations in connection with the Tax-Related Items.

ARTICLE IV.

EXERCISE OF OPTION

4.1 Person Eligible to Exercise. Except as provided in Section 5.2(b), during the lifetime of the Participant, only the Participant may exercise the Option or any portion thereof. After the death of the Participant, any exercisable portion of the Option may, prior to the time when the Option becomes unexercisable under Section 3.3, be exercised by the Participant's personal representative or by any person empowered to do so under the deceased Participant's will or under the then applicable laws of descent and distribution.

4.2 Partial Exercise. Any exercisable portion of the Option or the entire Option, if then wholly exercisable, may be exercised in whole or in part at any time prior to the time when the Option or portion thereof becomes unexercisable under Section 3.3.

4.3 Manner of Exercise. The Option, or any exercisable portion thereof, may be exercised solely by delivery to the Secretary of the Company (or any third party administrator or other person or entity designated by the Company) of all of the following prior to the time when the Option or such portion thereof becomes unexercisable under Section 3.3:

(a) An Exercise Notice in a form specified by the Administrator, stating that the Option or portion thereof is thereby exercised, such notice complying with all applicable rules established by the Administrator;

(b) The receipt by the Company of full payment for the shares of Stock with respect to which the Option or portion thereof is exercised, including payment of any applicable Tax-Related Items, which may be in one or more of the forms of consideration permitted under Section 4.4;

(c) Any other written representations as may be required in the Administrator's reasonable discretion to evidence compliance with the Securities Act or any other applicable law, rule, or regulation; and

(d) In the event the Option or portion thereof shall be exercised pursuant to Section 4.1 by any person or persons other than the Participant, appropriate proof of the right of such person or persons to exercise the Option.

Notwithstanding any of the foregoing, the Company shall have the right to specify all conditions of the manner of exercise, which conditions may vary by country and which may be subject to change from time to time.

4.4 Method of Payment. Payment of the exercise price, and any applicable Tax-Related Items, shall be by any of the following, or a combination thereof, at the election of the Participant:

(a) Cash;

(b) Check;

(c) Broker Assisted Cashless Exercise. With the consent of the Administrator, delivery of a notice that the Participant has placed a market sell order with a broker with respect to shares of Stock then issuable upon exercise of the Option, and that the broker has been directed to pay a sufficient portion of the net proceeds of the sale to the Company in satisfaction of the aggregate exercise price; *provided*, that payment of such proceeds is then made to the Company upon settlement of such sale;

(d) Share Surrender. With the consent of the Administrator, surrender of other shares of Stock which (i) in the case of shares of Stock acquired from the Company, have been owned by the Participant for more than six months on the date of surrender (or such other minimum length of time as the Administrator determines from time to time to be necessary to avoid adverse accounting consequences or violation of any applicable law, rule or regulation), and (ii) have a Fair Market Value on the date of surrender equal to the aggregate exercise price of the shares of Stock with respect to which the Option or portion thereof is being exercised; or

(e) Net Exercise. With the consent of the Administrator, surrendered shares of Stock issuable upon the exercise of the Option having a Fair Market Value on the date of exercise equal to the aggregate exercise price of the shares of Stock with respect to which the Option or portion thereof is being exercised.

4.5 Conditions to Issuance of Stock Certificates. The shares of Stock deliverable upon the exercise of the Option, or any portion thereof, may be either previously authorized but unissued shares of Stock or issued shares of Stock which have then been reacquired by the Company. Such shares of Stock shall be fully paid and nonassessable. The Company shall not be required to issue or deliver any shares of Stock purchased upon the exercise of the Option or portion thereof prior to fulfillment of all of the following conditions:

(a) The admission of such shares of Stock to listing on all stock exchanges on which such Stock is then listed;

(b) The completion of any registration or other qualification of such shares of Stock under any state or federal law or under rulings or regulations of the Securities and Exchange Commission or of any other governmental regulatory body, which the Administrator shall, in its absolute discretion, deem necessary or advisable;

(c) The obtaining of any approval or other clearance from any state or federal governmental agency which the Administrator shall, in its absolute discretion, determine to be necessary or advisable;

(d) The receipt by the Company of full payment for such shares of Stock, including payment of any applicable withholding tax, which may be in one or more of the forms of consideration permitted under Section 4.4; and

(e) The lapse of such reasonable period of time following the exercise of the Option as the Administrator may from time to time establish for reasons of administrative convenience.

4.6 Rights as Stockholder. The holder of the Option shall not be, nor have any of the rights or privileges of, a stockholder of the Company in respect of any shares of Stock purchasable upon the exercise of any part of the Option unless and until such shares of Stock shall have been issued by the Company to such holder (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company). No adjustment will be made for a dividend or other right for which the record date is prior to the date the shares of Stock are issued, except as provided in Section 8 of the Plan.

ARTICLE V.

OTHER PROVISIONS

5.1 Administration. The Administrator shall have the power to interpret the Plan and this Agreement and to adopt such rules for the administration, interpretation and application of the Plan as are consistent therewith and to interpret, amend or revoke any such rules. All actions taken and all interpretations and determinations made by the Administrator in good faith shall be final and binding upon the Participant, the Company and all other interested persons. No member of the Committee or the Board shall be personally liable for any action, determination or interpretation made in good faith with respect to the Plan, this Agreement or the Option.

5.2 Option Transferability.

(a) Except as otherwise set forth in Section 5.2(b), (i) the Option may not be sold, pledged, assigned or transferred in any manner other than by will or the laws of descent and distribution, unless and until the shares of Stock underlying the Option have been issued, and all restrictions applicable to such shares of Stock have lapsed. Neither the Option nor any interest or right therein shall be liable for the debts, contracts or engagements of the Participant or his or her successors in interest or shall be subject to disposition by transfer, alienation, anticipation, pledge, encumbrance, assignment or any other means whether such disposition be voluntary or involuntary or by operation of law by judgment, levy, attachment, garnishment or any other legal or equitable proceedings (including bankruptcy), and any attempted disposition thereof shall be null and void and of no effect, except to the extent that such disposition is permitted by the preceding sentence; and (ii) during the lifetime of the Participant, only the Participant may exercise the Option or any portion thereof. After the death of the Participant, any exercisable portion of the Option may, prior to the time when the Option becomes unexercisable under Section 3.3, be exercised by the Participant's personal representative or by any person empowered to do so under the deceased Participant's will or under the then applicable laws of descent and distribution.

(b) Notwithstanding the foregoing, with respect to participants who are corporate officers or operating presidents, the Administrator may permit any portion of the Option that is not an Incentive Stock Option to be transferred to, exercised by and paid to certain persons or entities related to such Participant, including but not limited to members of such Participant's family, charitable institutions or trusts or other entities whose beneficiaries or beneficial owners are members of such Participant's family and/or charitable institutions, or to such other persons or entities as may be expressly approved by the Administrator, pursuant to such conditions and procedures as the Administrator may establish. Any permitted transfer shall be subject to the condition that the Administrator receive evidence satisfactory to it that the transfer is being made for estate and/or tax planning purposes (or to a "blind trust" in connection with such Participant's termination of employment or service with the Company or a Subsidiary to assume a position with a governmental, charitable, educational or similar non-profit institution) and on a basis consistent with the Company's lawful issue of securities.

5.3 Adjustments. The Participant acknowledges that the Option is subject to modification and termination in certain events as provided in this Agreement and Section 8 of the Plan.

5.4 Appendix. Notwithstanding any provisions in this Agreement, the Option grant shall be subject to any additional or different terms and conditions set forth in the attached Appendix to this Option Agreement for the Participant's country (the "***Appendix***"). Moreover, if the Participant relocates to one of the countries included in the Appendix, the special terms and conditions for such country will apply to the Participant, to the extent the Company determines that the application of such terms and conditions is necessary or advisable to comply with local law or facilitate the administration of the Plan. The Appendix constitutes part of this Agreement.

5.5 Insider Trading/Market Abuse Laws. The Participant understands that he or she may be subject to insider trading restrictions and/or market abuse laws in applicable jurisdictions, including but not limited to the United States, the Participant's country, the Service Provider's country, and the country in which the shares of Stock may be listed, which may affect the Participant's ability, directly or indirectly, to purchase or sell or attempt to sell or otherwise dispose of shares of Stock, rights to shares of Stock (e.g., Options), or rights linked to the value of shares of Stock, during such times as the Participant is considered to have "inside information" regarding the Company (as defined by the laws and/or regulation in the applicable jurisdiction(s)). Local insider trading laws and regulations may prohibit the cancellation or amendment of orders the Participant placed before possessing inside information. Furthermore, the Participant may be prohibited from (i) disclosing inside information to any third party, including fellow employees or service providers (other than on a "need to know" basis) and (ii) "tipping" third parties or causing them to otherwise buy or sell securities. Any restrictions under these laws or regulations are separate from and in addition to any restrictions that may be imposed under any applicable Company insider trading policy. The Participant is responsible for ensuring compliance with any applicable restrictions and the Participant should consult with his or her personal legal advisor on this matter.

5.6 No Advice Regarding Grant. The Company is not providing any tax, legal or financial advice, nor is the Company making recommendations regarding the Participant's participation in the Plan, or the Participant's acquisition or sale of shares of Stock acquired upon exercise. The Participant should consult with his or her own personal tax, legal and financial advisors regarding his or her participation in the Plan before taking any actions related to the Plan.

5.7 Notices. Any notice to be given under the terms of this Agreement to the Company shall be addressed to the Company in care of the Secretary of the Company, and any notice to be given to the Participant shall be addressed to the Participant at the most recent address set forth in the Company's books and records. By a notice given pursuant to this Section 5.7, either party may hereafter designate a different address for notices to be given to that party. Any notice which is required to be given to the Participant shall, if the Participant is then deceased, be given to the person entitled to exercise his or her Option pursuant to Section 4.1 by written notice under this Section 5.7. Any notice shall be deemed duly given when sent via email or when sent by certified mail (return receipt requested) and deposited (with postage prepaid) in a post office or branch post office regularly maintained by the United States Postal Service.

5.8 Titles. Titles are provided herein for convenience only and are not to serve as a basis for interpretation or construction of this Agreement.

5.9 Governing Law and Venue; Severability. The validity, interpretation, construction and performance of this Agreement, and all acts and transactions pursuant hereto and the rights and obligations of the parties hereto shall be governed, construed and interpreted in accordance with the laws of the state of Delaware, without giving effect to principles of conflicts of law. For purposes of litigating any dispute that may arise directly or indirectly from this Agreement, the parties hereby submit and consent to the exclusive jurisdiction of the state of Delaware and agree that any such litigation shall be conducted only in the courts of Delaware or the federal courts of the United States located in Delaware and no other courts. In the event that any provision hereof becomes or is declared by a court of competent jurisdiction to be illegal, unenforceable or void, this Agreement shall continue in full force and effect.

5.10 Conformity to Securities Laws. The Participant acknowledges that the Plan and this Agreement are intended to conform to the extent necessary with all provisions of the U.S. Securities Act and the Exchange Act and any and all regulations and rules promulgated by the U.S. Securities and Exchange Commission thereunder, and any U.S. or non-U.S. securities laws and regulations. Notwithstanding anything herein to the contrary, the Plan shall be administered, and the Option is granted and may be exercised, only in such a manner as to conform to such laws, rules and regulations. To the extent permitted by applicable law, the Plan and this Agreement shall be deemed amended to the extent necessary to conform to such laws, rules and regulations.

5.11 Amendments, Suspension and Termination. To the extent permitted by the Plan, this Agreement may be wholly or partially amended or otherwise modified, suspended or terminated at any time or from time to time by the Committee or the Board, *provided*, that, except as may otherwise be provided by the Plan, no amendment, modification, suspension or termination of this Agreement shall adversely affect the Option in any material way without the prior written consent of the Participant.

5.12 Successors and Assigns. The Company may assign any of its rights under this Agreement to single or multiple assignees, and this Agreement shall inure to the benefit of the successors and assigns of the Company. Subject to the restrictions on transfer herein set forth in Section 5.2, this Agreement shall be binding upon the Participant and his or her heirs, executors, administrators, successors and assigns.

5.13 Notification of Disposition. If this Option is designated as an Incentive Stock Option, the Participant shall give prompt notice to the Company of any disposition or other transfer of any shares of Stock acquired under this Agreement if such disposition or transfer is made (a) within two years from the Grant Date with respect to such shares of Stock or (b) within one year after the transfer of such shares of Stock to him. Such notice shall specify the date of such disposition or other transfer and the amount realized, in cash, other property, assumption of indebtedness or other consideration, by the Participant in such disposition or other transfer.

5.14 Limitations Applicable to Section 16 Persons. Notwithstanding any other provision of the Plan or this Agreement, if the Participant is subject to Section 16 of the Exchange Act, the Plan, the Option and this Agreement shall be subject to any additional limitations set forth in any applicable exemptive rule under Section 16 of the Exchange Act (including any amendment to Rule 16b-3 of the Exchange Act) that are requirements for the application of such exemptive rule. To the extent permitted by applicable law, this Agreement shall be deemed amended to the extent necessary to conform to such applicable exemptive rule.

5.15 Not a Contract of Employment. Nothing in this Agreement or in the Plan shall confer upon the Participant any right to continue to serve as an employee or other service provider of the Company or any of its Subsidiaries. The terms of the Participant's employment or service relationship are determined by the Company or the Employer's policy, and by the terms of any employment or service contract to which the Participant might be party. This Agreement creates no rights to continued employment, or any other service relationship, nor does it limit the discretion the Company or the Employer would otherwise have to terminate Participant's employment or other service relationship, with or without Cause. The Option and any shares of Stock acquired pursuant to the Plan (including the value and income of the same) are not part of normal or expected compensation or salary, including, but not limited to, for purposes of calculating any severance, resignation, termination, redundancy, dismissal, end of service payments, bonuses, long-service awards, pension or retirement or welfare benefits or similar payments.

5.16 Electronic Delivery and Participation. The Company may, in its sole discretion, decide to deliver any documents related to current or future participation in the Plan by electronic means. The Participant hereby consents to receive such documents by electronic delivery and agree to participate in the Plan through an on-line or electronic system established and maintained by the Company or any third party designated by the Company.

5.17 Imposition of Other Requirements. The Company reserves the right to impose other requirements on the Participant's participation in the Plan, on the Options and on any shares of Stock acquired upon exercise of the Option, to the extent the Company determines it is necessary or advisable for legal or administrative reasons, and to require the Participant to sign any additional agreements or undertakings that may be necessary to accomplish the foregoing.

5.18 No Right to Damages. Nothing in the Grant Notice, this Agreement or the Plan gives the Participant a right to receive damages for any portion of the Option that Participant might lose due to Company, Subsidiary or Committee decisions. The loss of potential profit from the Option will not constitute an element of damages in the event of Participant's Termination of Services for any reason, even if such Termination of Services violates an obligation of the Company or a Subsidiary.

5.19 Entire Agreement. The Plan, the Grant Notice and this Agreement (including all Exhibits thereto) constitute the entire agreement of the parties and supersede in their entirety all prior undertakings and agreements of the Company and Participant with respect to the subject matter hereof.

5.20 Waiver. The Participant acknowledges that a waiver by the Company of any provision, or breach thereof, of this Agreement on any occasion shall not operate or be construed as a waiver of such provision on any other occasion or as a waiver of any other provision of this Agreement, or of any subsequent breach by the Participant or any other participant.

5.21 Section 409A. Notwithstanding any other provision of the Plan, this Agreement or the Grant Notice, the Plan, this Agreement and the Grant Notice shall be interpreted in accordance with, and incorporate the terms and conditions required by, Section 409A of the U.S. Internal Revenue Code of 1986, as amended (together with any U.S. Department of Treasury regulations and other interpretive guidance issued thereunder, including without limitation any such regulations or other guidance that may be issued after the date hereof, "***Section 409A***"). The Committee reserves the right (without the obligation to do so or to indemnify the Participant for the failure to do so) to adopt such amendments to the Plan, this Agreement or the Grant Notice or adopt other policies and procedures (including amendments, policies and procedures with retroactive effect), or take any other actions, as the Committee determines are necessary or appropriate to exempt the Option from Section 409A or to comply with the requirements of Section 409A and thereby avoid the penalty taxes under Section 409A.

APPENDIX

COUNTRY-SPECIFIC PROVISIONS TO THE
STOCK OPTION AGREEMENT

Terms and Conditions

This Appendix includes additional terms and conditions that govern the Option granted to the Participant under the Plan if the Participant resides or works in one of the countries listed below. If the Participant is a citizen or resident (or is considered as such for local law purposes) of a country other than the country in which the Participant is currently residing and/or working, or if the Participant relocates to another country after the grant of the Option, the Company shall, in its discretion, determine to what extent the country-specific terms contained herein shall be applicable to the Participant. Certain capitalized terms used but not defined in this Appendix have the meanings set forth in the Plan and/or the Agreement.

Notifications

This Appendix also includes information regarding exchange controls and certain other issues of which the Participant should be aware with respect to the Participant's participation in the Plan. The information is based on the securities, exchange control and other laws as of October 2019; however, such laws are often complex and change frequently. As a result, the Company strongly recommends that the Participant does not rely on the information in this Appendix as the only source of information relating to the consequences of the Participant's participation in the Plan because the information may be out of date at the time that Participant exercises the Option or sell shares of Stock acquired under the Plan.

In addition, the information contained herein is general in nature and may not apply to the Participant's particular situation and the Company is not in a position to assure the Participant of any particular result. Accordingly, the Participant is advised to seek appropriate professional advice as to how the relevant laws in the Participant's country may apply to the Participant's situation.

Finally, the Participant understands that if he or she is a citizen or resident of a country other than the one in which Participant is currently working, transfers employment after the grant date, or is considered a resident of another country for local law purposes, the information contained herein may not apply to the Participant, and the Company shall, in its discretion, determine to what extent the terms and conditions contained herein shall apply.

ALL COUNTRIES OUTSIDE OF THE UNITED STATES

Terms and Conditions

1. Nature of Grant. In accepting the Option, the Participant acknowledges and agrees that:

(a) the Plan is established voluntarily by the Company, it is discretionary in nature and it may be modified, amended, suspended or terminated by the Company at any time, to the extent permitted by the Plan;

(b) the grant of the Options is voluntary and occasional and does not create any contractual or other right to receive future grants of stock options, or benefits in lieu of stock options, even if stock options have been granted in the past;

(c) all decision with respect to future stock options or other grants, if any, will be at the sole discretion of the Company;

(d) the Participant's participation in the Plan shall not create a right to further employment or service relationship with the Company or the Employer and shall not interfere with the ability of the Company or the Employer to terminate the Participant's employment or service relationship at any time;

(e) the Participant is voluntarily participating in the Plan;

(f) the Options and the shares of Stock subject to the Options, and the income and value of the same, are extraordinary items that do not constitute compensation of any kind for services of any kind rendered to the Company or the Employer, and which is outside the scope of the Participant's employment or service contract, if any;

(g) the Options and the shares of Stock subject to the Options, and the income and value of the same are not intended to replace any pension rights or compensation;

(h) the Options and the shares of Stock subject to the Options, and the income and value of the same, are not part of normal or expected compensation or salary for any purposes, including, but not limited to, calculating any severance, resignation, termination, redundancy, dismissal, end-of-service payments, holiday pay, bonuses, long-service awards, leave-related payments, pension or retirement or welfare benefits or similar mandatory payments and in no event should be considered compensation for, or relating to, past services for the Company, the Employer of any Subsidiary;

(i) the Option grant and the Participant's participation in the Plan will not be interpreted to form an employment or service contract or relationship with the Company or a Subsidiary;

(j) unless otherwise agreed with the Company, the Options and the shares of Stock subject to the Option, and the income and value of the same, are not granted as consideration for, or in connection with, any service the Participant may provide as a director of a Subsidiary;

(k) the future value of the underlying shares of Stock is unknown, indeterminable and cannot be predicted with certainty;

(l) if the underlying shares of Stock do not increase in value, the Option will have no value;

(m) no claim or entitlement to compensation or damages shall arise from forfeiture of the Option resulting from the Participant's Termination of Services (for any reason whatsoever, and whether or not later found to be invalid or in breach of employment or other laws in the jurisdiction where the Participant renders services or the terms of the Participant's employment or service agreement, if any);

(n) unless otherwise provided in the Plan or by the Company in its sole discretion, the Options and the benefits evidenced by this Agreement do not create any entitlement to have the Options or any such benefit transferred to, or assumed by, another company nor to be exchanged, cashed out or substituted for, in connection with any corporate transaction affecting the shares of Stock of the Company; and

(o) neither the Company, the Employer, nor any other Subsidiary shall be liable for any foreign exchange rate fluctuation between the Participant's local currency and the U.S. Dollar that may affect the value of the Option or of any amounts due to the Participant upon exercise of the Options or the subsequent sale of any shares of Stock acquired upon settlement.

2. Language. The Participant acknowledges that the Participant is sufficiently proficient in English or has consulted with an advisor who is sufficiently proficient in English so as to allow the Participant to understand the terms and conditions of this Agreement. Further, if the Participant has received this Agreement or any other document(s) related to the Plan translated into a language other than English and if the meaning of the translated version is different than the English version, the English version will control.

Data Privacy Information and Consent.

(a) Declaration of Consent. The Participant is declaring that he or she agrees with the data processing practices described herein and consents to the collection, processing and use of Data (as defined below) by the Company and the transfer of Data to the recipients mentioned below, including recipients located in countries which may not have a similar level of protection from the perspective of the Participant's country's data protection laws.

(b) Data Collection and Usage. The Company and the Employer collect, process and use certain personal information about the Participant, including but not limited to his or her name, home address, telephone number, email address, date of birth, social insurance number, passport or other identification number, salary, nationality, any shares of Stock, details of all stock options granted under the Plan or any other entitlement to shares awarded, canceled, exercised, vested, unvested or outstanding in the Participant's favor ("Data"), for purposes of implementing, administering and managing the Plan. The legal basis, where required, for the collection and processing of Data is the Participant's consent.

(c) ***Stock Plan Administration Service Providers. The Company may transfer Data, or parts thereof, to a third-party stock plan administrator/broker ("Service Provider") which may assist the Company, presently or in the future, with the implementation, administration and management of the Plan. The Participant acknowledges and understands that the Service Provider will open an account for the Participant to receive and trade shares of Stock acquired under the Plan and the Participant may be asked to agree on separate terms and data processing practices with the Service Provider, with such agreement being a condition to the Participant's ability to participate in the Plan. Where required, the legal basis for the transfer of Data to the Service Provider is the Participant's consent.***

(d) ***International Data Transfers. The Company is, and the Service Provider may be, based in the United States. The Participant's country or jurisdiction may have different data privacy laws and protections than the United States. For example, the European Commission has issued only a limited adequacy finding with respect to the United States that applies only if and to the extent companies self-certify and remain self-certified under the EU-U.S. Privacy Shield program, which is open to companies subject to the jurisdiction of the Federal Trade Commission. The Company has currently not registered for the EU-U.S. Privacy Shield program. The Company's legal basis for the transfer of data, where required, is the Participant's consent.***

(e) ***Data Retention. The Company will hold and use Data only as long as is necessary to implement, administer and manage the Participant's participation in the Plan, or as required to comply with legal or regulatory obligations including under tax, exchange control, labor and securities laws. This may mean Data is retained until after the Participant's employment or service relationship ends. When the Company or the Employer no longer need Data for any of the above purposes, they will cease processing it in this context and remove it from all of their systems used for such purposes, to the fullest extent possible.***

(f) ***Voluntariness and Consequences of Consent Denial or Withdrawal. Participation in the Plan is voluntary and the Participant is providing the consents herein on a purely voluntary basis. The Participant understands that he or she may request to stop the transfer and processing of the Data for purposes of his or her participation in the Plan and that the Participant's compensation from or service relationship with the Employer will not be affected. The only consequence of refusing or withdrawing consent is that the Company would not be able to allow the Participant to participate in the Plan. The Participant understands that his or her Data will still be processed in relation to the Participant's employment or service relationship for record-keeping purposes.***

(g) ***Data Subject Rights. The Participant may have a number of rights under the data privacy laws in his or her jurisdiction. Depending on where the Participant is based, such rights may include the right to (i) request access to or copies of Data the Company processes, (ii) rectify incorrect Data, (iii) delete Data, (iv) restrict the processing of Data, (v) restrict the portability of Data, (iv) lodge complaints with the competent authorities in the Participant's jurisdiction, and/or (vii) receive a list with the names and addresses of any potential recipients of Data. To receive clarification regarding these rights or to exercise these rights, the Participant can contact his or her human resources representative.***

By signing below, the Participant declares that he or she agrees with the data processing practices as described above. The Participant understands and acknowledges that the Participant may withdraw his or her consent at any time with future effect for any or no reason as described in sub-section (f) above.

Submitted by:

PARTICIPANT

____
Signature

____
Print Name

CANADA

Terms and Conditions

Manner of Exercise**.** The following provision supplements Section 4.3 the Agreement:

Notwithstanding anything in the Plan, the Participant agrees to pay the exercise price and any Tax-Related Items solely by means of (i) cash, (ii) check or other instrument acceptable to the Company or (ii) a broker-assisted cashless exercise, whereby the broker sells some or all of the shares of Common Stock to be issued upon exercise to pay the exercise price, brokerage fees and any applicable Tax-Related Items. To the extent that tax regulatory requirements change, the Company reserves the right to permit the Participant to exercise the Option and pay the exercise price and any applicable Tax-Related Items in shares of Stock to the extent permitted by the Plan.

Termination of Services. Notwithstanding any provision in the Agreement to the contrary, for purposes of the Option, and except as expressly required by applicable legislation, the Participant's Termination of Services (regardless of the reason for such termination and whether or not later found to be invalid or in breach of employment laws in the jurisdiction where the Participant is employed or providing services, or the terms of the Participant's employment or service agreement, if any) will be deemed to occur as of the date that is the earlier of: (1) the date that the Participant is no longer actively employed by the Company or any Subsidiary, or at the discretion of the Committee, or (2) the date the Participant receives notice of Termination of Services, regardless of any notice period or period of pay in lieu of such notice required under local law (including, but not limited to statutory law, regulatory law and/or common law); the Company shall have the exclusive discretion to determine when Participant is no longer employed for purposes of the Option grant (including when Participant is no longer considered as providing active service while on a leave of absence).

The following provisions will apply if the Participant is a resident of Quebec:

French Language Provision**.**

The parties acknowledge that it is their express wish that the Agreement, as well as all documents, notices and legal proceedings entered into, given or instituted pursuant hereto or relating directly or indirectly hereto, be drawn up in English.

Les parties reconnaissent avoir exigé la rédaction en anglais de la convention, ainsi que de tous documents exécutés, avis donnés et procedures judiciaries intentées, directement ou indirectement, relativement à la présente convention.

Data Privacy**.** This provision supplements the Data Privacy for All Countries Outside of the United States in this Appendix:

The Participant hereby authorizes the Company and the Company's representatives to discuss with and obtain all relevant information from all personnel, professional or not, involved in the administration and operation of the Plan. The Participant further authorizes the Company, any Subsidiaries and the Committee to disclose and discuss the Plan with their advisors. The Participant further authorizes the Company or its Subsidiaries to record such information and to keep such information in the Participant's employee file.

Notifications

Securities Law Notice. The Participant is permitted to sell shares of Stock acquired through the Plan through the designated broker appointed under the Plan, if any, provided the resale of shares of Stock acquired under the Plan takes place outside of Canada through the facilities of a stock exchange on which the shares of Stock are listed. The Company's shares of Stock are currently listed on the New York Stock Exchange.

Foreign Asset/Account Reporting Information**.** The Participant is required to report any foreign specified property on Form T1135 (Foreign Income Verification Statement) if the total value of the foreign specified property exceeds C$100,000 at any time during the year. Foreign specified property includes shares of Stock acquired under the Plan, and may include the Option. The Option must be reported (generally at a nil cost) if the C$100,000 cost threshold is exceeded because of other foreign property the Participant holds. If shares of Stock are acquired, their cost generally is the adjusted cost base ("ACB") of the shares of Stock. The ACB ordinarily would equal the fair market value of the shares of Stock at the time of acquisition, but if the Participant owns other shares of Stock, this ACB may have to be averaged with the ACB of the other shares of Stock. The Form must be filed by April 30 of the following year. The Participant should consult with a personal advisor to ensure that the Participant complies with the applicable requirements.

FRANCE

Terms and Conditions

Option Type. The Option is not intended to qualify for specific tax or social security treatment in France.

Consent to Receive Information in English**.** By accepting the Option, the Participant confirms having read and understood the Plan and this Agreement, including all terms and conditions included therein, which were provided in the English language. The Participant accepts the terms of those documents accordingly.

En acceptant cette Option, vous confirmez avoir lu et compris le Plan et cette convention, incluant tous leurs termes et conditions, qui ont été transmis en langue anglaise. Vous acceptez les dispositions de ces documents en connaissance de cause.

Notifications

Foreign Asset/Account Reporting Information**.** French residents and non-residents must declare to the Customs Authorities the cash and securities they import or export without the use of a financial institution when the value of such cash or securities exceeds €10,000. French residents with foreign account balances exceeding €1,000,000 must report any transactions carried out on those accounts to the Bank of France on a monthly basis. French residents must also report all foreign bank and brokerage accounts on an annual basis (included accounts opened or closed during the tax year) on a specific form together with the income tax return. Failure to comply could trigger significant penalties.

GERMANY

Notifications

Exchange Control Notification. Cross-border payments in excess of €12,500 must be reported monthly to the German Federal Bank. If Participant makes or receives a payment in excess of this amount, Participant must report the payment to the German Federal Bank electronically using the "General Statistics Reporting Portal" ("*Allgemeines Meldeportal Statistik*") available via the German Federal Bank's website (*www.bundesbank.de*).

UNITED KINGDOM

Terms and Conditions

Taxes and Other Deductions**.** The following supplements Section 3.4 of the Agreement:

If payment or withholding of the income tax due is not made within ninety (90) days of the end of the tax year in which the event giving rise to the liability occurred or such other period specified in Section 222(1)(c) of the U.K. Income Tax (Earnings and Pensions) Act 2003 (the "Due Date"), the amount of any uncollected tax liability shall constitute a loan owed by the Participant to the Company or the Employer, as applicable, effective as of the Due Date. The Participant agrees that the loan will bear interest at the then-current official rate of Her Majesty's Revenue & Customs ("HMRC"), it will be immediately due and repayable, and the Company or the Employer, as applicable, may recover it at any time thereafter by any of the means referred to in Section 3.4 of the Agreement.

Notwithstanding the foregoing, if the Participant is a director or executive officer of the Company (within the meaning of Section 13(k) of the U.S. Securities and Exchange Act of 1934, as amended), the Participant shall not be eligible for a loan as described above. In the event that the Participant is a director or executive officer and the amount of any income tax is not collected from or paid by the Participant by the Due Date, the amount of any uncollected tax liability may constitute a benefit to the Participant on which additional income tax and National Insurance contributions ("NICs") may be payable. The Participant understands that he or she will be responsible for reporting any income tax and NICs due on this additional benefit directly to HMRC under the self-assessment regime and for reimbursing the Company or the Employer, as applicable, for the value of any NICs due on this additional benefit.

EXHIBIT B

FOR USE WITH FIVE YEAR AWARDS

VESTING

The options will vest as follows:

Fiscal year 2021	Minimum vesting of 2.5% of the Options if EBITDA Margin is at least 40% and up to 10% of the Options if EBITDA Margin is at least 44%, plus Minimum vesting of 2.5% of the Options if EBITDA As Defined is at least $1,850 million and up to 10% of the Options if EBITDA is at least $2,150 million EBITDA and EBITDA Margin will be calculated consistent with EBITDA As Defined and EBITDA As Defined margin in the Company’s annual financial statements
Fiscal year 2022	Vesting of up to 20% of the Options based on criteria related to the Company’s performance to be determined by the Administrator hereafter in its sole discretion
Fiscal year 2023	Vesting of up to 20% of the Options based on criteria related to the Company’s performance to be determined by the Administrator hereafter in its sole discretion
Fiscal year 2024	Vesting of up to 20% of the Options based on criteria related to the Company’s performance to be determined by the Administrator hereafter in its sole discretion
Fiscal year 2025	Vesting of up to 20% of the Options based on criteria related to the Company’s performance to be determined by the Administrator hereafter in its sole discretion

1. Annual Operational Performance Vesting. Effective as of the last day of each of the Company’s fiscal years 2021-2025 there shall become vested the percentage of shares covered by the Option as determined in accordance with the performance criteria set forth above. The Options shall become vested and exercisable as of the date that the Administrator verifies the performance criteria; provided, however, the vesting hereunder will be effective as to Participant as of the end of the fiscal year to which such performance criteria relates (notwithstanding any termination of Participant’s employment during the period between the end of such fiscal year and the verification of the performance criteria and, in such case, notwithstanding the provisions of Section 3.1(b)). For each such fiscal year, the Administrator shall verify the performance criteria, and shall notify the Company’s Chief Executive Officer of its determination with respect thereto, within ten business days after the Administrator receives the Company’s audited financial statements for that fiscal year.

2. Adjustments of Operational Performance Objectives. The performance criteria specified in this Exhibit B are based upon certain assumptions about the future business of the Company as of the date the Option is granted. Accordingly, in the event that, after such date, the Administrator determines, in its sole discretion, that any acquisition or disposition of any business by the Company or any dividend or other distribution (whether in the form of cash, Stock, other securities or other property), recapitalization, reclassification, stock split, reverse stock split, reorganization, merger, consolidation, split-up, spin-off, combination, repurchase, or exchange of Stock or other securities of the Company, issuance of warrants or other rights to purchase Stock or other securities of the Company, any unusual or nonrecurring transactions or events affecting the Company, or the financial statements of the Company, or change in applicable laws, regulations, or accounting principles occurs such that an adjustment is determined by the Administrator to be appropriate in order to prevent dilution or enlargement of the benefits or potential benefits intended to be made available under the Plan or with respect to the Option, then the Administrator may, in good faith and in such manner as it may deem equitable, adjust the amounts set forth on this Exhibit B (and/or adjust definitions applicable to certain performance criteria) to reflect the projected effect of such transaction(s) or event(s) on performance. Further, in the event that the Company pays a special dividend, the Administrator may adjust performance criteria as appropriate.

EXHIBIT B

FOR USE WITH TWO YEAR EXTENSION GRANTS

VESTING

The options will vest as follows:

Fiscal year 2024	Vesting of up to 50% of the Options based on criteria related to the Company's performance to be determined by the Administrator hereafter in its sole discretion
Fiscal year 2025	Vesting of up to 50% of the Options based on criteria related to the Company's performance to be determined by the Administrator hereafter in its sole discretion

1. Annual Operational Performance Vesting. Effective as of the last day of each of the Company's fiscal years 2024-2025 there shall become vested the percentage of shares covered by the Option in accordance with the performance criteria set forth above. The Options shall become vested and exercisable as of the date that the Administrator verifies the performance criteria; provided, however, the vesting hereunder will be effective as to Participant as of the end of the fiscal year to which such performance criteria relates (notwithstanding any termination of Participant's employment during the period between the end of such fiscal year and the verification of the performance criteria and, in such case, notwithstanding the provisions of Section 3.1(b)). For each such fiscal year, the Administrator shall verify the performance criteria, and shall notify the Company's Chief Executive Officer of its determination with respect thereto, within ten business days after the Administrator receives the Company's audited financial statements for that fiscal year.

2. Adjustments of Operational Performance Objectives. The performance criteria specified in this Exhibit B are based upon certain assumptions about the future business of the Company as of the date the Option is granted. Accordingly, in the event that, after such date, the Administrator determines, in its sole discretion, that any acquisition or disposition of any business by the Company or any dividend or other distribution (whether in the form of cash, Stock, other securities or other property), recapitalization, reclassification, stock split, reverse stock split, reorganization, merger, consolidation, split-up, spin-off, combination, repurchase, or exchange of Stock or other securities of the Company, issuance of warrants or other rights to purchase Stock or other securities of the Company, any unusual or nonrecurring transactions or events affecting the Company, or the financial statements of the Company, or change in applicable laws, regulations, or accounting principles occurs such that an adjustment is determined by the Administrator to be appropriate in order to prevent dilution or enlargement of the benefits or potential benefits intended to be made available under the Plan or with respect to the Option, then the Administrator may, in good faith and in such manner as it may deem equitable, adjust the amounts set forth on this Exhibit B (and/or adjust definitions applicable to certain performance criteria) to reflect the projected effect of such transaction(s) or event(s) on Operational Performance. Further, in the event that the Company pays a special dividend, the Administrator may adjust performance criteria as appropriate.

EXHIBIT C

STOCK RETENTION GUIDELINES

As a condition to receiving the Option grant, Participant acknowledges and agrees to hold a number of shares and/or options with such value and for such period of time as set forth below:

(a) At all times during Participant's continued employment by the Company, Participant shall hold an aggregate amount of Company equity with a value equal to or greater than **$_____** (the "Retention Limit")**, one-half of which must be held in stock**. This Retention Limit will supersede any Retention Limit in any prior dated option agreement between the Company and Participant pursuant to the Plan.

For purposes of this Exhibit C, Company equity shall be equal to (i) the Fair Market Value of any Common Stock held by the Participant plus (ii) the value of vested options then held by Participant, whether granted pursuant to the Plan, the Company's 2006 Stock Incentive Plan, the Company's 2003 Stock Option Plan or otherwise, which will be equal to the Fair Market Value of the Common Stock underlying the options over the exercise price.

(b) If at any time after the date hereof the aggregate amount of Company equity held by Participant falls below the Retention Limit because of a decline in the Fair Market Value of the Common Stock, Participant will have three years to reach the Retention Limit before the Administrator may exercise any remedies under paragraph (d).

(c) Participant shall not be obligated to comply with the Retention Limit until five years from the date of grant; provided, however, that notwithstanding the foregoing, Participant may not make any sales of vested Options until the Retention Limit is reached, and thereafter, only to the extent that Participant would, at the time of the sale, be in compliance with the Retention Limit, except that Participants may make sales under 10b5-1 plans in existence on the date hereof so long as such sales would be in compliance with any preexisting Retention Limit.

(d) Participant's failure to hold that number of shares and/or vested options set forth in this Exhibit C shall result in Participant's forfeiture of all unvested Options unless otherwise determined by the Administrator, in its sole discretion.

Exhibit 10.54

THIRTEENTH AMENDMENT TO THE
RECEIVABLES PURCHASE AGREEMENT

This THIRTEENTH AMENDMENT TO THE RECEIVABLES PURCHASE AGREEMENT (this "Amendment"), dated as of July 26, 2021, is entered into by and among the following parties:

(i) TRANSDIGM RECEIVABLES LLC, a Delaware limited liability company, as Seller;

(ii) TRANSDIGM, INC., a Delaware corporation, as Servicer;

(iii) PNC BANK, NATIONAL ASSOCIATION, as a Committed Purchaser, as Purchaser Agent for its Purchaser Group and as Administrator ("PNC"); and

(iv) FIFTH THIRD BANK, NATIONAL ASSOCIATION ("Fifth Third"), as a Committed Purchaser and as Purchaser Agent for its Purchaser Group.

Capitalized terms used but not otherwise defined herein (including such terms used above) have the respective meanings assigned thereto in the Receivables Purchase Agreement described below.

BACKGROUND

A. The parties hereto and PNC Capital Markets LLC, as structuring agent, have entered into a Receivables Purchase Agreement, dated as of October 21, 2013 (as amended, restated, supplemented or otherwise modified through the date hereof, the "Receivables Purchase Agreement").

B. Concurrently herewith, the parties hereto are entering into that certain Amended and Restated Fee Letter in connection herewith (the "Amended Fee Letter").

C. The parties hereto desire to amend the Receivables Purchase Agreement as set forth herein.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto hereby agree as follows:

SECTION 1. Amendments to the Receivables Purchase Agreement. The Receivables Purchase Agreement is hereby amended to incorporate the changes shown on the marked pages of the Receivables Purchase Agreement attached hereto as Exhibit A.

SECTION 2. Representations and Warranties of the Seller and Servicer. Each of the Seller and the Servicer hereby represents and warrants, as to itself, to the Administrator, each Purchaser and each Purchaser Agent, as follows:

(a) *Representations and Warranties*. Immediately after giving effect to this Amendment, the representations and warranties made by such Person in the Transaction Documents to which it is a party are true and correct as of the date hereof (unless stated to relate solely to an earlier date, in which case such representations or warranties were true and correct as of such earlier date).

(b) *Enforceability*. This Amendment and each other Transaction Document to which it is a party, as amended hereby, constitute the legal, valid and binding obligation of such Person enforceable against such Person in accordance with its respective terms, except as such enforceability may be limited by bankruptcy, insolvency, reorganization or other similar laws affecting the enforcement of creditors' rights generally and by general principles of equity, regardless of whether enforceability is considered in a proceeding in equity or at law.

(c) *No Termination Event*. No event has occurred and is continuing, or would result from the transactions contemplated hereby, that constitutes a Purchase and Sale Termination Event, an Unmatured Purchase and Sale Termination Event, a Termination Event or an Unmatured Termination Event.

SECTION 3. Effect of Amendment. All provisions of the Receivables Purchase Agreement and the other Transaction Documents, as expressly amended and modified by this Amendment, shall remain in full force and effect. After this Amendment becomes effective, all references in the Receivables Purchase Agreement (or in any other Transaction Document) to "this Receivables Purchase Agreement", "this Agreement", "hereof", "herein" or words of similar effect referring to the Receivables Purchase Agreement shall be deemed to be references to the Receivables Purchase Agreement as amended by this Amendment. This Amendment shall not be deemed, either expressly or impliedly, to waive, amend or supplement any provision of the Receivables Purchase Agreement other than as set forth herein.

SECTION 4. Effectiveness. This Amendment shall become effective as of the date hereof upon the satisfaction of the following conditions precedent:

(a) The Administrator shall have received counterparts of this Amendment, duly executed by each of the parties hereto.

(b) The Administrator shall have received counterparts of the Amended Fee Letter duly executed by each of the parties thereto.

(c) The Administrator shall have received confirmation that the "Closing Fees" set forth in the Amended Fee Letter have been paid in accordance with the terms thereof.

(d) The Administrator shall have received such other agreements, documents, certificates, instruments and opinions listed on the closing memorandum attached as Exhibit B hereto.

SECTION 5. <u>Counterparts</u>. This Amendment may be executed in any number of counterparts and by different parties on separate counterparts, each of which when so executed shall be deemed to be an original and all of which when taken together shall constitute but one and the same instrument. Delivery of an executed counterpart of a signature page to this Amendment by facsimile or e-mail transmission shall be effective as delivery of a manually executed counterpart hereof.

SECTION 6. <u>GOVERNING LAW</u>. THIS AMENDMENT SHALL BE DEEMED TO BE A CONTRACT MADE UNDER AND GOVERNED BY THE INTERNAL LAWS OF THE STATE OF NEW YORK (INCLUDING FOR SUCH PURPOSE SECTIONS 5-1401 AND 5-1402 OF THE GENERAL OBLIGATIONS LAW OF THE STATE OF NEW YORK).

SECTION 7. <u>Section Headings</u>. The various headings of this Amendment are included for convenience only and shall not affect the meaning or interpretation of this Amendment, the Receivables Purchase Agreement or any provision hereof or thereof.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the parties hereto have executed this Amendment by their duly authorized officers as of the date first above written.

TRANSDIGM RECEIVABLES LLC,
as Seller

By: /s/ Halle F. Martin
Name: Halle F. Martin
Title: Secretary

TRANSDIGM, INC.,
as Initial Servicer

By: /s/ Halle F. Martin
Name: Halle F. Martin
Title: General Counsel, Chief Compliance Officer and Secretary

PNC BANK, NATIONAL ASSOCIATION,
as a Committed Purchaser, as a Purchaser Agent and as Administrator

By: /s/ Henry Chan
Name: Henry Chan
Title: Senior Vice President

FIFTH THIRD BANK, NATIONAL ASSOCIATION,
as a Committed Purchaser and as Purchaser Agent for its Purchaser Group

By: /s/ Andrew D. Jones
Name: Andrew D. Jones
Title: Managing Director

Exhibit A

[See Attached]

Exhibit B

Closing Memorandum

[See Attached]

Exhibit 21.1

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:

Name of Subsidiary	Jurisdiction of Incorporation or Organization
17111 Waterview Pkwy LLC	Delaware
Acme Aerospace, Inc.	Delaware
Adams Rite Aerospace GmbH	Germany
Adams Rite Aerospace, Inc.	California
Advanced Inflatable Products Limited	United Kingdom
AeroControlex Group, Inc.	Delaware
Aerosonic LLC	Delaware
Airborne Acquisition, Inc.	Delaware
Airborne Global, Inc.	Delaware
Airborne Holdings, Inc.	Delaware
Airborne Systems Canada Ltd.	Ontario, Canada
Airborne Systems Group Limited	United Kingdom
Airborne Systems Holdings Limited	United Kingdom
Airborne Systems Limited	United Kingdom
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	United Kingdom
Airborne UK Acquisition Limited	United Kingdom
Airborne UK Parent Limited	United Kingdom
Aircraft Materials Limited	United Kingdom
Air-Sea Survival Equipment Trustee Limited	United Kingdom
AmSafe Aviation (Chongqing), Ltd.	China
AmSafe Bridport (Kunshan) Co., Ltd.	China
AmSafe Bridport (Private) Ltd.	Sri Lanka
AmSafe Bridport Ltd.	United Kingdom
AmSafe Global Holdings, Inc.	Delaware
AmSafe Global Services (Private) Limited	Sri Lanka
AmSafe, Inc.	Delaware
Angus Electronics Co.	Delaware
ARA Deutschland GmbH	Germany
ARA Holding GmbH	Germany
Arkwin Industries, Inc.	New York
Armtec Countermeasures Co.	Delaware
Armtec Countermeasures TNO Co.	Delaware
Armtec Defense Products Co.	Delaware

Name of Subsidiary	Jurisdiction of Incorporation or Organization
Auxitrol SAS	France
Auxitrol Weston Mexico, S. de R.L. de C.V.	Mexico
Auxitrol Weston Services China Ltd.	China
Auxitrol Weston Singapore Pte. Ltd.	Singapore
Auxitrol Weston USA, Inc.	Delaware
Aviation Technologies, Inc.	Delaware
Avionic Instruments LLC	Delaware
Avionics Specialties, Inc.	Virginia
AvtechTyee, 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 Erie Aviation, Inc.	Delaware
Bridport Holdings, Inc.	Delaware
Bridport Ltd.	United Kingdom
Bridport-Air Carrier, Inc.	Washington
Bruce Aerospace Inc.	Delaware
CDA InterCorp LLC	Florida
CEF Industries, LLC	Delaware
Champion Aerospace LLC	Delaware
Chelton Avionics Holdings, Inc.	Delaware
Chelton Avionics, Inc.	Delaware
Chelton Limited	England & Wales
CMC Electronics Aurora LLC	Delaware
CMC Electronics Inc.	Quebec, Canada
CMC Electronics ME Inc.	Quebec, Canada
Cobham CTS Limited	England & Wales
Cobham Defence Communications Limited	England & Wales
Cobham Defense Products, Inc.	Delaware
Darchem Engineering Limited	United Kingdom
Darchem Holdings Limited	United Kingdom
Data Device Corporation	Delaware
DDC Electronics K.K.	Japan
DDC Electronics Ltd.	United Kingdom
DDC Electronics Private Limited	India
DDC Electronique, S.A.R.L.	France
DDC Elektronik, GmbH	Germany
Dukes Aerospace, Inc.	Delaware
Edlaw Limited	United Kingdom
Electromech Technologies LLC	Delaware

Name of Subsidiary	Jurisdiction of Incorporation or Organization
Elektro-Metall Export GmbH	Germany
Elektro-Metall Paks KFT	Hungary
EST Defence Company UK Limited	United Kingdom
Esterline Acquisition Ltd	United Kingdom
Esterline do Brasil Assessoria e Intermediação Ltda	Brazil
Esterline Europe Company LLC	Delaware
Esterline Foreign Sales Corporation	US Virgin Islands
Esterline International Company	Delaware
Esterline Mexico, S. de R.L. de C.V.	Mexico
Esterline Technologies Corporation	Delaware
Esterline Technologies Europe Limited	United Kingdom
Esterline Technologies France Holding SAS	France
Esterline Technologies French Acquisition Limited	United Kingdom
Esterline Technologies Global Limited	United Kingdom
Esterline Technologies Holdings Limited	United Kingdom
Esterline Technologies SGIP LLC	Delaware
Esterline Technologies Unlimited	United Kingdom
European Antennas Limited	England & Wales
Extant Components Group Holdings, Inc.	Delaware
Extant Components Group Intermediate, Inc.	Delaware
GQ Parachutes Limited	United Kingdom
Guizhou Leach-Tianyi Aviation Electrical Company Ltd	China
HarcoSemco LLC	Connecticut
Hartwell Corporation	California
Hytek Finishes Co.	Delaware
ILC Holdings, Inc.	Delaware
Irvin Aerospace Limited	United Kingdom
IrvinGQ France SAS	France
IrvinGQ Limited	United Kingdom
Janco Corporation	California
Johnson Liverpool LLC	Delaware
Kirkhill Inc.	Delaware
Korry Electronics Co.	Delaware
Kunshan Shield Restraint Systems, Ltd.	China
Leach Holding Corporation	Delaware
Leach International Asia-Pacific Ltd	Hong Kong
Leach International Corporation	Delaware
Leach International Europe S.A.S.	France
Leach International Germany GmbH	Germany
Leach International Mexico S. de R. L. de C. V.	Mexico
Leach International UK Ltd	United Kingdom

Name of Subsidiary	Jurisdiction of Incorporation or Organization
Leach Mexico Holding LLC	Delaware
Leach Technology Group, Inc.	Delaware
MarathonNorco Aerospace, Inc.	Delaware
Mason Electric Co.	Delaware
Mastsystem Int'l Oy	Finland
McKechnie Aerospace (Europe) Ltd.	United Kingdom
McKechnie Aerospace DE, Inc.	Delaware
McKechnie Aerospace DE, LP	United Kingdom
McKechnie Aerospace Holdings, Inc.	Delaware
McKechnie Aerospace US LLC	Delaware
Mecanismos de Matamoros S. de R.L. de C.V.	Mexico
NAT Seattle Inc.	Delaware
NMC Group, Inc.	California
Nordisk Asia Pacific Limited	Hong Kong
Nordisk Asia Pacific Pte Ltd	Singapore
Nordisk Aviation Products (Kunshan) Ltd.	China
Nordisk Aviation Products AS	Norway
Nordisk Aviation Products LLC	Delaware
North Hills Signal Processing Corp.	Delaware
North Hills Signal Processing Overseas LLC	Delaware
Norwich Aero Products, Inc.	New York
Palomar Products, Inc.	Delaware
Pexco Aerospace, Inc.	Delaware
PneuDraulics, Inc.	California
Pressure Systems International Ltd	United Kingdom
Schneller Asia Pte. Ltd.	Singapore
Schneller LLC	Delaware
Schneller S.A.R.L.	France
Semco Instruments, Inc.	Delaware
Shield Restraint Systems Ltd.	United Kingdom
Shield Restraint Systems, Inc.	Delaware
Signal Processing Matamoros S.A. de C.V.	Mexico
Skandia, Inc.	Illinois
Skurka Aerospace Inc.	Delaware
Symetrics Industries, LLC	Florida
Symetrics Technology Group, LLC	Florida
TA Aerospace Co.	California
TA Mfg Limited	United Kingdom
Tactair Fluid Controls, Inc.	New York
TDG Bavaria GmbH	Germany
TDG ESL Holdings Inc.	Delaware

Name of Subsidiary	Jurisdiction of Incorporation or Organization
TDG France Ultimate Parent SAS	France
TDG Germany GmbH	Germany
TEAC Aerospace Holdings, Inc.	Delaware
TEAC Aerospace Technologies, Inc.	Delaware
Telair International GmbH	Germany
Telair International Services PTE Ltd	Singapore
Telair US LLC	Delaware
Texas Rotronics, Inc.	Texas
TransDigm (Barbados) SRL	Barbados
TransDigm Canada ULC	Quebec, Canada
TransDigm European Holdings Limited	United Kingdom
TransDigm Ireland Ltd.	Ireland
TransDigm Receivables LLC	Delaware
TransDigm Technologies India Private Limited	India
TransDigm UK Holdings plc	United Kingdom
Transicoil (Malaysia) Sendirian Berhad	Malaysia
Transicoil LLC	Delaware
Wallop Defence UK Limited	United Kingdom
Weston Aerospace Ltd	United Kingdom
Whippany Actuation Systems, LLC	Delaware
XCEL Power Systems Ltd.	United Kingdom
Young & Franklin Inc.	New York

Exhibit 22.1

LISTING OF SUBSIDIARY GUARANTORS

TransDigm Group Incorporated has unconditionally guaranteed, on a joint and several basis, each of the following registered debt securities with each of the subsidiaries listed below under "Subsidiary Guarantors."

Registered Debt Securities
8.00% Senior Secured Notes due 2025 (2025 Secured Notes)
6.375% Senior Subordinated Notes due 2026 (6.375% 2026 Notes)
6.875% Senior Subordinated Notes due 2026 (6.875% 2026 Notes)
6.25% Senior Secured Notes due 2026 (2026 Secured Notes)
7.50% Senior Subordinated Notes due 2027 (7.50% 2027 Notes)
5.50% Senior Subordinated Notes due 2027 (5.50% 2027 Notes)
4.625% Senior Subordinated Notes due 2029 (4.625% 2029 Notes)
4.875% Senior Subordinated Notes due 2029 (4.875% 2029 Notes)

Subsidiary Guarantors	Jurisdiction of Incorporation or Organization
17111 Waterview Pkwy LLC	Delaware
Acme Aerospace, Inc.	Delaware
Adams Rite Aerospace, Inc.	California
AeroControlex Group, Inc.	Delaware
Aerosonic LLC	Delaware
Airborne Acquisition, Inc.	Delaware
Airborne Global, Inc.	Delaware
Airborne Holdings, Inc.	Delaware
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
AmSafe Global Holdings, Inc.	Delaware
AmSafe, Inc.	Delaware
Angus Electronics Co.	Delaware
Arkwin Industries, Inc.	New York
Armtec Countermeasures Co.	Delaware
Armtec Countermeasures TNO Co.	Delaware
Armtec Defense Products Co.	Delaware
Auxitrol Weston USA, Inc.	Delaware
Aviation Technologies, Inc.	Delaware
Avionic Instruments LLC	Delaware
Avionics Specialties, Inc.	Virginia
AvtechTyee, Inc.	Washington
Beta Transformer Technology Corporation	New York
Beta Transformer Technology LLC	Delaware
Breeze-Eastern LLC	Delaware
Bridport Erie Aviation, Inc.	Delaware

Subsidiary Guarantors	Jurisdiction of Incorporation or Organization
Bridport Holdings, Inc.	Delaware
Bridport-Air Carrier, Inc.	Washington
Bruce Aerospace Inc.	Delaware
CDA InterCorp LLC	Florida
CEF Industries, LLC	Delaware
Champion Aerospace LLC	Delaware
Chelton Avionics Holdings, Inc.	Delaware
Chelton Avionics, Inc.	Delaware
CMC Electronics Aurora LLC	Delaware
Cobham Defense Products, Inc.	Delaware
Data Device Corporation	Delaware
Dukes Aerospace, Inc.	Delaware
Electromech Technologies LLC	Delaware
Esterline Europe Company LLC	Delaware
Esterline International Company	Delaware
Esterline Technologies Corporation	Delaware
Esterline Technologies SGIP LLC	Delaware
Extant Components Group Holdings, Inc.	Delaware
Extant Components Group Intermediate, Inc.	Delaware
HarcoSemco LLC	Connecticut
Hartwell Corporation	California
Hytek Finishes Co.	Delaware
ILC Holdings, Inc.	Delaware
Janco Corporation	California
Johnson Liverpool LLC	Delaware
Kirkhill Inc.	Delaware
Korry Electronics Co.	Delaware
Leach Holding Corporation	Delaware
Leach International Corporation	Delaware
Leach Mexico Holding LLC	Delaware
Leach Technology Group, Inc.	Delaware
MarathonNorco Aerospace, Inc.	Delaware
Mason Electric Co.	Delaware
McKechnie Aerospace DE, Inc.	Delaware
McKechnie Aerospace Holdings, Inc.	Delaware
McKechnie Aerospace US LLC	Delaware
NAT Seattle Inc.	Delaware
NMC Group, Inc.	California
Nordisk Aviation Products LLC	Delaware
North Hills Signal Processing Corp.	Delaware
North Hills Signal Processing Overseas LLC	Delaware
Norwich Aero Products, Inc.	New York
Palomar Products, Inc.	Delaware

	Subsidiary Guarantors	Jurisdiction of Incorporation or Organization
	Pexco Aerospace, Inc.	Delaware
	PneuDraulics, Inc.	California
	Schneller LLC	Delaware
	Semco Instruments, Inc.	Delaware
	Shield Restraint Systems, Inc.	Delaware
	Skandia, Inc.	Illinois
	Skurka Aerospace, Inc.	Delaware
	Symetrics Industries, LLC	Florida
	Symetrics Technology Group, LLC	Florida
	TA Aerospace Co.	California
	Tactair Fluid Controls, Inc.	New York
	TDG ESL Holdings Inc.	Delaware
	TEAC Aerospace Holdings, Inc.	Delaware
	TEAC Aerospace Technologies, Inc.	Delaware
	Telair US LLC	Delaware
	Texas Rotronics, Inc.	Texas
(1)	TransDigm Inc.	Delaware
(1)	TransDigm UK Holdings plc	United Kingdom
	Transicoil LLC	Delaware
	Whippany Actuation Systems, LLC	Delaware
	Young & Franklin Inc.	New York

(1) Entity is also a subsidiary issuer.

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the following Registration Statements:

(1) Registration Statements (Form S-8 No. 333-174122 and Form S-8 No. 333-152847) pertaining to the TransDigm Group Incorporated 2006 Stock Incentive Plan,

(2) Registration Statement (Form S-8 No. 333-132808) pertaining to the TransDigm Group Incorporated 2006 Stock Incentive Plan and the TransDigm Group Fourth Amended and Restated 2003 Stock Option Plan, as amended, and

(3) Registration Statement (Form S-8 No. 333-200204) pertaining to the TransDigm Group 2014 Stock Option Plan;

of our reports dated November 16, 2021, with respect to the consolidated financial statements and schedule of TransDigm Group Incorporated and the effectiveness of internal control over financial reporting of TransDigm Group Incorporated included in this Annual Report (Form 10-K) of TransDigm Group Incorporated for the year ended September 30, 2021.

/s/ Ernst & Young LLP

Cleveland, Ohio
November 16, 2021

Exhibit 31.1

CERTIFICATION

I, Kevin Stein, 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 16, 2021

/s/ Kevin Stein

Name: Kevin Stein

Title: President, Chief Executive Officer and Director

(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION

I, Michael Lisman, 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 16, 2021

/s/ Michael Lisman
Name: Michael Lisman
Title: Chief Financial Officer
(Principal Financial Officer)

Exhibit 32.1

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, 2021 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Kevin Stein, President, Chief Executive Officer and Director (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 16, 2021

/s/ Kevin Stein
Name: Kevin Stein
Title: President, Chief Executive Officer and Director
(Principal Executive Officer)

Exhibit 32.2

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, 2021 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Michael Lisman, Chief Financial Officer (Principal Financial 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 16, 2021

/s/ Michael Lisman
Name: Michael Lisman
Title: Chief Financial Officer
(Principal Financial Officer)