Section 1: 10-K (10-K - MARCH 31, 2019)

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

(Mark One)

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended March 31, 2019

or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to

Commission File No. 1-12235

Triumph Group, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**51-0347963**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification Number)

899 Cassatt Road, Suite 210, Berwyn, Pennsylvania 19312
(Address of principal executive offices, including zip code)

Registrant's telephone number, including area code: **(610) 251-1000**

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value $.001 per share	**TGI**	**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 ☒ No ☐

Indicate by check mark if the Registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934. Yes ☐ No ☒

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

Indicate by check mark whether the Registrant has submitted electronically 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 ☒ No ☐

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a 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 Securities Exchange Act of 1934. (Check one)

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 is a shell company (as defined in Rule 12b-2 of the Securities Exchange Act of 1934). Yes ☐ No ☒

As of September 30, 2018, the aggregate market value of the shares of Common Stock held by non-affiliates of the Registrant was approximately $1,150 million. Such aggregate market value was computed by reference to the closing price of the Common Stock as reported on the New York Stock Exchange on September 30, 2018. For purposes of making this calculation only, the Registrant has defined affiliates as including all directors and executive officers.

The number of outstanding shares of the Registrant's Common Stock, par value $.001 per share, on May 17, 2019 was 49,904,760.

Documents Incorporated by Reference

Portions of the following document are incorporated herein by reference:

The Proxy Statement of Triumph Group, Inc. to be filed in connection with our 2019 Annual Meeting of Stockholders is incorporated in part in Part III hereof, as specified herein.

Table of Contents

PART I

Item 1. Business

Cautionary Note Regarding Forward-Looking Statements

This report contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 relating to our future operations and prospects, including statements that are based on current projections and expectations about the markets in which we operate, and management's beliefs concerning future performance and capital requirements based upon current available information. Such statements are based on management's beliefs as well as assumptions made by and information currently available to management. When used in this document, words like "may," "might," "will," "expect," "anticipate," "plan," "believe," "potential," and similar expressions are intended to identify forward-looking statements. Actual results could differ materially from management's current expectations. For example, there can be no assurance that additional capital will not be required or that additional capital, if required, will be available on reasonable terms, if at all, at such times and in such amounts as may be needed by us. In addition to these factors, among other factors that could cause actual results to differ materially, are uncertainties relating to the integration of acquired businesses, general economic conditions affecting our business segments, dependence of certain of our businesses on certain key customers, the risk that we will not realize all of the anticipated benefits from acquisitions as well as competitive factors relating to the aerospace industry. For a more detailed discussion of these and other factors affecting us, see the risk factors described in "Item 1A. Risk Factors."

General

Triumph Group, Inc. ("Triumph," the "Company," "we," "us," or "our") was incorporated in 1993 in Delaware. Our companies design, engineer, manufacture, repair, and overhaul a broad portfolio of aerospace and defense systems, components, and structures. We serve the global aviation industry, including original equipment manufacturers, or OEMs, and the full spectrum of military and commercial aircraft operators.

Products and Services

We offer a variety of products and services to the aerospace industry through three operating segments: (i) Triumph Integrated Systems, whose companies' revenues are derived from the design, development and support of proprietary components, subsystems and systems, as well as production of complex assemblies using external designs; (ii) Triumph Aerospace Structures, whose companies supply commercial, business, regional and military manufacturers with large metallic and composite structures and produce close-tolerance parts primarily to customer designs and model-based definition, including a wide range of aluminum, hard metal and composite structure capabilities; and (iii) Triumph Product Support, whose companies provide full life cycle solutions for commercial, regional and military aircraft.

Integrated Systems' capabilities include hydraulic, mechanical and electromechanical actuation, power and control; a complete suite of aerospace gearbox solutions, including engine accessory gearboxes and helicopter transmissions; active and passive heat exchange technology; fuel pumps, fuel metering units and Full Authority Digital Electronic Control fuel systems; hydro-mechanical and electromechanical primary and secondary flight controls; and a broad spectrum of surface treatment options.

The products that companies within this group design, engineer, build and repair include:

Aircraft and engine-mounted accessory drives	Thermal control systems and components
Cargo hooks	High lift actuation
Cockpit control levers	Hydraulic systems and components
Control system valve bodies	Landing gear actuation systems
Electronic engine controls	Landing gear components and assemblies
Exhaust nozzles and ducting	Main engine gear box assemblies
Geared transmissions and drive train components	Main fuel pumps
Fuel-metering units	Secondary flight control systems
Vibration absorbers	

Aerospace Structures' products include wings, wing boxes, fuselage panels, horizontal and vertical tails, and subassemblies such as floor grids. Aerospace Structures also has the capability to engineer detailed structural designs in metal and composites. Aerospace Structures capabilities also include advanced composite and interior structures, joining processes such as welding, autoclave bonding and conventional mechanical fasteners and a variety of special processes, including super plastic titanium forming, aluminum and titanium chemical milling and surface treatments.

The products that companies within this group design, manufacture, build and repair include:

Aircraft wings	Flight control surfaces
Composite and metal bonding	Helicopter cabins
Engine nacelles	Integrated testing and certification services
Comprehensive processing services	Stretch-formed leading edges and fuselage skins
Empennages	Wing spars and stringers
Acoustic and thermal insulation systems	Composite ducts and floor panels

Product Support's extensive product and service offerings include full post-delivery value chain services that simplify the maintenance, repair and overhaul ("MRO") supply chain. Through its ground support equipment maintenance, component MRO and postproduction supply chain activities, Product Support is positioned to provide integrated planeside repair solutions globally. Capabilities include metallic and composite aircraft structures; nacelles; thrust reversers; interiors; auxiliary power units; and a wide variety of pneumatic, hydraulic, fuel and mechanical accessories. Companies in Product Support repair and overhaul various components for the aviation industry including:

Air cycle machines	Blades and vanes
APUs	Cabin panes, shades, light lenses and other components
Constant speed drives	Combustors
Engine and airframe accessories	Stators
Flight control surfaces	Transition ducts
Integrated drive generators	Sidewalls
Nacelles	Light assemblies
Remote sensors	Overhead bins
Thrust reversers	Fuel bladder cells

Certain financial information about our three segments is set forth in Note 2 of "Notes to Consolidated Financial Statements."

Proprietary Rights

We benefit from our proprietary rights relating to designs, engineering and manufacturing processes, and repair and overhaul procedures. For some products, our unique manufacturing capabilities are required by the customer's specifications or designs, thereby necessitating reliance on us for the production of such specially designed products.

We view our name and trademark as significant to our business as a whole. Our products are protected by a portfolio of patents, trademarks, licenses or other forms of intellectual property that expire at various dates in the future. We continually develop and acquire new intellectual property and consider all of our intellectual property to be valuable. However, based on the broad scope of our product lines, management believes that the loss or expiration of any single intellectual property right would not have a material adverse effect on our results of operations, our financial position, or our business segments. Our policy is to file applications and obtain patents for our new products as appropriate, including product modifications and improvements. While patents generally expire 20 years after the patent application filing date, new patents are issued to us on a regular basis.

In our overhaul and repair businesses, OEMs of equipment that we maintain for our customers often include language in repair manuals that relate to their equipment, asserting broad claims of proprietary rights to the contents of the manuals used in our operations. There can be no assurance that OEMs will not try to enforce such claims, including the possible use of legal proceedings. In the event of such legal proceedings, there can be no assurance that such actions against the Company will be unsuccessful. However, we believe that our use of manufacture and repair manuals is lawful.

Raw Materials and Replacement Parts

We purchase raw materials, primarily consisting of extrusions, forgings, castings, aluminum and titanium sheets and shapes, and stainless steel alloys, from various vendors. We also purchase replacement parts, which are utilized in our various repair and overhaul operations. We believe that the availability of raw materials to us is adequate to support our operations.

Sales, Marketing and Engineering

While each of our operating companies maintains responsibility for selling and marketing its specific products, we have developed two marketing teams at the group level who are focused on cross-selling our broad capabilities. One team supports Integrated Systems and Aerospace Structures and the other team supports Product Support. These teams are responsible for selling systems, integrated assemblies and repair and overhaul services, reaching across our operating companies, to our OEM, military, airline and air cargo customers. In certain limited cases, we use independent, commission-based representatives to serve our customers' changing needs and current trends in some of the markets and geographic regions in which we operate.

The two group-level marketing teams operate as the front-end of the selling process, establishing or maintaining relationships, identifying opportunities to leverage our brand, and providing service for our customers. Each individual operating company is responsible for its own technical support, pricing, manufacturing, and product support. Also, within Product Support, we have created a group engineering function to provide integrated solutions to meet our customer needs by designing systems that integrate the capabilities of our companies. Also, we are increasingly meeting our customers' needs by designing systems that integrate the extended capabilities of our companies.

A significant portion of our government and defense contracts are awarded on a competitive bidding basis. We generally do not bid or act as the primary contractor but will typically bid and act as a subcontractor on contracts on a fixed-price basis. We generally sell to our other customers on a fixed-price, negotiated contract, or purchase order basis.

When subcontracting, there is a risk of nonperformance by our subcontractors which could lead to disputes regarding quality, cost or impacts to production schedules. Additionally, economic environment changes, including Brexit, trade sanctions, tariffs, and budgetary constraints affecting the prime contractor and our subcontractors may adversely affect their ability to meet or support our performance requirements.

Backlog

We have a number of long-term agreements with several of our customers. These agreements generally describe the terms under which the customer may issue purchase orders to buy our products and services during the term of the agreement. These terms typically include a list of the products or repair services customers may purchase, initial pricing, anticipated quantities and, to the extent known, delivery dates. In tracking and reporting our backlog, however, we only include amounts for which we have actual purchase orders with firm delivery dates or contract requirements generally within the next 24 months, which primarily relate to sales to our OEM customer base. Purchase orders issued by our aftermarket customers are usually completed within a short period of time. As a result, our backlog data relates primarily to the OEM customers. The backlog information set forth below does not include the sales that we expect to generate from long-term agreements for which we do not have actual purchase orders with firm delivery dates.

As of March 31, 2019, we had outstanding purchase orders representing an aggregate invoice price of approximately $3.74 billion, of which $1.45 billion, $2.28 billion and $22 million related to Integrated Systems, Aerospace Structures and Product Support, respectively. As of March 31, 2018, our continuing operations had outstanding purchase orders representing an aggregate invoice price of approximately $4.50 billion, of which $1.34 billion, $3.13 billion and $27 million related to Integrated Systems, Aerospace Structures and Product Support, respectively. Of the existing backlog of $3.74 billion, approximately $1.45 billion will not be shipped by March 31, 2020.

Dependence on Significant Customers

For the fiscal years ended March 31, 2019, 2018, and 2017, the Boeing Company ("Boeing") represented approximately 31%, 31% and 35%, respectively, of our net sales, covering virtually every Boeing plant and product.

For the fiscal years ended March 31, 2019, 2018, and 2017, Gulfstream Aerospace Corporation ("Gulfstream") represented approximately 11%, 13% and 12%, respectively, of our net sales, covering several of Gulfstream's products.

A significant reduction in sales to Boeing and/or Gulfstream may have a material adverse impact on our financial position, results of operations and cash flows.

Competition

We compete primarily with Tier 1 and Tier 2 aerostructures manufacturers, systems suppliers and component manufacturers, some of which are divisions or subsidiaries of other large companies, in the manufacture of aircraft structures, systems components, subassemblies and detail parts.

Competition for the repair and overhaul of aviation components comes from four primary sources, some of whom possess greater financial and other resources than we have: OEMs, major commercial airlines, government support depots, and other independent repair and overhaul companies. Some major commercial airlines continue to own and operate their own service centers, while others have begun to sell or outsource their repair and overhaul services to other aircraft operators or third parties. Large domestic and foreign airlines that provide repair and overhaul services typically provide these services not only for their own aircraft but for other airlines as well. OEMs also maintain service centers which provide repair and overhaul services for the components they manufacture. Many governments maintain aircraft support depots in their military organizations that maintain and repair the aircraft they operate. Other independent service organizations also compete for the repair and overhaul business of other users of aircraft components.

Participants in the aerospace industry compete primarily on the basis of breadth of technical capabilities, quality, turnaround time, capacity and price.

Government Regulation and Industry Oversight

The aerospace industry is highly regulated in the United States by the Federal Aviation Administration ("FAA") and in other countries by similar agencies. We must be certified by the FAA and, in some cases, by individual OEMs, in order to engineer and service parts and components used in specific aircraft models. If material authorizations or approvals were revoked or suspended, our operations would be adversely affected. New and more stringent government regulations may be adopted, or industry oversight heightened, in the future and these new regulations, if enacted, or any industry oversight, if heightened, may have an adverse impact on us.

We must also satisfy the requirements of our customers, including OEMs, that are subject to FAA regulations, and provide these customers with products and repair services that comply with the government regulations applicable to aircraft components used in commercial flight operations. The FAA regulates commercial flight operations and requires that aircraft components meet its stringent standards. In addition, the FAA requires that various maintenance routines be performed on aircraft components, and we currently satisfy these maintenance standards in our repair and overhaul services. Several of our operating locations are FAA-approved repair stations.

Generally, the FAA only grants licenses for the manufacture or repair of a specific aircraft component, rather than the broader licenses that have been granted in the past. The FAA licensing process may be costly and time-consuming. In order to obtain an FAA license, an applicant must satisfy all applicable regulations of the FAA governing repair stations. These regulations require that an applicant have experienced personnel, inspection systems, suitable facilities and equipment. In addition, the applicant must demonstrate a need for the license. Because an applicant must procure manufacturing and repair manuals from third parties relating to each particular aircraft component in order to obtain a license with respect to that component, the application process may involve substantial cost.

The license approval processes for the European Aviation Safety Agency ("EASA"), which regulates this industry in the European Union; the Civil Aviation Administration of China; and other comparable foreign regulatory authorities are similarly stringent, involving potentially lengthy audits. EASA was formed in 2002 and is handling most of the responsibilities of the national aviation authorities in Europe, such as the United Kingdom Civil Aviation Authority.

Our operations are also subject to a variety of worker and community safety laws. For example, the Occupational Safety and Health Act of 1970 ("OSHA"), mandates general requirements for safe workplaces for all employees in the United States. In addition, OSHA provides special procedures and measures for the handling of hazardous and toxic substances. Specific safety standards have been promulgated for workplaces engaged in the treatment, disposal or storage of hazardous waste. We believe that our operations are in material compliance with OSHA's health and safety requirements.

Environmental Matters

Our business, operations and facilities are subject to numerous stringent federal, state, local and foreign environmental laws and regulation by government agencies, including the Environmental Protection Agency ("EPA"). Among other matters, these regulatory authorities impose requirements that regulate the emission, discharge, generation, management, transportation and disposal of hazardous materials, pollutants and contaminants, govern public and private response actions to hazardous or regulated substances which may be or have been released to the environment, and require us to obtain and maintain licenses and permits in connection with our operations. This extensive regulatory framework imposes significant compliance burdens and risks on us. Although management believes that our operations and our facilities are in material compliance with such laws and regulations, future changes in these laws, regulations or interpretations thereof or the nature of our operations or regulatory enforcement actions which may arise, may require us to make significant additional capital expenditures to ensure ongoing compliance or engage in remedial actions.

Certain of our facilities, including facilities acquired and operated by us or one of our subsidiaries have at one time or another been under active investigation for environmental contamination by federal or state agencies when acquired, and at least in some cases, continue to be under investigation or subject to remediation. We are frequently indemnified by prior owners or operators and/or present owners of the facilities for liabilities which we incur as a result of these investigations and the environmental contamination found which pre-dates our acquisition of these facilities, subject to certain limitations. We also maintain a pollution liability policy that provides coverage for certain material liabilities associated with the clean-up of on-site pollution conditions, as well as defense and indemnity for certain third-party suits (including Superfund liabilities at third-party sites), in each case, to the extent not otherwise indemnified. This policy applies to all of our manufacturing and assembly operations worldwide. Also, as we proceed with our plans to exit certain facilities as part of restructuring and related initiatives, the need for remediation for potential environmental contamination could be identified. If we are required to pay the expenses related to environmental liabilities because neither indemnification nor insurance coverage is available, these expenses could have a material adverse effect on us.

Employees

As of March 31, 2019, we employed 10,776 persons, of whom 2,539 were management employees, 74 were sales and marketing personnel, 502 were technical personnel, 383 were administrative personnel and 7,278 were production workers. Our segments were composed of the following employees: Integrated Systems - 2,894 persons, Aerospace Structures - 6,962 persons, Product Support - 751 persons, and Corporate - 169 persons.

Several of our subsidiaries are parties to collective bargaining agreements with labor unions. Under those agreements, we currently employ approximately 2,101 full-time employees. Currently, approximately 19% of our permanent employees are represented by labor unions and approximately 63% of net sales are derived from the facilities at which at least some employees are unionized. Of the 2,101 employees represented by unions, no employees are working under contracts that have expired.

During the fiscal year ended March 31, 2019, the Stuart, Florida facility production and maintenance employees elected the United Autoworkers of America, Local #2505, to represent them in collective bargaining with the Company. As of March 31, 2019, the union and the Company were still engaged in initial contract discussions.

Our inability to negotiate an acceptable contract with any of our labor unions could result in strikes by the affected workers and increased operating costs as a result of higher wages or benefits paid to union members. If the unionized workers were to engage in a strike or other work stoppage, or other employees were to become unionized, we could experience a significant disruption of our operations and higher ongoing labor costs, which could have an adverse effect on our business and results of operations.

Executive Officers

Our current executive officers are:

Name	Age	Position
Daniel J. Crowley	56	President and Chief Executive Officer and Director
James F. McCabe, Jr.	56	Senior Vice President, Chief Financial Officer
Jennifer H. Allen	47	Senior Vice President, General Counsel and Secretary
Lance R. Turner	48	Senior Vice President, Chief Human Resources Officer
Thomas A. Quigley, III	42	Vice President and Controller
Frank Dubey	56	Executive Vice President, Integrated Systems
Peter K. Wick	49	Executive Vice President, Aerospace Structures
William Kircher	52	Executive Vice President, Product Support

Daniel J. Crowley was appointed President and Chief Executive Officer and a director of the Company on January 4, 2016. Previously, Mr. Crowley served as a corporate vice president and President of Integrated Defense Systems at Raytheon Company from 2013 until 2015, and as President of Network Centric Systems at Raytheon Company from 2010 until 2013. Prior to joining Raytheon Company, Mr. Crowley served as Chief Operating Officer of Lockheed Martin Aeronautics after holding a series of increasingly responsible assignments across its space, electronics, and aeronautics sectors.

James F. McCabe, Jr. has been our Senior Vice President and Chief Financial Officer since August 2016. He joined the Company from Steel Partners Holdings where he served in a number of roles from 2007 to 2016, including the following: Senior Vice President and CFO, President, Shared Services, and Senior Vice President and CFO of its affiliates Handy & Harman and Steel Excel. Prior to joining Steel Partners Holdings, Mr. McCabe served as Vice President, Finance and Treasurer of American Water's Northeast Region from 2004 to 2007, and President and CFO of Teleflex Aerospace from 1991 to 2003, which served the global aviation industry. He has previously qualified as a certified public accountant and Six Sigma Green Belt, and served as a member of the Board of Governors and the Civil Aviation Council Executive Committee for the Aerospace Industries Association.

Jennifer H. Allen has been a Senior Vice President and our General Counsel and Secretary since September 2018. She joined Triumph Group from CIRCOR International, Inc. where she was Senior Vice President, General Counsel & Secretary from 2016 to 2018. Previously, she was Vice President & Associate General Counsel – Corporate for BAE Systems, Inc., from 2010 to 2016, a member of the mergers and acquisition group in the New York office of Jones Day from 2005 to 2010, and a member of the business and finance group in the Philadelphia office of Morgan, Lewis & Bockius LLP from 1996 to 2001.

Lance R. Turner was appointed our Senior Vice President and Chief Human Resources Officer in September 2017. From 2013 until September 2017, Mr. Turner served as Vice President of Human Resources for CenturyLink, Inc.; and from 2000 until 2013, as Senior Director of Human Resources for Honeywell.

Thomas A. Quigley, III has been our Vice President and Controller since November 2012, and serves as the Company's principal accounting officer. Mr. Quigley previously served as the Company's SEC Reporting Manager from 2009 to 2012. From 2002 until joining Triumph in 2009, Mr. Quigley held various roles within the audit practice of KPMG LLP, including Senior Audit Manager.

Frank Dubey was appointed our Executive Vice President, Integrated Systems in November 2018. He joined the Company from Thales InFlyt Experience where he was the Chief Operating Officer since 2017. Previously, he also led the Engine and Fuel Systems Divisions at Eaton from 2005 to 2009 and the Control Systems Division at Parker Hannifin from 2012 to 2016.

Peter K.A. Wick was appointed our Executive Vice President, Aerospace Structures in December 2017. He previously served as Executive Vice President, Triumph Precision Components in 2017and, prior to that, served as Vice President, Contracts for Triumph Group from 2016 to 2017, overseeing all contract-related activities and lead negotiations for major contracts with a primary focus on supply contracts to OEM customers. Prior to joining the Company in 2016, Mr. Wick spent eight years with GKN Aerospace holding a range of leadership positions, the last of which was VP Commercial for their North American business. Mr. Wick has in excess of 25 years of experience working in the aerospace industry across the commercial and military aviation, space and avionics sectors.

William Kircher was appointed our Executive Vice President, Product Support in September 2018. Prior to joining the company, he served as Chief Operating Officer of MB Aerospace, a Blackstone portfolio company, from 2016 to 2017 and as CEO of VAS Aero Services, a HIG portfolio company, in 2015. Mr. Kircher also spent 18 years with United Technologies

Corporation in various domestic and international leadership roles including President, UTC Aerospace Singapore, and Vice President, Singapore Overhaul and Repair for Pratt and Whitney.

Available Information

For more information about us, visit our website at www.triumphgroup.com. The contents of the website are not part of this Annual Report on Form 10-K. Our electronic filings with the Securities and Exchange Commission ("SEC") (including all Forms 10-K, 10-Q and 8-K, and any amendments to these reports) are available free of charge through our website immediately after we electronically file with or furnish them to the SEC. The SEC maintains an internet site that contains reports, proxy and information statements, and other information regarding issuers who file electronically with the SEC at www.sec.gov.

Item 1A. Risk Factors

Factors that have an adverse impact on the aerospace industry may adversely affect our results of operations and liquidity.

A substantial percentage of our gross profit and operating results derive from commercial aviation. Our operations have been focused on designing, engineering, manufacturing, repairing and overhauling a broad portfolio of aerostructures, aircraft components, accessories, subassemblies and systems. Therefore, our business is directly affected by economic factors and other trends that affect our customers in the aerospace industry, including a possible decrease in outsourcing by OEMs and aircraft operators or projected market growth that may not materialize or be sustainable. We are also significantly dependent on sales to the commercial aerospace market, which has been cyclical in nature with significant downturns in the past. When these economic and other factors adversely affect the aerospace industry, they tend to reduce the overall customer demand for our products and services, which decreases our operating income. Economic and other factors that might affect the aerospace industry may have an adverse impact on our results of operations and liquidity. We have credit exposure to a number of commercial airlines, some of which have encountered financial difficulties. In addition, an increase in energy costs and the price of fuel to the airlines could result in additional pressure on the operating costs of airlines. The market for jet fuel is inherently volatile and is subject to, among other things, changes in government policy on jet fuel production, fluctuations in the global supply of crude oil and disruptions in oil production or delivery caused by hostility in oil-producing areas. Airlines are sometimes unable to pass on increases in fuel prices to customers by increasing fares due to the competitive nature of the airline industry, and this compounds the pressure on operating costs. Other events of general impact such as natural disasters, war, terrorist attacks affecting the industry or pandemic health crises may lead to declines in the worldwide aerospace industry that could adversely affect our business and financial condition.

In addition, demand for our maintenance, repair and overhaul services is strongly correlated with worldwide flying activity. A significant portion of the MRO activity required on commercial aircraft is mandated by government regulations that limit the total time or number of flights that may elapse between scheduled MRO events. As a result, although short-term deferrals are possible, MRO activity is ultimately required to continue to operate the aircraft in revenue-producing service. Therefore, over the intermediate and long-term, trends in the MRO market are closely related to the size and utilization level of the worldwide aircraft fleet, as reflected by the number of available seat miles, commonly referred to as ASMs, and cargo miles flown. Consequently, conditions or events which contribute to declines in worldwide ASMs and cargo miles flown, such as those mentioned above, could negatively impact our MRO business.

Changes in levels of U.S. Government defense spending or overall acquisition priorities could negatively impact our financial position and results of operations.

We derive a significant portion of our revenue from the U.S. Government, primarily from defense-related programs with the U.S. Department of Defense ("U.S. DoD"). Levels of U.S. defense spending are very difficult to predict and may be impacted by numerous factors such as the political environment, U.S. foreign policy, macroeconomic conditions and the ability of the U.S. Government to enact relevant legislation such as authorization and appropriations bills.

In addition, significant budgetary delays and constraints have already resulted in reduced spending levels, and additional reductions may be forthcoming. The Budget Control Act of 2011 established limits on U.S. Government discretionary spending, including a reduction of defense spending between the 2012 and 2021 U.S. Government fiscal years. Accordingly, long-term uncertainty remains with respect to overall levels of defense spending and it is likely that U.S. Government discretionary spending levels will continue to be subject to pressure.

In addition, there continues to be significant uncertainty with respect to program-level appropriations for the U.S. DoD and other government agencies within the overall budgetary framework described above. While the House and Senate

Appropriations committees included funding for major military programs in fiscal year 2019, such as CH-47 Chinook, AH-64 Apache, KC-46A Tanker, UH-60 Black Hawk, Northrop Grumman Global Hawk and V-22 Osprey programs, uncertainty remains about how defense budgets in fiscal year 2020 and beyond will affect these programs. Future budget cuts, including cuts mandated by sequestration, or future procurement decisions associated with the authorizations and appropriations process could result in reductions, cancellations, and/or delays of existing contracts or programs. Any of these impacts could have a material effect on the results of the Company's operations, financial position and/or cash flows.

In addition, as a result of the significant ongoing uncertainty with respect to both U.S. defense spending levels and the nature of the threat environment, we expect the U.S. DoD to continue to emphasize cost-cutting and other efficiency initiatives in its procurement processes. If we can no longer adjust successfully to these changing acquisition priorities and/or fail to meet affordability targets set by the U.S. DoD customer, our revenues and market share would be further impacted.

Our business could be negatively affected by cyber or other security threats or other disruptions.

Our businesses depend heavily on information technology and computerized systems to communicate and operate effectively. The Company's systems and technologies, or those of third parties on which we rely, could fail or become unreliable due to equipment failures, software viruses, cyber threats, terrorist acts, natural disasters, power failures or other causes. These threats arise in some cases as a result of our role as a defense contractor. Our customers, including the U.S. Government, are increasingly requiring cybersecurity protections and mandating cybersecurity standards in our products and we may incur additional cost to comply with such demands.

Cybersecurity threats are evolving and include, but are not limited to, malicious software; attempts to gain unauthorized access to our sensitive information, including that of our customers, suppliers, subcontractors, and joint venture partners; and other electronic security breaches that could lead to disruptions in mission critical systems, unauthorized release of confidential or otherwise protected information and corruption of data.

Although we utilize various procedures and controls to monitor and mitigate these threats, there can be no assurance that these procedures and controls will be sufficient to prevent security threats from materializing. If any of these events were to materialize, the costs related to cyber or other security threats or disruptions may not be fully insured or indemnified and could have a material adverse effect on our reputation, operating results and financial condition.

Our substantial debt could adversely affect our financial condition and our ability to operate and grow our business. The terms of our indentures governing our Senior Notes and Revolving Credit Facility impose significant operating and financial restrictions on the Company and our subsidiaries, which could also adversely affect our operating flexibility and put us at a competitive disadvantage by preventing us from capitalizing on business opportunities and additional financing may not be available on terms acceptable to us.

The terms of our indentures governing our Senior Notes, Revolving Credit Facility and Securitization Facility (each as defined in Note 10 of the "Notes to the Consolidated Financial Statements") impose significant operating and financial restrictions on us, which limit our ability to incur liens, sell assets and enter into certain transactions, among other things. In addition, our debt instruments require us to maintain compliance with financial covenants.

We cannot assure you that we will be able to maintain compliance with the covenants in the agreements governing our indebtedness in the future or, if we fail to do so, that we will be able to obtain waivers from the lenders or amend the covenants. Failure to maintain compliance with these covenants could have a material adverse effect on our operations.

We may periodically need to obtain additional financing in order to meet our debt obligations as they come due, to support our operations and/or to make acquisitions. Our access to the debt capital markets and the cost of borrowings are affected by a number of factors, including market conditions and the strength of our credit ratings. If we cannot obtain adequate sources of credit on favorable terms, or at all, our business, operating results, and financial condition could be adversely affected.

The profitability of certain development and production programs depends significantly on the assumptions surrounding satisfactory settlement of claims and assertions.

For certain of our new development programs, we regularly commence work or incorporate customer-requested changes prior to negotiating pricing terms for engineering work or the product which has been modified. We typically have the legal right to negotiate pricing for customer-directed changes. In those cases, we assert to our customers our contractual rights to obtain the additional revenue or cost reimbursement we expect to receive upon finalizing pricing terms. An expected recovery value of these assertions is incorporated into our contract profitability estimates when applying contract accounting. Our inability to recover these expected values, among other factors, could result in the recognition of a forward loss on these programs or a lower than expected profit margin and could have a material adverse effect on our results of operations. In addition, negotiations over our claims may lead to disputes with our customers that would result in litigation and its associated costs and risks of damages, penalties and injunctive relief, any of which could have a material, adverse effect on our business and results of operations.

We incur risk associated with new programs with new technologies.

New programs with new technologies typically carry risks associated with design responsibility, development of new production tools, hiring and training of qualified personnel, increased capital and funding commitments, ability to meet customer specifications, delivery schedules and unique contractual requirements, supplier performance, subcontractor performance, ability of the customer to meet its contractual obligations to us, and our ability to accurately estimate costs associated with such programs. In addition, any new aircraft program may not generate sufficient demand or may experience technological problems or significant delays in the regulatory certification or manufacturing and delivery schedule. If we were unable to perform our obligations under new programs to the customer's satisfaction or manufacture products at our estimated costs, if we were to experience unexpected fluctuations in raw material prices or supplier problems leading to cost overruns, if we were unable to successfully perform under revised design and manufacturing plans or successfully and equitably resolve claims and assertions, or if a new program in which we had made a significant investment was terminated or experienced weak demand, delays or technological problems, our business, financial condition and results of operations could be materially adversely affected. This risk includes the potential for default, quality problems, or inability to meet weight requirements and could result in low margin or forward loss contracts, and the risk of having to write-off inventory or contract assets if they were deemed to be unrecoverable over the life of the program. In addition, beginning new work on existing programs also carries risks associated with the transfer of technology, knowledge and tooling.

In order to perform on new programs, we may be required to construct or acquire new facilities requiring additional up-front investment costs. In the case of significant program delays and/or program cancellations, we could be required to bear certain unrecoverable construction and maintenance costs and incur potential impairment charges for the new facilities. Also, we may need to expend additional resources to determine an alternate revenue generating use for the facilities. Likewise, significant delays in the construction or acquisition of a plant site could impact production schedules.

Volatility in the financial markets may impede our ability to successfully access capital markets and ensure adequate liquidity and may adversely affect our customers and suppliers.

Turmoil in the capital markets may impede our ability to access the capital markets when we would like, or need, to raise capital or may restrict our ability to borrow money on favorable terms. Such market conditions could have an adverse impact on our flexibility to react to changing economic and business conditions and on our ability to fund our operations and capital expenditures in the future. In addition, interest rate fluctuations, financial market volatility, or credit market disruptions may also negatively affect our customers' and our suppliers' ability to obtain credit to finance their businesses on acceptable terms. As a result, our customers' need for and ability to purchase our products or services may decrease, and our suppliers may increase their prices, reduce their output or change their terms of sale. If our customers' or suppliers' operating and financial performance deteriorates, or if they are unable to make scheduled payments or obtain credit, our customers may not be able to pay, or may delay payment of, accounts receivable owed to us, and our suppliers may restrict credit or impose different payment terms. Any inability of customers to pay us for our products and services or any demands by suppliers for different payment terms may adversely affect our earnings and cash flow.

Cancellations, reductions or delays in customer orders may adversely affect our results of operations.

Our overall operating results are affected by many factors, including the timing of orders from large customers and the timing of expenditures to manufacture parts and purchase inventory in anticipation of future sales of products and services. A large portion of our operating expenses are relatively fixed. Because several of our operating locations typically do not obtain long-term purchase orders or commitments from our customers, they 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. These historic patterns may be disrupted by many factors, including changing economic conditions, inventory adjustments, or work stoppages or labor disruptions at our customers' locations. Cancellations, reductions or delays in orders by a customer or group of customers could have a material adverse effect on our business, financial condition and results of operations.

A significant decline in business with a key customer could have a material adverse effect on us.

Boeing, or Boeing Commercial, Military and Space, represented approximately 31% of our net sales for the fiscal year ended March 31, 2019, covering virtually every Boeing plant and product. Gulfstream represented approximately 11% of our net sales for the fiscal year ended March 31, 2019, covering several Gulfstream plants and products. As a result, a significant reduction in purchases by Boeing and/or Gulfstream could have a material adverse impact on our financial condition, results of operations, and cash flows. In addition, some of our individual companies rely significantly on particular customers, the loss of which could have an adverse effect on those businesses. The Company was notified on April 5, 2019 of production rate adjustments planned by Boeing over the next several months on the 737 MAX from 52 to 42 airplanes per month. The Company does not anticipate a material impact to the Company’s financial performance or forecasts, as the program historically has contributed a single digit percentage of annual revenue.

Our international sales and operations are subject to applicable laws relating to trade, export controls and foreign corrupt practices, the violation of which could adversely affect our operations.

We must comply with all applicable export control laws and regulations of the United States and other countries. United States 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. The U.S. Government agencies responsible for administering EAR and ITAR have significant discretion in the interpretation and enforcement of these regulations. We cannot provide services to certain countries subject to United States trade sanctions unless we first obtain the necessary authorizations from OFAC. In addition, we are subject to the Foreign Corrupt Practices Act which generally bars bribes or unreasonable gifts to foreign governments or officials.

Violations of these laws or regulations could result in significant additional sanctions, including fines, more onerous compliance requirements, more extensive debarments from export privileges, loss of authorizations needed to conduct aspects of our international business and criminal penalties and may harm our ability to enter into contracts with the U.S. Government. A future violation of ITAR or the other regulations enumerated above could materially adversely affect our business, financial condition and results of operations.

Any significant disruption from key suppliers of raw materials and key components could delay production and decrease revenue.

We are highly dependent on the availability of essential raw materials such as carbon fiber, aluminum and titanium, and purchased engineered component parts from our suppliers, many of which are available only from single customer-approved sources. Moreover, we are dependent upon the ability of our suppliers to provide raw materials and components that meet our specifications, quality standards and delivery schedules. Our suppliers' failure to provide expected raw materials or component parts could require us to identify and enter into contracts with alternate suppliers that are acceptable to both us and our customers, which could result in significant delays, expenses, increased costs and management distraction and adversely affect production schedules and contract profitability.

We have from time to time experienced limited interruptions of supply, and we may experience a significant interruption in the future. Our continued supply of raw materials and component parts are subject to a number of risks, including:

- availability of capital to our suppliers;
- the destruction of our suppliers' facilities or their distribution infrastructure;
- a work stoppage or strike by our suppliers' employees;
- the failure of our suppliers to provide raw materials or component parts of the requisite quality;
- the failure of essential equipment at our suppliers' plants;
- the failure or shortage of supply of raw materials to our suppliers;
- contractual amendments and disputes with our suppliers;
- reduction to credit terms; and
- geopolitical conditions in the global supply base.

In addition, some contracts with our suppliers for raw materials, component parts and other goods are short-term contracts, which are subject to termination on a relatively short-term basis. The prices of our raw materials and component parts fluctuate depending on market conditions, and substantial increases in prices could increase our operating costs, which, as a result of our fixed-price contracts, we may not be able to recoup through increases in the prices of our products.

Due to economic difficulty, we may face pressure to renegotiate agreements resulting in lower margins. Our suppliers may discontinue provision of products to us at attractive prices or at all, and we may not be able to obtain such products in the future from these or other providers on the scale and within the time periods we require. Furthermore, substitute raw materials or component parts may not meet the strict specifications and quality standards we and our customers demand, or that the U.S. Government requires. If we are not able to obtain key products on a timely basis and at an affordable cost, or we experience significant delays or interruptions of their supply, revenues from sales of products that use these supplies will decrease.

Significant consolidation by aerospace industry suppliers could adversely affect our business.

The aerospace industry continues to experience consolidation among suppliers and customers, primarily as it pertains to the airlines. Suppliers have consolidated and formed alliances to broaden their product and integrated system offerings and achieve critical mass. This supplier consolidation is in part attributable to aircraft manufacturers more frequently awarding long-term sole-source or preferred supplier contracts to the most capable suppliers, thus reducing the total number of suppliers. This consolidation could cause us to compete against certain competitors with greater financial resources, market penetration and purchasing power. When we purchase component parts and services from suppliers to manufacture our products, consolidation reduces price competition between our suppliers, which could diminish incentives for our suppliers to reduce prices. If this consolidation continues, our operating costs could increase and it may become more difficult for us to be successful in obtaining new customers.

Competitive pressures may adversely affect us.

We have numerous competitors in the aerospace industry. We compete primarily with the top-tier systems integrators and the manufacturers that supply them, some of which are divisions or subsidiaries of OEMs and other large companies that manufacture aircraft components and subassemblies. Our OEM competitors, which include Boeing, Airbus, Bell Helicopter, Bombardier, Cessna, General Electric, Gulfstream, Honeywell, Lockheed Martin, Northrop Grumman, Raytheon, Rolls Royce and Sikorsky, may choose not to outsource production of aerostructures or other components due to, among other things, their own direct labor and overhead considerations, capacity utilization at their own facilities, and desire to retain critical or core skills. Consequently, traditional factors affecting competition, such as price and quality of service, may not be significant determinants when OEMs decide whether to produce a part in-house or to outsource. We also face competition from non-OEM component manufacturers, including Alenia Aeronautica, Fokker Technologies, Fuji Heavy Industries, GKN Westland Aerospace (U.K.), Kawasaki Heavy Industries, Mitsubishi Heavy Industries, Spirit AeroSystems and UTC Aerospace Systems. Competition for the repair and overhaul of aviation components comes from three primary sources: OEMs, major commercial airlines and other independent repair and overhaul companies.

We may need to expend significant capital to keep pace with technological developments in our industry.

The aerospace industry is constantly undergoing development and change and it is likely that new products, equipment and methods of repair and overhaul service will be introduced in the future. In order to keep pace with any new developments, such as additive technology, we may need to expend significant capital to purchase new equipment and machines or to train our employees in the new methods of production and service.

The construction of aircraft is heavily regulated and failure to comply with applicable laws could reduce our sales or require us to incur additional costs to achieve compliance, and we may incur significant expenses to comply with new or more stringent governmental regulation.

The aerospace industry is highly regulated in the United States by the FAA and in other countries by similar agencies. We must be certified by the FAA and, in some cases, by individual OEMs in order to engineer and service parts, components and aerostructures used in specific aircraft models. If any of our material authorizations or approvals were revoked or suspended, our operations would be adversely affected. New or more stringent governmental regulations may be adopted, or industry oversight heightened in the future, and we may incur significant expenses to comply with any new regulations or any heightened industry oversight.

Our business could be materially adversely affected by product warranty obligations.

Our operations expose us to potential liability for warranty claims made by customers or third parties with respect to aircraft components that have been designed, manufactured, or serviced by us or our suppliers. Material product warranty obligations could have a material adverse effect on our business, financial condition and results of operations.

We may not realize our anticipated return on capital commitments made to expand our capabilities.

We continually make significant capital expenditures to implement new processes and to increase both efficiency and capacity. Some of these projects require additional training for our employees and not all projects may be implemented as anticipated. If any of these projects do not achieve the anticipated increase in efficiency or capacity, our returns on these capital expenditures may be lower than expected.

We may not be successful in achieving expected operating efficiencies and sustaining or improving operating expense reductions, and may experience business disruptions associated with restructuring, facility consolidations, realignment, cost reduction and other strategic initiatives.

Over the past several years, we have implemented a number of restructuring, realignment and cost-reduction initiatives, including facility consolidations, organizational realignments and reductions in our workforce. While we have realized some efficiencies from these actions, we may not realize the benefits of these initiatives to the extent we anticipated. Further, such benefits may be realized later than expected, and the ongoing difficulties in implementing these measures may be greater than anticipated, which could cause us to incur additional costs or result in business disruptions. In addition, if these measures are not successful or sustainable, we may be compelled to undertake additional realignment and cost reduction efforts, which could result in significant additional charges. Moreover, if our restructuring and realignment efforts prove ineffective, our ability to achieve our other strategic and business plan goals may be adversely affected.

Any product liability claims in excess of insurance may adversely affect our financial condition.

Our operations expose us to potential liability for personal injury or death as a result of the failure of an aircraft component that has been serviced by us or the failure of an aircraft component designed or manufactured by us. While we believe that our liability insurance is adequate to protect us from these liabilities, our insurance may not cover all liabilities. Additionally, should insurance market conditions change, general aviation product liability, insurance coverage may not be available in the future at a cost acceptable to us. Any material liability not covered by insurance or for which third-party indemnification is not available could have a material adverse effect on our financial condition.

The lack of available skilled personnel may have an adverse effect on our operations.

From time to time, some of our operating locations have experienced difficulties in attracting and retaining skilled personnel to design, engineer, manufacture, repair and overhaul sophisticated aircraft components. Our ability to operate successfully could be jeopardized if we are unable to attract and retain a sufficient number of skilled personnel to conduct our business.

Our fixed-price contracts may commit us to unfavorable terms.

A significant portion of our net sales are derived from fixed-price contracts under which we have agreed to provide components or aerostructures for a price determined on the date we entered into the contract. Several factors may cause the costs we incur in fulfilling these contracts to vary substantially from our original estimates, and we bear the risk that increased or unexpected costs may reduce our profit or cause us to sustain losses on these contracts. In a fixed-price contract, we must fully absorb cost overruns, notwithstanding the difficulty of estimating all of the costs we will incur in performing these contracts. Because our ability to terminate contracts is generally limited, we may not be able to terminate our performance requirements under these contracts at all or without substantial liability and, therefore, in the event we are sustaining reduced profits or losses, we could continue to sustain these reduced profits or losses for the duration of the contract term. Our failure to anticipate technical problems, estimate delivery reductions, estimate costs accurately or control costs during performance of a fixed-price contract may reduce our profitability or cause significant losses on programs similar in nature to the forward losses incurred on the Boeing 747-8 ("747-8 program") and Bombardier Global 7500 contracts.

Any exposure to environmental liabilities may adversely affect us.

Our business, operations and facilities are subject to numerous stringent federal, state, local, and foreign environmental laws and regulations, and we are subject to potentially significant fines or penalties, including criminal sanctions, if we fail to comply with these requirements. In addition, we could be affected by future laws and regulations, including those imposed in response to climate change concerns and other actions commonly referred to as "green initiatives." Compliance with current and future environmental laws and regulations currently requires and is expected to continue to require significant operating and capital costs.

Pursuant to certain environmental laws, a current or previous owner or operator of a contaminated site may be held liable for the entire cost of investigation, removal or remediation of hazardous materials at such property. Innocent Landowner Regulations require an Environmental Site Assessment prior to acquisition to prevent unknowingly acquiring impaired property. Once identified, if the transaction continues, the impairment is not covered by insurance. Although management believes that our operations and facilities are in material compliance with such laws and regulations, future changes in such laws, regulations or interpretations thereof or the nature of our operations or regulatory enforcement actions which may arise, may require us to make significant additional capital expenditures to ensure compliance in the future. Certain of our facilities, including facilities acquired and operated by us or one of our subsidiaries, have at one time or another been under active investigation for environmental contamination by federal or state agencies when acquired and, at least in some cases, continue to be under investigation or subject to remediation. Lawsuits, claims and costs involving environmental matters may arise in the future. Individual facilities of ours have also been subject to investigation on occasion for possible past waste disposal practices which might have contributed to contamination at or from remote third-party waste disposal sites. In some instances, we are indemnified by prior owners or operators and/or present owners of the facilities for liabilities which we incur as a result of these investigations and the environmental contamination found which pre-dates our acquisition of these facilities, subject to certain limitations, including, but not limited to specified exclusions, deductibles and limitations on the survival period of the indemnity. We also maintain a pollution liability policy that provides coverage, subject to specified limitations, for specified material liabilities associated with the clean-up of certain on-site pollution conditions, as well as defense and indemnity for certain third-party suits (including Superfund liabilities at third-party sites), in each case, to the extent not otherwise indemnified. Also, as we proceed with our plans to exit certain facilities as part of restructuring and related initiatives, the need for remediation for potential environmental contamination could be identified. However, if we are required to pay the expenses related to environmental liabilities because neither indemnification nor insurance coverage is available, these expenses could have a material adverse effect on our financial position, results of operations, and cash flows.

Our expansion into international markets may increase credit, currency and other risks, and our current operations in international markets expose us to such risks.

As we pursue customers in Asia, South America and other less developed aerospace markets throughout the world, our inability to ensure the creditworthiness of our customers in these areas could adversely impact our overall profitability. In addition, with operations in China, France, Germany, Ireland, Mexico, Thailand and the United Kingdom, and customers throughout the world, we are subject to the legal, political, social and regulatory requirements, and economic conditions of other jurisdictions. In the future, we may also make additional international capital investments, including further acquisitions of companies outside the United States or companies having operations outside the United States. Risks inherent to international operations include, but are not limited to, the following:

- difficulty in enforcing agreements in some legal systems outside the United States;
- imposition of additional withholding taxes or other taxes on our foreign income, tariffs or other restrictions on foreign trade and investment, including currency exchange controls;
- fluctuations in exchange rates which may affect demand for our products and services and may adversely affect our profitability in U.S. dollars;
- inability to obtain, maintain or enforce intellectual property rights;
- changes in general economic and political conditions in the countries in which we operate;
- unexpected adverse changes in the laws or regulatory requirements outside the United States, including those with respect to environmental protection, export duties and quotas;
- failure by our employees or agents to comply with U.S. laws affecting the activities of U.S. companies abroad;
- difficulty with staffing and managing widespread operations; and
- difficulty of and costs relating to compliance with the different commercial and legal requirements of the countries in which we operate.

Due to the size and long-term nature of many of our contracts, we are required by GAAP to estimate sales and expenses relating to these contracts in our financial statements, which may cause actual results to differ materially from those estimated under different assumptions or conditions.

Our consolidated financial statements are prepared in conformity with accounting principles generally accepted in the United States ("GAAP"). These principles require our management to make estimates and assumptions regarding our contracts that affect the reported amounts of revenue and expenses during the reporting period. Accounting for revenue recognized over time requires judgment relative to assessing risks, estimating contract sales and costs, and making assumptions for schedule and technical issues. Due to the size and nature of many of our contracts, the estimation of total sales and cost at completion is complicated and subject to many variables. While we base our estimates on historical experience and on various assumptions that we believe to be reasonable under the circumstances at the time made, actual results may differ materially from those estimated.

We could become involved in intellectual property litigation, which could have a material and adverse impact on our profitability.

We and other companies in our industry possess certain proprietary rights relating to designs, engineering, manufacturing processes, and repair and overhaul procedures. In the event that we believe that a third party is infringing upon our proprietary rights, we may bring an action to enforce such rights. In addition, third parties may claim infringement by us with respect to their proprietary rights and may initiate legal proceedings against us in the future. The expense and time of bringing an action to enforce such rights or defending against infringement claims can be significant. Intellectual property litigation involves complex legal and factual questions which makes the outcome of any such proceedings subject to considerable uncertainty. Not only can such litigation divert management's attention, but it can also expose the Company to damages and potential injunctive relief which, if granted, may preclude the Company from making, using, or selling particular products or technology. The expense and time associated with such litigation may have a material and adverse impact on our profitability.

Our acquisition strategy exposes us to risks, including the risk that we may not be able to successfully integrate acquired businesses.

We have historically had a strategy to grow, in part, through the acquisition of additional businesses in the aerospace industry and are continuously evaluating various acquisition opportunities, including those outside the United States and those that may have a material impact on our business. Our ability to grow by acquisition is dependent upon, among other factors, the availability of suitable acquisition candidates. Growth by acquisition involves risks that could adversely affect our operating results, including difficulties in integrating the operations and personnel of acquired companies, the risk of diverting the attention of senior management from our existing operations, the potential amortization of acquired intangible assets, the potential impairment of goodwill and the potential loss of key employees of acquired companies. We may not be able to consummate acquisitions on satisfactory terms or, if any acquisitions are consummated, successfully integrate these acquired businesses.

We do not own certain intellectual property and tooling that is important to our business.

In our overhaul and repair businesses, OEMs of equipment that we maintain for our customers include language in repair manuals relating to their equipment asserting broad claims of proprietary rights to the contents of the manuals used in our operations. Although we believe that our use of manufacture and repair manuals is lawful, there can be no assurance that OEMs will not try to enforce such claims, including through the possible use of legal proceedings, or that any such actions will be unsuccessful.

Our business also depends on using certain intellectual property and tooling that we have rights to use pursuant to license grants under our contracts with our OEM customers. These contracts contain restrictions on our use of the intellectual property and tooling and may be terminated if we violate certain of these restrictions. Our loss of a contract with an OEM customer and the related license rights to use an OEM's intellectual property or tooling would materially adversely affect our business.

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

Our manufacturing facilities or our customers' facilities could be damaged or disrupted by a natural disaster, war, or terrorist activity. We maintain property damage and business interruption insurance at the levels typical in our industry or for our customers and suppliers, however, a major catastrophe, such as an earthquake, hurricane, fire, flood, tornado or other natural disaster at any of our sites, or war or terrorist activities in any of the areas where we conduct operations could result in a prolonged interruption of our business. Any disruption resulting from these events could cause significant delays in shipments of products and the loss of sales and customers and we may not have insurance to adequately compensate us for any of these events. For leased facilities, timely renewal of leases and risk mitigation from the sale of our leased facilities is required to avoid any business interruption.

Our reputation; our ability to do business; and our financial position, results of operations and/or cash flows may be impacted by the improper conduct of employees, agents, subcontractors, suppliers, business partners or joint ventures in which we participate.

We have implemented policies, procedures, training and other compliance controls, and have negotiated terms designed to prevent misconduct by employees, agents or others working on our behalf or with us that would violate the applicable laws of the jurisdictions in which we operate, including laws governing improper payments to government officials, the protection of export controlled or classified information, cost accounting and billing, competition and data privacy. However, we cannot ensure that we will prevent all such misconduct committed by our employees, agents, subcontractors, suppliers, business partners or others working on our behalf or with us, and this risk of improper conduct may increase as we expand globally. In the ordinary course of our business we form and are members of joint ventures. We may be unable to prevent misconduct or other violations of applicable laws by these joint ventures (including their officers, directors and employees) or our partners. Improper actions by those with whom or through whom we do business (including our employees, agents, subcontractors, suppliers, business partners and joint ventures) could subject us to administrative, civil or criminal investigations and monetary and non-monetary penalties, including suspension and debarment, which could negatively impact our reputation and ability to conduct business and could have a material adverse effect on our financial position, results of operations and/or cash flows.

We may be subject to work stoppages at our facilities or those of our principal customers and suppliers, which could seriously impact the profitability of our business.

At March 31, 2019, we employed 10,776 people, of which 19.5% belonged to unions. Our unionized workforces and those of our customers and suppliers may experience work stoppages. For example, during the quarter ended June 30, 2016, we settled a strike and agreed to a new collective bargaining agreement with our union employees with IAM District 751 at our Spokane, Washington facility which had expired during the quarter. While we were in negotiations with the workforce, we were able to implement plans that allowed us to continue production in Spokane with the support from our other locations. If we are unable to negotiate a contract with those workforces, our operations may be disrupted and we may be prevented from completing production and delivery of products from those facilities, which would negatively impact our results. Contingency plans have been developed that would allow production to continue in the event of a strike.

Many aircraft manufacturers, airlines and aerospace suppliers have unionized workforces. Strikes, work stoppages or slowdowns experienced by aircraft manufacturers, airlines or aerospace suppliers could reduce our customers' demand for our products or prevent us from completing production. In turn, this may have a material adverse effect on our financial condition, results of operations and cash flows.

Financial market conditions may adversely affect the benefit plan assets for our defined benefit plans, increase funding requirements and materially impact our statements of financial position and cash flows.

Our benefit plan assets are invested in a diversified portfolio of investments in both the equity and debt categories, as well as limited investments in other alternative investments. The current market values of all of these investments, as well as the related benefit plan liabilities are impacted by the movements and volatility in the financial markets. In accordance with the *Compensation—Retirement Benefits* topic of the Accounting Standards Codification ("ASC"), we have recognized the overfunded or underfunded status of a defined benefit postretirement plan as an asset or liability on our balance sheet, and will recognize changes in that funded status in the year in which the changes occur. The funded status is measured as the difference between the fair value of the plan's assets and the projected benefit obligation. A decrease in the fair value of these plan assets or a decrease in interest rates resulting from movements in the financial markets will increase the underfunded status of the plans recorded on our consolidated balance sheets and result in additional cash funding requirements to meet the minimum required funding levels.

The U.S. Government is a significant customer of our largest customers, and we and they are subject to specific U.S. Government contracting rules and regulations.

The military aircraft manufacturers' business, and by extension, our business, is affected by the U.S. Government's continued commitment to programs under contract with our customers. The terms of defense contracts with the U.S. Government generally permit the government to terminate contracts partially or completely, either for its convenience or if we default by failing to perform under the contract. Termination for convenience provisions provide only for our recovery of unrecovered costs incurred or committed, settlement expenses and profit on the work completed prior to termination. Termination for default provisions provide for the contractor to be liable for excess costs incurred by the U.S. Government in procuring undelivered items from another source. On contracts where 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, portions of research and development costs, and certain marketing expenses may not be subject to reimbursement.

We bear the potential risk that the U.S. Government may unilaterally suspend our customers or us from new contracts pending the resolution of alleged violations of procurement laws or regulations. Sales to the U.S. Government are also subject to changes in the government's procurement policies in advance of design completion. An unexpected termination of, or suspension from, a significant government contract, a reduction in expenditures by the U.S. Government for aircraft using our products, lower margins resulting from increasingly competitive procurement policies, a reduction in the volume of contracts awarded to us, or substantial cost overruns could have a material adverse effect on our financial condition, results of operations and cash flows.

We are subject to the requirements of the National Industrial Security Program Operating Manual for facility security clearance, which is a prerequisite for our ability to perform on classified contracts for the U.S. Government.

U.S. DoD facility security clearance is required in order to be awarded and be able to perform on classified contracts for the U.S. DoD and certain other agencies of the U.S. Government, which is a significant part of our business. We have obtained clearance at appropriate levels that require stringent qualifications, and we may be required to seek higher level clearances in the future. We cannot assure you that we will be able to maintain our security clearance. If for some reason our security clearance is invalidated or terminated, we may not be able to continue to perform our present classified contracts or be able to enter into new classified contracts, which could affect our ability to compete for and capture new business.

Regulations related to conflict minerals have and will continue to force us to incur additional expenses, may make our supply chain more complex, and could adversely impact our business.

The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 contains provisions to improve transparency and accountability concerning the supply of certain minerals and metals, known as conflict minerals, originating from the Democratic Republic of Congo (the "DRC") and adjoining countries. As a result, in August 2012, the SEC adopted annual investigation, disclosure and reporting requirements for those companies that manufacture or contract to manufacture products that contain conflict minerals that originated from the DRC and adjoining countries. We have and will continue to incur compliance costs, including costs related to determining the sources of conflict minerals used in our products and other potential changes to processes or sources of supply as a consequence of such verification activities. The implementation of these rules could adversely affect the sourcing, supply and pricing of materials used in certain of our products. As there may be only a limited number of suppliers offering "conflict free" minerals, we cannot be sure that we will be able to obtain necessary conflict-free minerals from such suppliers in sufficient quantities or at competitive prices. Also, we may face reputational challenges if we determine that certain of our products contain minerals not determined to be conflict free.

Our business is subject to regulation in the United States and internationally.

The manufacturing of our products is subject to numerous federal, state and foreign governmental regulations. The number of laws and regulations that are being enacted or proposed by various governmental bodies and authorities are increasing. Compliance with these regulations is difficult and expensive. If we fail to adhere, or are alleged to have failed to adhere, to any applicable federal, state or foreign laws or regulations, or if such laws or regulations negatively affect sales of our products, our business, prospects, results of operations, financial condition or cash flows may be adversely affected. In addition, our future results could be adversely affected by changes in applicable federal, state, and foreign laws and regulations, or the interpretation or enforcement thereof, including those relating to manufacturing processes, product liability, government contracts, trade rules and customs regulations, intellectual property, consumer laws, privacy laws, as well as accounting standards and taxation requirements (including tax-rate changes, new tax laws or revised tax law interpretations).

Brexit may have short-term and long-term adverse impacts on the Company's operations in the United Kingdom.

The Company’s United Kingdom operations represented approximately 4% of consolidated net sales for the twelve months ended March 31, 2019. The outcome of Brexit could adversely affect our business, results of operations, and financial condition. In the short-term, volatility in the British pound sterling could continue as the United Kingdom negotiates its anticipated exit from the European Union. In the longer term, any impact from Brexit on the Company’s United Kingdom operations will depend, in part, on the outcome of tariff, trade, regulatory, and other negotiations.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

As of March 31, 2019, our segments owned or leased the following facilities with the following square footage:

(Square feet in thousands)	Owned	Leased	Total
Integrated Systems	1,075	735	1,810
Aerospace Structures	4,474	4,543	9,017
Product Support	562	477	1,039
Corporate	—	22	22
Total	6,111	5,777	11,888

At March 31, 2019, our segments occupied 7.3 million square feet of floor space at the following major locations:

- Integrated Systems: West Hartford, Connecticut; and Park City, Utah
- Aerospace Structures: Milledgeville, Georgia; Nashville, Tennessee; Hawthorne, California; Red Oak, Texas; Grand Prairie, Texas; and Stuart, Florida
- Product Support: Hot Springs, Arkansas

We believe that our properties are adequate to support our operations for the foreseeable future.

Item 3. Legal Proceedings

In the ordinary course of business, we are involved in disputes, claims and lawsuits with employees, suppliers and customers, as well as governmental and regulatory inquiries, that are deemed to be immaterial. Some may involve claims or potential claims of substantial damages, fines, penalties or injunctive relief. While we cannot predict the outcome of any pending or future litigation or proceeding and no assurances can be given, we do not believe that any pending matter will have a material effect, individually or in the aggregate, on its financial position or results of operations.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Our common stock is traded on the New York Stock Exchange under the symbol "TGI." As of May 17, 2019, there were approximately 150 holders of record of our common stock and we believe that our common stock was beneficially owned by approximately 17,000 persons.

Dividend Policy

During fiscal 2019 and 2018, we paid cash dividends of $0.16 per share and $0.16 per share, respectively. However, our declaration and payment of cash dividends in the future and the amount thereof will depend upon our results of operations, financial condition, cash requirements, future prospects, limitations imposed by credit agreements or indentures governing debt securities and other factors deemed relevant by our Board of Directors. No assurance can be given that cash dividends will continue to be declared and paid at historical levels or at all. Certain of our debt arrangements, including the Credit Facility, restrict our paying dividends and making distributions on our capital stock, except for the payment of stock dividends and redemptions of an employee's shares of capital stock upon termination of employment. The Company currently has an accumulated deficit which could limit or restrict our ability to pay dividends in the future.

Repurchases of Stock

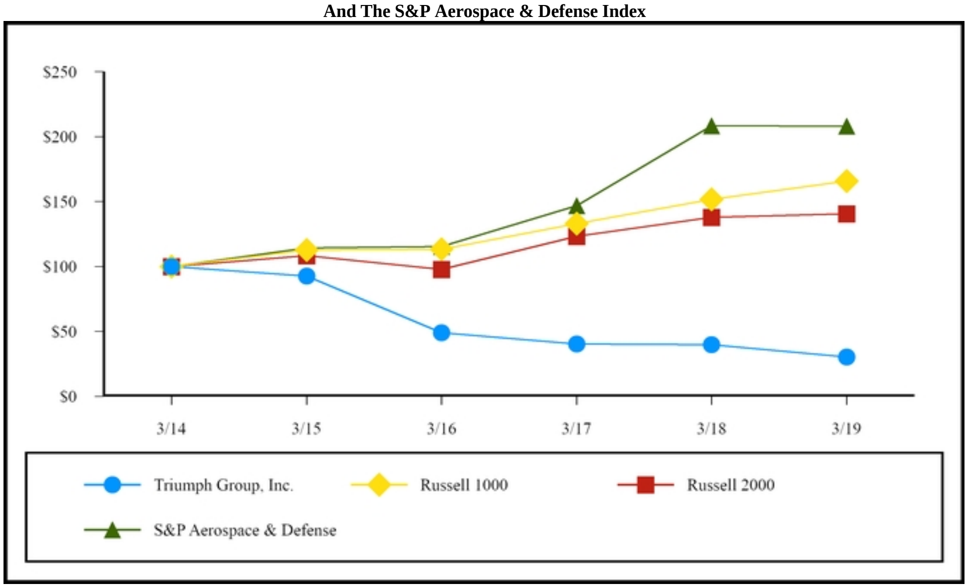
In December 1998, we announced a program to repurchase up to 500,000 shares of our common stock. In February 2008, the Company's Board of Directors authorized an increase in the Company's existing stock repurchase program by up to an additional 500,000 shares of its common stock. In February 2014, the Company's Board of Directors authorized an increase in the Company's existing stock repurchase program by up to an additional 5,000,000 shares of its common stock. During the fiscal years ended March 31, 2019, 2018, and 2017, we did not repurchase any shares. During the fiscal years ended March 31, 2015 and 2014, we repurchased 2,923,011 and 300,000 shares, respectively, for a purchase price of $184.4 million and $19.1 million, respectively. From the inception of the program through March 31, 2013, we repurchased 499,200 shares (prior to the fiscal 2012 stock split) for a purchase price of $19.2 million. Repurchases may be made from time to time in open market transactions, block purchases, privately negotiated transactions or otherwise at prevailing prices. No time limit has been set for completion of the program. As a result, as of May 23, 2019, the Company remains able to purchase an additional 2,277,789 shares.

Equity Compensation Plan Information

The information required regarding equity compensation plan information will be included in our Proxy Statement in connection with our 2019 Annual Meeting of Stockholders to be held on July 18, 2019, under the heading "Equity Compensation Plan Information" and is incorporated herein by reference.

The following graph compares the cumulative 5-year total return provided stockholders on our common stock relative with the cumulative total returns of the Russell 1000 index, the Russell 2000 index and the S&P Aerospace & Defense 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 March 31, 2014, and its relative performance is tracked through March 31, 2019.

COMPARISON OF 5-YEAR CUMULATIVE TOTAL RETURN*
Among Triumph Group, Inc., and The Russell 1000 and 2000 Indexes
And The S&P Aerospace & Defense Index



* $100 invested on March 31, 2014, in stock or index, including reinvestment of dividends.

	Fiscal year ended March 31,					
	2014	**2015**	**2016**	**2017**	**2018**	**2019**
Triumph Group, Inc.	**100.00**	**92.70**	**49.05**	**40.33**	**39.68**	**30.25**
Russell 1000	**100.00**	**112.73**	**113.30**	**133.05**	**151.64**	**165.75**
Russell 2000	**100.00**	**108.21**	**97.65**	**123.25**	**137.78**	**140.61**
S&P Aerospace & Defense	**100.00**	**114.18**	**115.29**	**146.65**	**208.31**	**208.03**

The stock price performance included in this graph is not necessarily indicative of future stock price performance.

Table of Contents

Item 6. Selected Financial Data

The following selected financial data should be read in conjunction with the consolidated financial statements and related notes thereto and management's discussion and analysis of financial condition and results of operations included herein.

	Fiscal Year Ended March 31,				
	2019[1]	2018[2]	2017[3]	2016[4]	2015[5]
	(in thousands, except per share data)				
Operating Data:					
Net sales	$ 3,364,930	$ 3,198,951	$ 3,532,799	$ 3,886,072	$ 3,888,722
Cost of sales	2,924,920	2,607,556	2,774,449	3,671,684	3,196,996
	440,010	591,395	758,350	214,388	691,726
Selling, general and administrative expense	298,386	292,630	285,001	290,338	287,704
Depreciation and amortization	149,904	158,368	176,946	177,755	158,323
Impairment of intangible assets	—	535,227	266,298	874,361	—
Restructuring	31,098	40,069	42,177	36,182	3,193
Loss on divestitures	235,301	30,741	19,124	—	—
Loss (gain) on legal settlement, net	—	—	—	5,476	(134,693)
Operating (loss) income	(274,679)	(465,640)	(31,196)	(1,169,724)	377,199
Non-service defined benefit income	(62,105)	(103,234)	(88,085)	(78,618)	(57,474)
Interest expense and other	114,619	99,442	80,501	68,041	85,379
(Loss) income from continuing operations, before income taxes	(327,193)	(461,848)	(23,612)	(1,159,147)	349,294
Income tax (benefit) expense	(5,426)	(36,457)	19,340	(111,187)	110,597
Net (loss) income	$ (321,767)	$ (425,391)	$ (42,952)	$ (1,047,960)	$ 238,697
Earnings per share:					
(Loss) income from continuing operations:					
Basic	$ (6.47)	$ (8.60)	$ (0.87)	$ (21.29)	$ 4.70
Diluted[6]	$ (6.47)	$ (8.60)	$ (0.87)	$ (21.29)	$ 4.68
Cash dividends declared per share	$ 0.16	$ 0.16	$ 0.16	$ 0.16	$ 0.16
Shares used in computing earnings per share:					
Basic	49,698	49,442	49,303	49,218	50,796
Diluted[6]	49,698	49,442	49,303	49,218	51,005

	As of March 31,				
	2019[1]	2018[2]	2017[3]	2016[4]	2015[5]
	(in thousands)				
Balance Sheet Data:					
Working capital	$ 265,795	$ 930,486	$ 438,659	$ 606,767	$ 1,023,144
Total assets	2,854,574	3,807,064	4,414,600	4,835,093	5,956,325
Long-term debt, including current portion	1,488,821	1,438,284	1,196,300	1,417,320	1,368,600
Total stockholders' (deficit) equity	$ (573,313)	$ 450,534	$ 846,473	$ 934,944	$ 2,135,784

(1) Includes the divestitures of Triumph Fabrications - San Diego, Inc.; Triumph Fabrications - Ft. Worth, Inc.; Triumph Structures – Kansas City, Inc.; Triumph Structures – Wichita, Inc.; Triumph Gear Systems – Toronto, ULC and Triumph Northwest (The Triumph Group Operations, Inc.); Triumph Aviation Services - NAAS Division, Inc.; Triumph Structures - East Texas, Inc. as well as all of the shares of Triumph Structures - Los Angeles, Inc.; and Triumph Processing, Inc.; as well as the loss recognized as a result of the transition of the Global 7500 program to Bombardier.

(2) Includes the divestitures of Triumph Processing- Embee Division (September 2017) and Triumph Structures- Long Island (March 2018). Additionally, the prior period operating data has been adjusted as a result of Accounting Standards Update ("ASU") 2017-07, *Compensation-Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost* ("ASU 2017-07"). The prior period operating data has not been adjusted as a result of ASU 2014-09, *Revenue From Contracts with Customers* ("ASU 2014-09"); this affects the comparability of the information reflected in the selected financial data for this year. See Notes to the Consolidated Financial Statements.

(3) Includes the divestitures of Triumph Aerospace Systems-Newport News, Inc. (September 2016) and Triumph Air Repair, the Auxiliary Power Unit Overhaul Operations of Triumph Aviations Services - Asia, Ltd. and Triumph Engines - Tempe (December 2016). Additionally, the prior period

operating data has been adjusted as a result of ASU 2017-07. The prior period operating data has not been adjusted as a result of ASU 2014-09; this affects the comparability of the information reflected in the selected financial data for this year. See Notes to the Consolidated Financial Statements.

(4) Includes the acquisition of Fairchild Controls Corporation (October 2015) from the date of acquisition, forward losses on the Bombardier and 747-8 programs of $561,158 (March 2016). Additionally, the prior period operating data has been adjusted as a result of ASU 2017-07. The prior period operating data has not been adjusted as a result of ASU 2014-09; this affects the comparability of the information reflected in the selected financial data for this year. See Notes to the Consolidated Financial Statements.

(5) Includes the acquisitions of Spirit AeroSystems Holdings, Inc. - Gulfstream G650 and G280 Wings Programs and forward losses on the 747-8 program of $151,992 (December 2014), North American Aircraft Services, Inc. (October 2014) and GE Aviation - Hydraulic Actuation (June 2014) from the date of each respective acquisition. Additionally, the prior period operating data has been adjusted as a result of ASU 2017-07. The prior period operating data has not been adjusted as a result of ASU 2014-09; this affects the comparability of the information reflected in the selected financial data for this year. See Notes to the Consolidated Financial Statements.

(6) Diluted earnings per share for the fiscal years ended March 31, 2015, included 40,177 shares related to the dilutive effects of the Company's Convertible Notes.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion should be read in conjunction with the consolidated financial statements and notes thereto contained elsewhere herein.

OVERVIEW

We are a major supplier to the aerospace industry and have three operating segments: (i) Integrated Systems, whose companies’ revenues are derived from integrated solutions, including design, development and support of proprietary components, subsystems and systems, as well as production of complex assemblies using external designs; (ii) Aerospace Structures, whose companies supply commercial, business, regional, and military manufacturers with large metallic and composite structures and produce close-tolerance parts primarily to customer designs and model-based definition, including a wide range of aluminum, hard metal and composite structure capabilities; and (iii) Product Support, whose companies provide full life cycle solutions for commercial, regional and military aircraft.

During the fiscal year ended March 31, 2019, the Company divested of a number of its assets and operations, including (i) selling all of the shares of Triumph Structures - East Texas, Inc. and all of the shares of Triumph Structures - Los Angeles, Inc. and Triumph Processing, Inc. (collectively, the "Long & Large"), (ii) transitioning the responsibility for the Bombardier Global 7500 ("Global 7500") wing program manufacturing operations of Aerospace Structures to Bombardier, (iii) selling all of the shares of Triumph Fabrications - San Diego, Inc. and Triumph Fabrications - Ft. Worth, Inc. (together, "Fabrications"), (iv) selling all of the shares of Triumph Structures – Kansas City, Inc., Triumph Structures – Wichita, Inc., Triumph Gear Systems – Toronto, ULC and Triumph Northwest (The Triumph Group Operations, Inc.) (together, "Machining"), and (v) selling all of the shares of Triumph Aviation Services - NAAS Division, Inc. ("NAAS"). Collectively, these transactions are referred to as the "fiscal 2019 divestitures". The Company recognized combined net losses of $235.3 million associated with the fiscal 2019 divestitures, which are presented on the accompanying consolidated statements of operations within loss on divestitures. With the exception of NAAS, the operating results for the fiscal 2019 divestitures are included in Aerospace Structures ("fiscal 2019 Aerospace Structures Divestitures") through the respective dates of divestiture. The operating results for NAAS are included in Product Support through the date of divestiture.

Significant financial results for the fiscal year ended March 31, 2019, include:

- Net sales for fiscal 2019 increased 5.2% to $3.36 billion.
- Operating loss for fiscal 2019 was $274.7 million.
- Included in operating loss for fiscal 2019 was loss on divestitures of $235.3 million related to the fiscal 2019 divestitures and restructuring charges of $31.1 million.
- Net loss for fiscal 2019 was $321.8 million.
- Backlog decreased 16.7% over the prior year to $3.74 billion due to divestitures.

For the fiscal year ended March 31, 2019, net sales totaled $3.36 billion, a 5.2% increase from fiscal year 2018 net sales of $3.20 billion. The net loss for fiscal year 2019 decreased 24.4% to $321.8 million, or $6.47 per diluted common share, versus the net loss of $425.4 million, or $8.60 per diluted common share, for fiscal year 2018.

Our working capital needs are generally funded through cash flows from operations and borrowings under our credit arrangements. For the fiscal year ended March 31, 2019, we used $174.4 million of cash flows from operating activities, received $200.5 million from investing activities and received $32.5 million from financing activities. Cash flows from operating activities in fiscal year 2018 were $(288.9) million.

The Company has committed to several plans (which were initiated in fiscal 2016) that incorporated the restructuring of certain of its businesses as well as the consolidation of certain of its facilities. As of March 31, 2019, with the exception of two remaining facility consolidations to be completed in fiscal 2020 and three pending facility closures to be completed in fiscal 2021 or 2022, the Company has substantially completed these plans. As a result, since fiscal 2016, the Company has reduced its footprint by approximately 2.0 million square feet to date, with the reduction of an additional 2.0 million square feet to be upon completion of the 747-8 contract, and reduced headcount by approximately 2,500 employees. Over the course of these cost-reducing programs, the Company estimated that it would record aggregate related pretax charges of $195.0 million to $210.0 million, which represented employee termination benefits, contract termination costs, accelerated depreciation and facility closure and other exit costs. For the fiscal years ended March 31, 2019, 2018, and 2017, the Company recorded charges of $31.1 million, $43.1 million and $53.0 million, respectively, related to these programs.

Our restructuring plans and related activities generate annualized savings of approximately $300 million per year on a consolidated basis from facility consolidations, headcount reductions, operational efficiencies, and supply chain optimization. These savings resulted from our reportable segments approximately as follows: Integrated Systems - 23%; Aerospace Structures - 72% and Product Support - 5%. A significant portion of the savings were reinvested in business development, research and development and capital improvements to help drive organic growth or to offset price reductions to customers.

From fiscal 2014 through fiscal 2019, our Aerospace Structures business unit had been performing design, development and initial manufacturing on several new programs, including the Global 7500, the Embraer second generation E-Jet ("E2-Jets") and more recently, the Gulfstream G500/G600 programs. Historically, low-rate production commences during flight testing, followed by an increase to full-rate production, assuming that successful testing and certification are achieved. While work progressed on these development programs, we have experienced difficulties in achieving estimated cost targets particularly in the areas of engineering and estimated recurring costs which resulted in forward losses. Additionally, from fiscal 2015 to fiscal 2019, our Aerospace Structures business unit experienced operating and forward losses on its production of the the Boeing 747-8 fuselage for Boeing, Gulfstream G280 wing for Israel Aerospace Industries, Ltd ("IAI") and Gulfstream G650 wing for Gulfstream. Further discussion is included below regarding each program's impact on operations over the past three fiscal years.

Global 7500

The initial provision for forward losses recorded in fiscal 2016 on Global 7500 resulted in the impairment of previously capitalized pre-production costs due to the combination of cost recovery uncertainty, higher than anticipated nonrecurring costs and increased forecasted costs on recurring production. The increases in costs were driven by several factors, including: changing technical requirements, increased spending on the design and engineering phase of the program and uncertainty regarding cost reduction and cost recovery initiatives with our customer and suppliers.

On December 22, 2016, Triumph Aerostructures, LLC, the wholly owned subsidiary of the Company that was party to the Global 7500 contract with Bombardier (“Triumph Aerostructures”), initiated litigation against Bombardier in the Quebec Superior Court, District of Montreal. The lawsuit related to Bombardier’s failure to pay to Triumph Aerostructures certain nonrecurring expenses incurred by Triumph Aerostructures during the development phase of a program pursuant to which Triumph Aerostructures agreed to design, manufacture, and supply the wing and related components for Bombardier’s Global 7500 business aircraft.

In May 2017, Triumph Aerostructures and Bombardier entered into a comprehensive settlement agreement that resolved all outstanding commercial disputes between them, including all pending litigation, related to the design, manufacture and supply of wing components for Bombardier’s Global 7000 business aircraft. The settlement reset the commercial relationship between the companies and allowed each company to better achieve its business objectives going forward.

During the fiscal year ended March 31, 2019, the Company continued to experience increase in costs on the completion of the flight testing and anticipated ongoing production costs that resulted in additional forward loss charges of $60.4 million. In February 2019, the Company transitioned responsibility for the Global 7500 wing program manufacturing operations of Aerospace Structures to Bombardier at which point Bombardier assumed the program's assets and obligations.

E2-Jets

Under our contract with Embraer, we had the exclusive right to design, develop and manufacture the center fuselage section III, rear fuselage section and various tail section components (rudder and elevator) for the E2-Jets over the initial 600 ship sets. The contract provided for funding on a fixed amount of nonrecurring costs, to be paid over a specified number of production units. Higher than expected spending on the E2-Jets program resulted in a near break-even estimated profit margin percentage, with additional potential future cost pressures as well as opportunities for improved performance. Risks related to additional engineering as well as the recurring cost profile remain on this program.

During the fiscal year ended March 31, 2018, the Company reached an agreement with AeroSpace Technologies of Korea Inc. ("ASTK") to optimize the supply chain under our portion of the E2 program. Under this agreement, ASTK will build and transport fuselage shipsets to Embraer and establish a facility in Brazil to manage stock and repairs locally. At the time, the Company maintained its role as the supply chain integrator on the program.

In April 2019, we announced an agreement to assign our contract with Embraer for the manufacture of structural components for their program to ASTK. Under this agreement, we will remain a supplier to ASTK for the rudder and elevator components. We anticipate completion of the assignment to ASTK in the second half of fiscal 2020.

G500/G600

We are in the final development stages for the Gulfstream G500/G600 programs, as these aircraft are expected to enter service in fiscal 2020. Transition of each of these programs from development to recurring production levels is dependent upon the success of each program at achieving flight testing and certification, as well as the ability of the OEM to generate acceptable levels of aircraft sales.

Further cost increases or an inability to meet revised recurring cost forecasts on the G500/G600 program may result in additional forward loss reserves in future periods, while improvements in future costs compared to current estimates or additional cost recovery may result in favorable adjustments if forward loss reserves are no longer required.

Boeing 747-8

As disclosed during fiscal 2016, Boeing announced a rate reduction to the 747-8 program, which lowered production to one plane every two months. The impact of the rate reduction resulted in additional forward loss during the fiscal year ended March 31, 2016.

In March 2017, the Company settled several outstanding change orders and open pricing on a number of its programs with Boeing. The agreement included pricing settlements, advanced payments, delivery schedule adjustments and the opportunity to extend the mutual relationship on future programs. The agreement also provided for continued build ahead on the 747-8 program through the end of the existing contract, resulting in a reduction to the previously recognized forward losses on the 747-8 program.

This program has stabilized with no additional forward losses being recognized in the fiscal years ended March 31, 2019 or 2018 and is anticipated to complete production by mid-fiscal 2021.

G280

We acquired both the G280 and G650 wing programs in fiscal 2015 and received proceeds for $160.0 million as both contracts were operating at a loss. While operations have improved on the G650 since acquisition as noted further below, the cost profile of the G280 wing program has continued to result in forward loss charges, including $29.1 million in the fiscal year ended March 31, 2019.

In April 2019, the Company and IAI reached an agreement to transition the manufacture of the G280 wing to IAI. The two companies have developed detailed transition plans to enable a seamless transition of work. Our contract with IAI will terminate upon completion of the transition of work. Our forward loss recognized in the fiscal year ended March 31, 2019, noted above includes the cost to transition, which is estimated to be completed in mid-fiscal 2021.

G650

In the first quarter of fiscal 2019, the Company reached an agreement with Gulfstream to optimize the supply chain on the Company's G650 work scope. The G650 wing box and wing completion work, which had been co-produced across three facilities at both companies, are being consolidated into Gulfstream's facilities in Savannah, Georgia. The Company maintains its role as the supply chain integrator on the program and has since returned this contract to modest profitability.

Although none of the development or production programs noted above individually are expected to have a material impact on our net revenues, they do have the potential, either individually or in the aggregate, to materially and negatively impact our consolidated results of operations if future changes in estimates result in the need for a forward loss provision. Absent any such loss provisions, we do not anticipate that any of these programs will significantly dilute our future consolidated margins.

Consistent with the Company's policy described in Note 2, the Company performs an annual assessment in its fiscal fourth quarter and on an interim basis upon the occurrence of events or substantive changes in circumstances that indicate a reporting unit's carrying value may be less than its fair value. During the fiscal year ended March 31, 2018, the Company performed an interim assessment of the fair value of its goodwill due to the Company's decision to combine the Aerospace Structures and Precision Components reporting segments into one reporting segment. In accordance with ASC 350-20-35-3C, there are several potential events and circumstances that could be indicators of goodwill impairment. A change in a company's reporting unit structure is one of these events, and when this does occur, a company must perform a "before and after" test of the reporting units. Additionally, the Company's enhanced visibility into its future cash flows based on its annual planning process was also an indicator. Consistent with the Company's policy, it performed the goodwill impairment test which includes using a combination of both the market and income approaches to estimate the fair value of each reporting unit.

After performing the "before" portion of the test of the reporting units the Company concluded that the former Precision Components' reporting unit had a fair value that was lower than its carrying value by an amount of $190.2 million. Accordingly, the Company recorded a non-cash impairment charge during the fiscal quarter ended December 31, 2017, of $190.2 million, which is presented on the accompanying consolidated statements of operations as impairment of intangible assets. The decline in fair value is the result of declining revenues from production rate reductions on sun-setting programs and the slower than previously projected ramp in our development programs and the timing of associated earnings and cash flows.

The Company then performed the "after" portion of the test of the reporting units and concluded that the new reporting unit of Aerospace Structures' goodwill had a fair value that was lower than its carrying value by an amount that exceeded the remaining goodwill for the reporting unit. Following the applicable accounting guidance, this impairment charge is deemed to have occurred during the Company's fiscal fourth quarter. Therefore, the Company recorded a non-cash impairment charge during the fiscal quarter ended March 31, 2018, of $345.0 million, which is presented on the consolidated statements of operations as impairment of intangible assets for the fiscal year ended March 31, 2018. The decline in fair value is the result of declining revenues from production rate reductions on sun-setting programs and the slower than previously projected ramp in our development programs and the timing of associated earnings and cash flows (See Note 2 for definition of fair value levels).

In the fourth quarter of the fiscal year ended March 31, 2017, we concluded that the goodwill related to the Aerospace Structures reporting unit was impaired as of the annual testing date. We recorded a non-cash impairment charge during the fourth quarter of the fiscal year ending March 31, 2017, of $535.2 million, which is presented on the accompanying consolidated statements of operations as impairment of intangible assets.

During the fiscal year ended March 31, 2017, as part of the Company's annual assessment, the Company determined that the remaining estimated useful life for the Vought tradename should be reduced from a useful life of 20 years to a useful life of 10 years, as it better represents the expected period of benefit to the Company's financial performance.

In the event of significant loss of revenues and related earnings associated with the Vought tradename, further impairment charges may be required, which would adversely affect our operating results.

During the quarter ended June 30, 2016, we settled a strike and agreed to a new collective bargaining agreement with our union employees with IAM District 751 at our Spokane, Washington facility which had expired during the quarter, resulting in a charge of $15.7 million due to disruption costs. During the fiscal year ended March 31, 2018, the Company ratified a collective bargaining agreement with its union employees with United Autoworkers of America and its Local Union 848 at its Red Oak, Texas facility. During the fiscal year ended March 31, 2019, the Company ratified a collective bargaining agreement with its union employees with United Autoworkers of America and its Local Union 952 at its Tulsa, Oklahoma facility. During the fiscal year ended March 31, 2019, the Stuart, Florida facility production and maintenance employees elected the United

Autoworkers of America, Local #2505, to represent them in collective bargaining with the Company. As of March 31, 2019, the union and the Company were still engaged in initial contract discussions.

As of March 31, 2019, none of the Company's collectively bargained workforce are working under contracts that are expired or will expire within one year. Upon the expiration of a contract, we may become unable to negotiate a contract with a workforce, therefore our operations may be disrupted and we may be prevented from completing production and delivery of products from those facilities, which would negatively impact our results. Contingency plans have been developed that would allow production to continue in the event of a strike.

During fiscal 2018, the Company sold all of the shares of (i) Triumph Processing - Embee Division, Inc. ("Embee") and (ii) Triumph Structures - Long Island ("TS-LI"), (collectively, the "fiscal 2018 divestitures") for total cash proceeds of $74.5 million and a combined loss of $28.3 million presented on the accompanying consolidated statements of operations as loss on divestitures and is included in Corporate. The operating results of Embee were included in Integrated Systems and the operating results of TS-LI were included in Aerospace Structures, respectively, through their dates of disposal.

During fiscal 2017, the Company sold (i) Triumph Air Repair, the Auxiliary Power Unit Overhaul Operations of Triumph Aviations Services - Asia, Ltd. and Triumph Engines - Tempe ("Engines and APU") and (ii) all of the shares of Triumph Aerospace Systems-Newport News, Inc. ("TAS-Newport News"), (collectively, the "fiscal 2017 divestitures") for total cash proceeds of $69.4 million and a combined loss of $19.1 million presented on the accompanying consolidated statements of operations as loss on divestitures and is included in Corporate. The operating results of Engines and APU were included in Product Support and the operating results TAS-Newport News were included in Integrated Systems, respectively, through their dates of disposal.

RESULTS OF OPERATIONS

The following includes a discussion of our consolidated and business segment results of operations. The Company's diverse structure and customer base do not provide for precise comparisons of the impact of price and volume changes to our results. However, we have disclosed the significant variances between the respective periods.

Non-GAAP Financial Measures

We prepare and publicly release annual audited and quarterly unaudited financial statements prepared in accordance with U.S. GAAP. In accordance with Securities and Exchange Commission (the "SEC") rules, we also disclose and discuss certain non-GAAP financial measures in our public filings and earning releases. Currently, the non-GAAP financial measures that we disclose are Adjusted EBITDA, which is our net loss before interest, income taxes, amortization of acquired contract liabilities, legal settlements, loss on divestitures, depreciation and amortization; and Adjusted EBITDAP, which is Adjusted EBITDA, before pension expense or benefit, including the effects of curtailments, settlements, and other early retirement incentives. We disclose Adjusted EBITDA on a consolidated and Adjusted EBITDAP on a consolidated and a reportable segment basis in our earnings releases, investor conference calls and filings with the SEC. The non-GAAP financial measures that we use may not be comparable to similarly titled measures reported by other companies. Also, in the future, we may disclose different non-GAAP financial measures in order to help our investors more meaningfully evaluate and compare our future results of operations with our previously reported results of operations.

We view Adjusted EBITDA and Adjusted EBITDAP as operating performance measures and, as such, we believe that the U.S. GAAP financial measure most directly comparable to such measures is net loss. In calculating Adjusted EBITDA and Adjusted EBITDAP, we exclude from net loss the financial items that we believe should be separately identified to provide additional analysis of the financial components of the day-to-day operation of our business. We have outlined below the type and scope of these exclusions and the material limitations on the use of these non-GAAP financial measures as a result of these exclusions. Adjusted EBITDA and Adjusted EBITDAP are not measurements of financial performance under U.S. GAAP and should not be considered as a measure of liquidity, as an alternative to net loss, or as an indicator of any other measure of performance derived in accordance with U.S. GAAP. Investors and potential investors in our securities should not rely on Adjusted EBITDA or Adjusted EBITDAP as a substitute for any U.S. GAAP financial measure, including net loss. In addition, we urge investors and potential investors in our securities to carefully review the reconciliation of Adjusted EBITDA and Adjusted EBITDAP to net loss set forth below, in our earnings releases and in other filings with the SEC and to carefully review the U.S. GAAP financial information included as part of our Quarterly Reports on Form 10-Q and our Annual Reports on Form 10-K that are filed with the SEC, as well as our quarterly earnings releases, and compare the U.S. GAAP financial information with our Adjusted EBITDA and Adjusted EBITDAP.

Adjusted EBITDA and Adjusted EBITDAP are used by management to internally measure our operating and management performance and by investors as a supplemental financial measure to evaluate the performance of our business that, when viewed with our U.S. GAAP results and the accompanying reconciliation, we believe provides additional information that is useful to gain an understanding of the factors and trends affecting our business. We have spent more than 20 years expanding our product and service capabilities, partially through acquisitions of complementary businesses. Due to the expansion of our operations, which included acquisitions, our net loss has included significant charges for depreciation and amortization. Adjusted EBITDA and Adjusted EBITDAP exclude these charges and provide meaningful information about the operating performance of our business, apart from charges for depreciation and amortization. We believe the disclosure of Adjusted EBITDA and Adjusted EBITDAP helps investors meaningfully evaluate and compare our performance from quarter to quarter and from year to year. We also believe Adjusted EBITDA and Adjusted EBITDAP are measures of our ongoing operating performance because the isolation of non-cash charges, such as depreciation and amortization, and non-operating items, such as interest, income taxes, pension and other postretirement benefits, provides additional information about our cost structure and, over time, helps track our operating progress. In addition, investors, securities analysts and others have regularly relied on Adjusted EBITDA and Adjusted EBITDAP to provide financial measures by which to compare our operating performance against that of other companies in our industry.

Set forth below are descriptions of the financial items that have been excluded from our net income to calculate Adjusted EBITDA and Adjusted EBITDAP and the material limitations associated with using these non-GAAP financial measures as compared with net loss or income from continuing operations:

- Gains or losses from divestitures may be useful for investors to consider because they reflect gains or losses from sale of operating units. We do not believe these earnings necessarily reflect the current and ongoing cash earnings related to our operations.
- Legal settlements, when applicable, may be useful for investors to consider because it reflects gains or losses from disputes with third parties. We do not believe these earnings necessarily reflect the current and ongoing cash earnings related to our operations.
- Non-service defined benefit income or expense from our pension and other postretirement benefit plans (inclusive of the adoption of ASU 2017-07 and certain pension related transactions such as curtailments, settlements, and early retirement incentives) may be useful for investors to consider because they represent the cost of postretirement benefits to plan participants, net of the assumption of returns on the plan's assets and are not indicative of the cash paid for such benefits. We do not believe these earnings (expenses) necessarily reflect the current and ongoing cash earnings related to our operations.
- Amortization of acquired contract liabilities may be useful for investors to consider because it represents the non-cash earnings on the fair value of off-market contracts acquired through acquisitions. We do not believe these earnings necessarily reflect the current and ongoing cash earnings related to our operations.
- Amortization expense (including intangible asset impairments) may be useful for investors to consider because it represents the estimated attrition of our acquired customer base and the diminishing value of product rights and licenses. We do not believe these charges necessarily reflect the current and ongoing cash charges related to our operating cost structure.
- Depreciation may be useful for investors to consider because it generally represents the wear and tear on our property and equipment used in our operations. We do not believe these charges necessarily reflect the current and ongoing cash charges related to our operating cost structure.
- The amount of interest expense and other we incur may be useful for investors to consider and may result in current cash inflows or outflows. However, we do not consider the amount of interest expense and other to be a representative component of the day-to-day operating performance of our business.
- Income tax expense may be useful for investors to consider because it generally represents the taxes which may be payable for the period and the change in deferred income taxes during the period and may reduce the amount of funds otherwise available for use in our business. However, we do not consider the amount of income tax expense to be a representative component of the day-to-day operating performance of our business.

Management compensates for the above-described limitations of using non-GAAP measures only to supplement our U.S. GAAP results and to provide additional information that is useful to gain an understanding of the factors and trends affecting our business.

The following table shows our Adjusted EBITDA and Adjusted EBITDAP reconciled to our net loss for the indicated periods (in thousands):

	Fiscal year ended March 31, 2019	2018	2017
Net loss (U.S. GAAP measure)	$ (321,767)	$ (425,391)	$ (42,952)
Loss on divestitures	235,301	30,741	19,124
Curtailments, settlements and early retirement incentives	4,165	(25,722)	—
Adoption of ASU 2017-07	87,241	—	—
Amortization of acquired contract liabilities	(67,314)	(125,148)	(121,004)
Depreciation and amortization *	149,904	693,595	443,244
Interest expense and other	114,619	99,442	80,501
Income tax (benefit) expense	(5,426)	(36,457)	19,340
Adjusted EBITDA (non-GAAP measure)	$ 196,723	$ 211,060	$ 398,253
Non-service defined benefit income (excluding settlements)	(66,270)	(77,512)	(88,085)
Adjusted EBITDAP (non-GAAP measure)	$ 130,453	$ 133,548	$ 310,168

* - Includes impairment charges related to intangible assets

The following tables show our Adjusted EBITDAP by reportable segment reconciled to our operating (loss) income for the indicated periods (in thousands):

	Fiscal year ended March 31, 2019				
	Total	Integrated Systems	Aerospace Structures	Product Support	Corporate/ Eliminations
Operating (loss) income	$ (274,679)	$ 157,615	$ (152,407)	$ 43,479	$ (323,366)
Loss on divestitures	235,301	—	—	—	235,301
Adoption of ASU 2017-07	87,241	—	87,241	—	—
Amortization of acquired contract liabilities	(67,314)	(34,121)	(33,193)	—	—
Depreciation and amortization	149,904	29,052	111,431	6,321	3,100
Adjusted EBITDAP	$ 130,453	$ 152,546	$ 13,072	$ 49,800	$ (84,965)

	Fiscal year ended March 31, 2018				
	Total	Integrated Systems	Aerospace Structures	Product Support	Corporate/ Eliminations
Operating (loss) income	$ (465,640)	$ 185,401	$ (568,164)	$ 45,702	$ (128,579)
Loss on divestitures	30,741	—	—	—	30,741
Amortization of acquired contract liabilities	(125,148)	(38,293)	(86,855)	—	—
Depreciation and amortization *	693,595	35,986	649,013	6,744	1,852
Adjusted EBITDAP	$ 133,548	$ 183,094	$ (6,006)	$ 52,446	$ (95,986)

* - Includes impairment charges related to intangible assets.

	Fiscal year ended March 31, 2017				
	Total	Integrated Systems	Aerospace Structures	Product Support	Corporate/ Eliminations
Operating (loss) income	$ (31,196)	$ 200,209	$ (177,489)	$ 55,801	$ (109,717)
Loss on divestitures	19,124	—	—	—	19,124
Amortization of acquired contract liabilities	(121,004)	(36,760)	(84,244)	—	—
Depreciation and amortization *	443,244	40,332	392,414	9,037	1,461
Adjusted EBITDAP	$ 310,168	$ 203,781	$ 130,681	$ 64,838	$ (89,132)

* - Includes impairment charges related to intangible assets.

The fluctuations from period to period within the amounts of the components of the reconciliations above are discussed further below within Results of Operations.

Fiscal year ended March 31, 2019, compared with fiscal year ended March 31, 2018

	Year Ended March 31,	
	2019	2018
	(in thousands)	
Net sales	$ 3,364,930	$ 3,198,951
Segment operating income (loss)	$ 48,687	$ (337,061)
Corporate expense	(323,366)	(128,579)
Total operating loss	(274,679)	(465,640)
Interest expense and other	114,619	99,442
Non-service defined benefit income	(62,105)	(103,234)
Income tax benefit	(5,426)	(36,457)
Net loss	$ (383,872)	$ (528,625)

Net sales increased by $166.0 million, or 5.2%, to $3.36 billion for the fiscal year ended March 31, 2019, from $3.20 billion for the fiscal year ended March 31, 2018. Net sales increases included the production ramp on Global 7500 of $232.5 million prior to transition. Organic sales adjusted for inter-segment sales increased $34.9 million, or 1.3%. The fiscal 2018 divestitures and fiscal 2019 divestitures, excluding the Global 7500 transition contributed $101.4 million to the net sales decrease as compared with the prior fiscal year. Organic sales increased primarily due to the rate increases on key commercial programs and higher volumes on military programs in Integrated Systems, as well as increased demand for structural component repair in Product Support, offset by decreased business jet sales from reduced scope of the G650 wing.

Cost of sales increased by $317.4 million, or 12.2%, to $2.92 billion for the fiscal year ended March 31, 2019, from $2.61 billion for the fiscal year ended March 31, 2018. Net sales increases from the production ramp on Global 7500 contributed $343.9 million increase in cost of sales prior to transition, including $60.4 million in forward loss charges. Organic cost of sales adjusted for inter-segment sales increased $121.3 million or 4.6% and included additional forward loss provisions from the adoption of ASU 2017-07 of $87.2 million, as well as $29.1 million on the G280 wing program The fiscal 2018 divestitures and fiscal 2019 divestitures, excluding the Global 7500 transition contributed $94.8 million to the cost of sales variance compared with the prior fiscal year. Organic gross margin for the fiscal year ended March 31, 2019, was 17.2% compared with 20.8% for the fiscal year ended March 31, 2018. The gross margin for the fiscal year ended March 31, 2019, decreased compared with the comparable prior year period due to the additional forward loss provisions noted above.

Gross margin included net unfavorable cumulative catch-up adjustments on long-term contracts of $68.7 million. The favorable cumulative catch-up adjustments to operating income included gross favorable adjustments of $46.1 million and gross unfavorable adjustments of $114.8 million. Additionally, the adoption of ASU 2017-07 resulted in a change in estimates due to a change in accounting principles of $87.2 million. Gross margins for fiscal 2018 included net favorable cumulative catch-up adjustments of $19.7 million.

Segment operating income increased by $385.7 million, or 114.4%, to an operating income of $48.7 million for the fiscal year ended March 31, 2019, from $337.1 million of operating loss for the fiscal year ended March 31, 2018. Organic operating income increased due to a prior year goodwill impairment charge of $535.2 million. The fiscal 2018 divestitures and fiscal 2019 divestitures contributed $16.7 million to an operating income decrease compared with the prior fiscal year.

Corporate operations incurred expenses of $323.4 million for the fiscal year ended March 31, 2019, as compared with $128.6 million for the fiscal year ended March 31, 2018. The corporate expenses included increased loss on divestitures of $204.6 million, partially offset by $13.0 million in decreased restructuring expenses.

Interest expense and other increased by $15.2 million, or 15.3%, to $114.6 million for the fiscal year ended March 31, 2019, compared with $99.4 million for the fiscal year ended March 31, 2018, due to higher interest rates and relative debt levels and the favorable net change in foreign exchange rate gain/loss of approximately $6.8 million compared with the prior year period.

Non-service defined benefit income decreased by $41.1 million, or 39.8%, to $62.1 million for the fiscal year ended March 31, 2019, compared with $103.2 million for the fiscal year ended March 31, 2018. The decrease was primarily due to nonrecurring income recognized in fiscal year 2018 from a curtailment of other post employment benefits of $26.3 million and changes in actuarial assumptions and experience which reduced income for fiscal year 2019 by $6.0 million.

The income tax benefit was $5.4 million for the fiscal year ended March 31, 2019, reflecting an effective tax rate of 1.7%. During the fiscal year ended March 31, 2019, the Company adjusted the valuation allowance against the consolidated net deferred tax asset by $252,243 primarily due to an increase in the net operating loss and changes to temporary differences related to ASC 606. As of March 31, 2019, management determined that it was necessary to maintain a valuation allowance against principally all of its net deferred tax assets.

As of March 31, 2019, we have a valuation allowance against substantially all of our net deferred tax assets given the insufficient positive evidence to support the realization of our deferred tax assets. We intend to continue maintaining a valuation allowance on our deferred tax assets until there is sufficient positive evidence to support the reversal of all or some portion of these allowances. A reduction in the valuation allowance could result in a significant decrease in income tax expense in the period that the release is recorded. However, the exact timing and amount of the reduction in our valuation allowance are unknown at this time and will be subject to the earnings level we achieve as well as our projected income in future periods.

Fiscal year ended March 31, 2018, compared with fiscal year ended March 31, 2017

	Year Ended March 31,	
	2018	2017
	(in thousands)	
Net sales	$ 3,198,951	$ 3,532,799
Segment operating (loss) income	$ (337,061)	$ 78,521
Corporate expenses	(128,579)	(109,717)
Total operating loss	(465,640)	(31,196)
Interest expense and other	99,442	80,501
Non-service defined benefit income	(103,234)	(88,085)
Income tax (benefit) expense	(36,457)	19,340
Net loss	$ (528,625)	$ (131,037)

Net sales decreased by $333.8 million, or 9.4%, to $3.2 billion for the fiscal year ended March 31, 2018, from $3.5 billion for the fiscal year ended March 31, 2017. Organic sales adjusted for inter-segment sales decreased $218.4 million, or 6.4%. The fiscal 2017 divestitures and the divestiture of Embee contributed $110.5 million to the net sales decrease as compared with the prior fiscal year. Organic sales decreased primarily due to the completion of and continued rate reductions on certain Boeing and Gulfstream programs, along with the timing of deliveries on certain programs. These factors were partially offset by increased production on the 767/Tanker program.

Cost of sales decreased by $166.9 million, or 6.0%, to $2.6 billion or the fiscal year ended March 31, 2018, from $2.8 billion for the fiscal year ended March 31, 2017. Organic cost of sales adjusted for inter-segment sales decreased $69.4 million or 2.7%. The fiscal 2017 divestitures and the divestiture of Embee contributed $80.7 million to the cost of sales decrease as compared with the prior fiscal year. Organic gross margin for the fiscal year ended March 31, 2018, was 20.6% compared with 23.7% for the fiscal year ended March 31, 2017. The gross margin for the fiscal year ended March 31, 2018, decreased compared with the comparable prior year due to the completion of certain Boeing and Gulfstream programs as noted above,

Gross margin included net favorable cumulative catch-up adjustments on long-term contracts of $19.7 million. The favorable cumulative catch-up adjustments to operating income included gross favorable adjustments of $85.8 million and gross unfavorable adjustments of $66.2 million. Gross margins for fiscal 2017 included net favorable cumulative catch-up adjustments of $57.2 million, of which $131.4 million was related to the reduction of the previously recorded forward losses on the 747-8 program, partially offset by the correction of an immaterial error of $12.7 million.

Segment operating income decreased by $415.6 million, or 529.3%, to an operating loss of $337.1 million for the fiscal year ended March 31, 2018, from $78.5 million of operating income for the fiscal year ended March 31, 2017. Organic operating income decreased $398.9 million. The fiscal 2017 divestitures and divestiture of Embee contributed $16.7 million to the operating income decrease compared with the prior fiscal year. Organic operating income decreased for the fiscal year ended March 31, 2018, due to the decline in organic gross margin noted above and the previously mentioned goodwill impairment charge of $535.2 million.

Corporate operations incurred expenses of $128.6 million for the fiscal year ended March 31, 2018, as compared with $109.7 million for the fiscal year ended March 31, 2017. The increase in corporate expenses of $18.9 million or 17.2%, included increased loss on divestitures of $11.6 million and $8.6 million in increased diligence costs associated with divestiture actions.

Interest expense and other increased by $18.9 million, or 23.5%, to $99.4 million for the fiscal year ended March 31, 2018, compared with $80.5 million for the prior fiscal year due higher interest rates, the impairment of deferred financing fees due to the amendment to the Credit Facility and the extinguishment of the Term Loan of approximately $5.2 million and the unfavorable net change in foreign exchange rate gain/loss of approximately $7.6 million compared with the prior year period.

The income tax benefit was $36.5 million for the fiscal year ended March 31, 2018, reflecting an effective tax rate of 7.9%. The rate reflects an adjustment associated with the impairment charge recognized related to Aerospace Structures which was not deductible for tax purposes. During the fiscal year ended March 31, 2018, the Company increased the valuation allowance against certain of its net deferred tax assets generated from the current year temporary differences, the Tax Cuts and Jobs Act of 2017, and increase the valuation allowance on certain foreign deferred tax assets.

Business Segment Performance

We report our financial performance based on the following three reportable segments: Integrated Systems, Aerospace Structures, and Product Support. The Company's Chief Operating Decision Maker ("CODM") utilizes Adjusted EBITDA as a primary measure of profitability to evaluate performance of its segments and allocate resources.

The results of operations among our reportable segments, as well as our operating segments, vary due to differences in competitors, customers, extent of proprietary deliverables and performance. For example, Integrated Systems, which generally includes proprietary products and/or arrangements where we become the primary source or one of a few primary sources to our customers, our unique manufacturing capabilities command a higher margin. Also OEMs are increasingly focusing on assembly activities while outsourcing more manufacturing and repair to third parties, and as a result, are less of a competitive force than in previous years. This compares to Aerospace Structures, which generally includes long-term sole-source or preferred supplier contracts and the success of these programs provides a strong foundation for our business and positions us well for future growth on new programs and new derivatives. In contrast, Product Support provides MRO services on components and accessories manufactured by third parties, with more diverse competition, including airlines, OEMs and other third-party service providers. In addition, variability in the timing and extent of customer requests performed in Product Support can provide for greater volatility and less predictability in revenue and earnings than that experienced in Integrated Systems, and Aerospace Structures segments.

Integrated Systems consists of the Company’s operations that provide integrated solutions, including design, development and support of proprietary components, subsystems and systems, as well as production of complex assemblies using external designs. Capabilities include hydraulic, mechanical and electromechanical actuation, power and control; a complete suite of aerospace gearbox solutions, including engine accessory gearboxes and helicopter transmissions; active and passive heat exchange technology; fuel pumps, fuel metering units and Full Authority Digital Electronic Control fuel systems; hydromechanical and electromechanical primary and secondary flight controls.

Aerospace Structures consists of the Company’s operations that supply commercial, business, regional and military manufacturers with large metallic and composite structures and aircraft interior systems, including air ducting and thermal acoustic insulations systems. Products include wings, wing boxes, fuselage panels, horizontal and vertical tails, subassemblies such as floor grids, and aircraft interior systems, including air ducting and thermal acoustic insulations systems. Aerospace Structures also has the capability to engineer detailed structural designs in metal and composites. Capabilities include advanced composite and interior structures, joining processes such as welding, autoclave bonding and conventional mechanical fasteners and a variety of special processes, including: super plastic titanium forming, aluminum and titanium chemical milling, surface treatments, and integrated testing and certification services.

Product Support consists of the Company’s operations that provide full life cycle solutions for commercial, regional and military aircraft. The Company’s extensive product and service offerings include full post-delivery value chain services that simplify the MRO supply chain. Through its ground support equipment maintenance, component MRO and post-production supply chain activities, Product Support is positioned to provide integrated planeside repair solutions globally. Capabilities include metallic and composite aircraft structures; nacelles; thrust reversers; interiors; auxiliary power units; and a wide variety of pneumatic, hydraulic, fuel and mechanical accessories.

We currently generate a majority of our revenue from clients in the commercial aerospace industry, the military, the business jet industry and the regional airline industry. Our growth and financial results are largely dependent on continued demand for our products and services from clients in these industries. If any of these industries experiences a downturn, our clients in these sectors may conduct less business with us. The following table summarizes our net sales by end market by business segment. The loss of one or more of our major customers or an economic downturn in the commercial airline or the military and defense markets could have a material adverse effect on our business.

	Year Ended March 31,		
	2019	2018	2017
Integrated Systems			
Commercial aerospace	16.6%	15.1%	13.8%
Military	10.6	10.2	10.3
Business Jets	1.7	1.7	1.8
Regional	1.0	1.0	0.9
Non-aviation	0.8	1.0	1.0
Total Integrated Systems net sales	30.7%	29.0%	27.8%
Aerospace Structures			
Commercial aerospace	33.9%	34.6%	36.2%
Military	8.6	10.2	10.6
Business Jets	16.8	15.6	16.6
Regional	0.7	0.5	0.4
Non-aviation	0.7	0.4	0.4
Total Aerospace Structures net sales	60.7%	61.3%	64.2%
Product Support			
Commercial aerospace	7.2%	7.5%	6.1%
Military	0.9	1.5	1.4
Regional	0.5	0.7	0.5
Non-aviation	—	—	—
Total Product Support net sales	8.6%	9.7%	8.0%
Total Consolidated net sales	100.0%	100.0%	100.0%

We continue to experience a higher proportion of our sales mix in the commercial aerospace end market for across all three segments due to the 737, 767/Tanker, 777, 787, A320 and A330 programs. We have experienced a decrease in our military end market due to the wind-down of the C-17 program, while we have had increases in Aerospace Structures Business Jet end market from the Global 7500, prior to the transition in February 2019.

Business Segment Performance—Fiscal year ended March 31, 2019, compared with fiscal year ended March 31, 2018

	Year Ended March 31,		% Change	% of Total Sales	
	2019	2018		2019	2018
	(in thousands)				
NET SALES					
Integrated Systems	$ 1,042,947	$ 986,351	5.7%	31.0 %	30.9 %
Aerospace Structures	2,062,404	1,954,729	5.5%	61.2 %	61.2 %
Product Support	283,743	281,913	0.6%	8.4 %	8.8 %
Elimination of inter-segment sales	(24,164)	(24,042)	0.5%	(0.6)%	(0.9)%
Total net sales	$ 3,364,930	$ 3,198,951	5.2%	100.0 %	100.0 %

	Year Ended March 31,		% Change	% of Segment Sales	
	2019	2018		2019	2018
	(in thousands)				
SEGMENT OPERATING (LOSS) INCOME					
Integrated Systems	$ 157,615	$ 185,401	(15.0)%	15.1 %	18.8 %
Aerospace Structures	(152,407)	(568,164)	73.2 %	(7.4)%	(29.1)%
Product Support	43,479	45,702	(4.9)%	15.3 %	16.2 %
Corporate	(323,366)	(128,579)	(151.5)%	n/a	n/a
Total segment operating (loss) income	$ (274,679)	$ (465,640)	41.0 %	(8.2)%	(14.6)%

	Year Ended March 31,		% Change	% of Segment Sales	
	2019	2018		2019	2018
	(in thousands)				
Adjusted EBITDAP					
Integrated Systems	$ 152,546	$ 183,094	(16.7)%	14.6%	18.6 %
Aerospace Structures	13,072	(6,006)	317.6 %	0.6%	(0.3)%
Product Support	49,800	52,446	(5.0)%	17.6%	18.6 %
Corporate	(84,965)	(95,986)	11.5 %	n/a	n/a
	$ 130,453	$ 133,548	2.3 %	3.9%	4.2 %

Integrated Systems: Integrated Systems net sales increased by $56.6 million, or 5.7%, to $1,042.9 million for the fiscal year ended March 31, 2019, from $986.4 million for the fiscal year ended March 31, 2018. Organic sales increased by $74.7 million, or 7.7%. The divestiture of Embee contributed $18.1 million to the net sales variance. Organic sales increased primarily due to rate increases on key commercial programs and higher volumes on certain military programs.

Integrated Systems cost of sales increased by $82.0 million, or 12.4%, to $740.8 million for the fiscal year ended March 31, 2019, from $658.8 million for the fiscal year ended March 31, 2018. Organic cost of sales increased by $98.8 million, or 15.3%, while the divestiture of Embee contributed $13.2 million reduction to cost of sales. Organic gross margin for the fiscal year ended March 31, 2019, was 28.8% compared with 33.5% for the fiscal year ended March 31, 2018. The decrease in gross margin for the fiscal year ended March 31, 2019, is the result of sales mix, the higher costs incurred to drive future operational improvements noted above, increased costs on a development program and a favorable settlement of customer assertions in the comparable prior period.

Integrated Systems operating income decreased by $27.8 million, or 15.0%, to $157.6 million for the fiscal year ended March 31, 2019, from $185.4 million for the fiscal year ended March 31, 2018. Organic operating income decreased $27.6 million, or 15.7%, while the divestiture of Embee contributed $0.2 million to operating income in the prior year period.

Organic operating income decreased due to the decreased gross margin noted above and increased restructuring expenses of $4.1 million. These same factors contributed to the decrease in Adjusted EBITDAP year over year.

Integrated Systems operating income as a percentage of segment sales decreased to 15.1% for the fiscal year ended March 31, 2019, as compared with 18.8% for the fiscal year ended March 31, 2018, due to the gross margin increases. These same factors contributed to the decrease in Adjusted EBITDAP margin year over year.

Aerospace Structures: Aerospace Structures net sales increased by $107.7 million, or 5.5%, to $2.06 billion for the fiscal year ended March 31, 2019, from $1.95 billion for the fiscal year ended March 31, 2018. Net sales increases included the production ramp on Global 7500 of $232.5 million prior to transition. Organic net sales decreased $54.8 million due to declines in business jet, primarily on our change in scope on the G650 program. The fiscal 2019 Aerospace Structures divestitures, excluding the Global 7500 transition contributed $71.1 million to the net sales variance.

Aerospace Structures cost of sales increased by $232.0 million, or 13.1%, to $2.00 billion for the fiscal year ended March 31, 2019, from $1.77 billion for the fiscal year ended March 31, 2018. The cost of sales increase was driven by the increased sales and included additional forward loss provisions from the adoption of ASU 2017-07 of $87.2 million, as well as from the Bombardier Global 7500 program of $60.4 million prior to transition and $29.1 million on the G280 wing program.

Gross margin for the fiscal year ended March 31, 2019, was 3.1% compared with 9.7% for the fiscal year ended March 31, 2018. The decreased gross margin is due to additional forward loss charges noted above. In addition to the forward loss provision from the adoption of ASU 2017-07 noted above, the gross margin included net unfavorable cumulative catch-up adjustments of $68.7 million. The net unfavorable cumulative catch-up adjustments included gross favorable adjustments of $46.1 million and gross unfavorable adjustments of $114.8 million. The net unfavorable cumulative catch-up adjustment for the fiscal year ended March 31, 2016, was $19.7 million.

Aerospace Structures operating loss decreased by $415.8 million, or 73.2%, to $152.4 million for the fiscal year ended March 31, 2019, from a loss of $568.2 million for the fiscal year ended March 31, 2018. The decreased operating loss for the fiscal year ended March 31, 2019 is due to the aforementioned goodwill impairment charge of $535.2 million in the prior year period, partially offset by the additional forward loss charges noted above. The Adjusted EBITDAP is adjusted for the adoption of ASU 2017-07 and increased for the fiscal year ended March 31, 2019, due to the increased sales.

Aerospace Structures operating loss as a percentage of segment sales improved to 7.4% for the fiscal year ended March 31, 2019, as compared with 29.1% for the fiscal year ended March 31, 2018, due to the goodwill impairment charge in the prior year period discussed above. The Adjusted EBITDAP margin improvement was also affected by the increased sales noted above.

Product Support: Product Support net sales increased by $1.8 million, or 0.6%, to $283.7 million for the fiscal year ended March 31, 2019, from $281.9 million for the fiscal year ended March 31, 2018. Organic sales increased $14.1 million or 5.9% and the divestitures of NAAS, RPL, Engines and APU contributed $12.3 million to the variance. Organic sales increased primarily due to increased demand in structural component repairs.

Product Support cost of sales increased by $3.5 million, or 1.7%, to $210.8 million for the fiscal year ended March 31, 2019, from $207.4 million for the fiscal year ended March 31, 2018. Organic cost of sales increased $11.5 million, or 6.5%, and the divestitures of NAAS, RPL, Engines and APU contributed $8.0 million to the variance. Organic cost of sales increased for the current year period due to the increased sales noted above. Organic gross margin for the fiscal year ended March 31, 2019, was 26.3% compared with 26.7% for the fiscal year ended March 31, 2018. The gross margin decrease was impacted by learning curves on new repair programs.

Product Support operating income decreased by $2.2 million, or 4.9%, to $43.5 million for the fiscal year ended March 31, 2019, from $45.7 million for the fiscal year ended March 31, 2018. Organic operating income was consistent year over year and the divestitures of NAAS, RPL, Engines and APU contributed $2.3 million of the variance to the prior year period. The Adjusted EBITDAP year over year, decreased due to the divestitures of NAAS, RPL, Engines and APU, as noted above.

Product Support operating income as a percentage of segment sales decreased to 15.3% for the fiscal year ended March 31, 2019, as compared with 16.2% for the fiscal year ended March 31, 2018, due to changes to gross margin noted above. The same factors contributed to the decrease in Adjusted EBITDAP margin year over year.

Business Segment Performance—Fiscal year ended March 31, 2018, compared with fiscal year ended March 31, 2017

	Year Ended March 31,		% Change	% of Total Sales	
	2018	2017		2018	2017
	(in thousands)				
NET SALES					
Integrated Systems	$ 986,351	$ 1,040,805	(5.2)%	30.9 %	29.5 %
Aerospace Structures	1,954,729	2,172,768	(10.0)%	61.2 %	61.5 %
Product Support	281,913	338,325	(16.7)%	8.8 %	9.6 %
Elimination of inter-segment sales	(24,042)	(19,099)	25.9 %	(0.9)%	(0.5)%
Total net sales	$ 3,198,951	$ 3,532,799	(9.4)%	100.0 %	100.0 %

	Year Ended March 31,		% Change	% of Segment Sales	
	2018	2017		2018	2017
	(in thousands)				
SEGMENT OPERATING INCOME (LOSS)					
Integrated Systems	$ 185,401	$ 200,209	(7.4)%	18.8%	19.2%
Aerospace Structures	(568,164)	(177,489)	N/M	(29.1)%	(8.2)%
Product Support	45,702	55,801	(18.1)%	16.2%	16.5%
Corporate	(128,579)	(109,717)	17.2%	n/a	n/a
Total segment operating income (loss)	$ (465,640)	$ (31,196)	1,392.6%	(14.6)%	(0.9)%

	Year Ended March 31,		% Change	% of Segment Sales	
	2018	2017		2018	2017
	(in thousands)				
Adjusted EBITDAP					
Integrated Systems	$ 183,094	$ 203,781	(10.2)%	18.6 %	19.6 %
Aerospace Structures	(6,006)	130,681	N/M	(0.3)%	6.0 %
Product Support	52,446	64,838	(19.1)%	18.6 %	19.2 %
Corporate	(95,986)	(89,132)	7.7 %	n/a	n/a
	$ 133,548	$ 310,168	(56.9)%	11.4 %	(4.3)%

Integrated Systems: Integrated Systems net sales decreased by $54.5 million, or 5.2%, to $986.4 million for the fiscal year ended March 31, 2018, from $1.04 billion for the fiscal year ended March 31, 2017. Organic sales decreased by $21.6 million, or 2.2%. The divestitures of TAS-Newport News and Embee contributed $32.9 million in sales. Organic sales declined primarily due to rate reductions on A380 and 777 programs and timing of deliveries on other key commercial and military programs, partially offset by increased sales on the 737 program.

Integrated Systems cost of sales decreased by $31.0 million, or 4.5%, to $658.8 million for the fiscal year ended March 31, 2018, from $689.8 million for the fiscal year ended March 31, 2017. Organic cost of sales decreased by $9.4 million, or 1.5%, while the divestitures of TAS-Newport News and Embee contributed $21.4 million to cost of sales. Organic gross margin for the fiscal year ended March 31, 2018, was 33.5% compared with 33.9% for the fiscal year ended March 31, 2017.

Integrated Systems segment operating income decreased by $14.8 million, or 7.4%, to $185.4 million for the fiscal year ended March 31, 2018, from $200.2 million for the fiscal year ended March 31, 2017. Organic operating income decreased $10.9 million, or 5.6%, while the divestitures of TAS-Newport News and Embee contributed $3.9 million to operating income. Organic operating income decreased due to the decreased sales noted above. These same factors contributed to the decrease in Adjusted EBITDAP year over year.

Integrated Systems segment operating income as a percentage of segment sales increased to 18.8% for the fiscal year ended March 31, 2018, as compared with 19.2% for the fiscal year ended March 31, 2017.

Aerospace Structures: Aerospace Structures net sales decreased by $218.0 million, or 10.0%, to $1.95 billion for the fiscal year ended March 31, 2018, from $2.17 billion for the fiscal year ended March 31, 2017. Sales decreased primarily due to the completion of and continued rate reductions on certain Boeing and Gulfstream programs and partially offset by rate increases on 767/Tanker and Global Hawk/Triton programs.

Aerospace Structures cost of sales decreased by $92.4 million, or (5.0)%, to $1.77 billion for the fiscal year ended March 31, 2018, from $1.86 billion for the fiscal year ended March 31, 2017. The cost of sales were negatively impacted by the decreased sales as noted above.

Gross margin for the fiscal year ended March 31, 2018, was 9.7% compared with 14.5% for the fiscal year ended March 31, 2017. The decreased gross margin is due to change in product mix. The gross margin included net favorable cumulative catch-up adjustments of $19.7 million. The net favorable cumulative catch-up adjustments included gross favorable adjustments of $85.8 million and gross unfavorable adjustments of $66.2 million. The net unfavorable cumulative catch-up adjustment for the fiscal year ended March 31, 2017, was $57.2 million.

Aerospace Structures operating loss increased by $390.7 million, or 220.1%, to $568.2 million for the fiscal year ended March 31, 2018, from $177.5 million for the fiscal year ended March 31, 2017. The increased operating loss for the fiscal year ended is due to the aforementioned goodwill impairment charge of $535.2 million. The Adjusted EBITDAP decreased for the fiscal year ended March 31, 2018, due to the decreased sales noted above.

Aerospace Structures operating loss as a percentage of segment sales increased to (29.1)% for the fiscal year ended March 31, 2018, as compared with (8.2)% for the fiscal year ended March 31, 2017, due to the goodwill impairment charge noted above. The Adjusted EBITDAP margin decline was also impacted by the decreased gross margin noted above.

Product Support: Product Support net sales increased by $56.4 million, or 16.7%, to $281.9 million for the fiscal year ended March 31, 2018, from $338.3 million for the fiscal year ended March 31, 2017. Organic sales increased $21.2 million or 8.4% and the divestiture of Engines and APU contributed $77.6 million to the prior year period. Organic sales increased due to increased demand from OEM customers.

Product Support cost of sales increased by $38.5 million, or 15.7%, to $207.4 million for the fiscal year ended March 31, 2018, from $245.9 million for the fiscal year ended March 31, 2017. Organic cost of sales increased $20.7 million, or 11.5%, and the divestiture of Engines and APU contributed $59.2 million to the prior year period. Organic cost of sales increased for the current year period due to the increased sales noted above. Organic gross margin for the fiscal year ended March 31, 2018, was 26.7% compared with 28.7% for the fiscal year ended March 31, 2017. The gross margin decreased for the fiscal year ended March 31, 2018 due to sales mix.

Product Support operating income decreased by $10.1 million, or 18.1%, to $45.7 million for the fiscal year ended March 31, 2018, from $55.8 million for the fiscal year ended March 31, 2017. Organic operating income increased $2.8 million, or 6.6% and the divestiture of the Engines and APU contributed $12.9 million compared with the prior year period. Organic operating income increased due to sales factors as noted above. These Adjusted EBITDAP year over year, decreased due to the divestiture of Engines and APU, as noted above.

Product Support operating income as a percentage of segment sales decreased to 16.2% for the fiscal year ended March 31, 2018, as compared with 16.5% for the fiscal year ended March 31, 2017, due to the changes in gross margin noted above. The same factors contributed to the increase in Adjusted EBITDAP margin year over year.

Liquidity and Capital Resources

Our working capital needs are generally funded through cash flow from operations and borrowings under our credit arrangements. During the year ended March 31, 2019, we used approximately $174.4 million of cash flow from operating activities, received approximately $200.5 million from investing activities and received approximately $32.5 million in financing activities.

For the fiscal year ended March 31, 2019, we had a net cash outflow of $174.4 million from operating activities, a decrease of $114.5 million, compared with a net cash outflow of $288.9 million for the fiscal year ended March 31, 2018. We invested in inventory and contract assets for new programs which impacts our cash flows from operating activities. Cash flows used on new programs included approximately $230.0 million and $16.0 million pertaining to the Bombardier Global 7500 program, through the date of transition in February 2019, and the Embraer E-Jet, respectively. The Company received approximately $125.0 million in customer advances. In addition, the Company liquidated approximately $177.0 million of prior period advances against current period deliveries. The Company also received approximately $20 million to settle an indemnification receivable initially recognized related to a specific matter that we acquired from the seller.

Cash flows provided by investing activities for the fiscal year ended March 31, 2019, increased $162.3 million from the fiscal year ended March 31, 2018. Cash flows provided by investing activities for the fiscal year ended March 31, 2019, included cash from the fiscal 2019 divestitures of $247.6 million offset by capital expenditures of $47.1 million. Cash flows used in investing activities for the fiscal year ended March 31, 2018, included cash from the fiscal 2018 divestitures of $83.1 million, offset by capital expenditures of $42.1 million.

Cash flows provided by financing activities for the fiscal year ended March 31, 2019, were $32.5 million, compared with cash flows provided by financing activities for the fiscal year ended March 31, 2018, of $213.6 million. Cash flows provided by financing activities for the fiscal year ended March 31, 2019, included additional borrowings to fund operations. Cash flows provided by financing activities for the fiscal year ended March 31, 2018, included the issuance of our Senior Notes due 2025 of $500.0 million, offset by repayment of the 2013 Term Loan of $302.3 million, payment of financing fees $17.7 million and additional borrowings on our Credit Facility (as defined below).

As of March 31, 2019, the Company had $92.8 million of cash and $454.2 million was available under the Company's existing credit agreement ("Credit Facility"). On March 31, 2019, an aggregate amount of approximately $215.0 million in outstanding borrowings and approximately $30.8 million in letters of credit were outstanding under the Credit Facility, all of which were accruing interest at LIBOR plus applicable basis points totaling approximately 6.00% per annum. Amounts repaid under the Credit Facility may be reborrowed.

In July 2018, the Company, its subsidiary co-borrowers and guarantors entered into a Tenth Amendment to the Credit Agreement (the “Tenth Amendment” and the existing Credit Agreement as amended by the Tenth Amendment, the "Credit Agreement") and with the Administrative Agent and the Lenders party thereto. Among other things, the Tenth Amendment modifies certain financial covenants and other terms and lowered the capacity to $700.0 million upon the earlier of completion of certain asset sales or March 31, 2019. The fiscal 2019 divestitures described in Note 3 resulted in this reduction occurring as of March 8, 2019. Pursuant to additional provisions in our debt agreements, additional excess proceeds must be reinvested in the business or used to further permanently reduce outstanding debt within twelve months of asset sale. The Tenth Amendment also adds an additional mandatory prepayment provision requiring that the Company prepay the outstanding revolving credit loans as set forth in the Tenth Amendment.

In connection with the Tenth Amendment to the Credit Agreement, the Company incurred $1.7 million of financing costs. These costs, along with the $9.0 million of unamortized financing costs subsequent to the Ninth Amendment, are being amortized over the remaining term of the Credit Agreement. In accordance with the reduction in the capacity of the Credit Agreement, the Company wrote off a proportional amount of unamortized financing fees existing prior to the Tenth Amendment.

In July 2017, the Company entered into a Ninth Amendment to the Third Amended and Restated Credit Agreement, with the Administrative Agent and the Lenders party thereto to, among other things, (i) permit the Company to incur High Yield Indebtedness (as defined in the Credit Agreement) in an aggregate principal amount of up to $500.0 million, subject to the Company’s obligations to apply the net proceeds from this offering to repay the outstanding principal amount of the term loans in full, (ii) limit the mandatory prepayment provisions to eliminate the requirement that net proceeds received from the incurrence of Permitted Indebtedness (as defined in the Credit Agreement), including the High Yield Indebtedness, be applied to reduce the revolving credit commitments once the revolving credit commitments have been reduced to $800.0 million, (iii) amend certain covenants and other terms and (iv) modify the current interest rate and letter of credit pricing tiers.

In connection with the Ninth Amendment to the Credit Agreement, the Company incurred $0.6 million of financing costs. These costs, along with the $13.2 million of unamortized financing costs subsequent to the amendment, are being amortized over the remaining term of the Credit Agreement. In accordance with the reduction in the capacity of the Credit Agreement, the Company wrote-off a proportional amount of unamortized financing fees prior to the amendment.

In May 2017, the Company entered into an Eighth Amendment to the Third Amended and Restated Credit Agreement, among the Company and its lenders to, among other things, (i) eliminate the total leverage ratio financial covenant, (ii) increase the maximum permitted senior secured leverage ratio financial covenant applicable to each fiscal quarter, commencing with the fiscal quarter ended March 31, 2017, and to revise the step-downs applicable to such financial covenant, (iii) reduce the aggregate principal amount of commitments under the revolving line of credit to $850.0 million from $1,000.0 million, (iv) modify the maturity date of the term loans so that all of the term loans will mature on March 31, 2019, and (v) establish a new higher pricing tier for the interest rate, commitment fee and letter of credit fee pricing provisions.

On March 28, 2016, the Company entered into a Purchase Agreement ("Receivables Purchase Agreement") to sell certain accounts receivables to a financial institution without recourse. The Company was the servicer of the accounts receivable under the Receivables Purchase Agreement. Interest rates are based on LIBOR plus 0.65% - 0.70%. As of March 31, 2017, the Company sold $78.0 million, worth of eligible accounts receivable. The Company currently has no capacity under the Receivables Purchase Agreement to sell accounts receivable.

The level of unused borrowing capacity under the Credit Facility varies from time to time depending in part upon its compliance with financial and other covenants set forth in the related agreement. The Credit Facility contains certain affirmative and negative covenants, including limitations on specified levels of indebtedness to earnings before interest, taxes, depreciation and amortization, and interest coverage requirements, and includes limitations on, among other things, liens, mergers, consolidations, sales of assets, payment of dividends and incurrence of debt. As of March 31, 2019, the Company was in compliance with all such covenants.

In November 2017, the Company amended its receivable securitization facility (the "Securitization Facility"), decreasing the purchase limit from $225.0 million to $125.0 million and extending the term through November 2020.

In August 2017, the Company issued $500.0 million principal amount of 7.750% Senior Notes due 2025 (the "2025 Notes"). The 2025 Notes were sold at 100% of principal amount and have an effective interest yield of 7.750%. Interest on the 2025 Notes accrues at the rate of 7.750% per annum and is payable semiannually in cash in arrears on February 15 and August 15 of each year, commencing on February 15, 2018. We used the net proceeds to payoff the Term Loan and to reduce the outstanding balance of the Revolver. In connection with the issuance of the 2025 Notes, the Company incurred approximately $8.8 million of costs, which were deferred and are being amortized on the effective interest method over the term of the 2025 Notes.

In June 2014, the Company issued the 2022 Notes for $300.0 million in principal amount. The 2022 Notes were sold at 100% of principal amount and have an effective yield of 5.25%. Interest on the 2022 Notes is payable semiannually in cash in arrears on June 1 and December 1 of each year. We used the net proceeds to redeem the 2018 Notes and pay related fees and expenses. In connection with the issuance of the 2022 Notes, the Company incurred approximately $5.0 million of costs, which were deferred and are being amortized on the effective interest method over the term of the notes.

In February 2013, the Company issued the 2021 Notes for $375.0 million in principal amount. The 2021 Notes were sold at 100% of principal amount and have an effective interest yield of 4.875%. Interest on the 2021 Notes is payable semiannually in cash in arrears on April 1 and October 1 of each year. We used the net proceeds to repay borrowings under our Credit Facility and pay related fees and expenses, and for general corporate purposes. In connection with the issuance of the 2021 Notes, the Company incurred approximately $6.3 million of costs, which were deferred and are being amortized on the effective interest method over the term of the notes.

For further information on the Company's long-term debt, see Note 10 of "Notes to Consolidated Financial Statements."

For the fiscal year ended March 31, 2018, we had a net cash outflow of $288.9 million from operating activities, an decrease of $570.4 million, compared with a net cash inflow of $281.5 million for the fiscal year ended March 31, 2017. During fiscal 2018, the net cash used in operating activities was primarily attributable to decreased receipts from customers ($873.1 million), offset by the timing of payments on accounts payable and other accrued expenses driven by decreased pre-production costs, and net spending on the G280 and G650 Programs ($407.2 million).

We continue to invest in inventory for new programs, which impacts our cash flows from operating activities. During fiscal 2018, expenditures for inventory costs on new programs, excluding progress payments, including the Bombardier Global 7000/8000 and the Embraer E-Jet programs, were $384.9 million and $35.1 million, respectively. Additionally, inventory for mature programs declined due to decreased production rates and the utilization of build ahead inventory, by approximately $144.4 million. Unliquidated progress payments netted against inventory increased $162.5 million due to timing of receipts and resolution of open assertions.

Cash flows provided by investing activities for the fiscal year ended March 31, 2018, increased $3.9 million from the fiscal year ended March 31, 2017. Cash flows provided by investing activities for the fiscal year ended March 31, 2018, included cash from the divestitures of TS-LI and Embee of $83.1 million offset by capital expenditures of $42.1 million. Cash flows used in investing activities for the fiscal year ended March 31, 2017, included cash from the divestitures of TAS - Newport News and Engines and APU of $86.2 million, offset by capital expenditures of $51.8 million.

Capital expenditures were $47.1 million for the fiscal year ended March 31, 2019. We funded these expenditures through cash from operations and borrowings under the Credit Facility. We expect capital expenditures of approximately $50.0 million to $60.0 million for our fiscal year ending March 31, 2020. The expenditures are expected to be used mainly to expand capacity or replace old equipment at several facilities.

Our expected future cash flows for the next five years for long-term debt, leases and other obligations are as follows:

	Payments Due by Period				
Contractual Obligations	**Total**	**Less than 1 Year**	**1 - 3 Years**	**4 - 5 Years**	**After 5 Years**
			(in thousands)		
Debt principal (1)	$ 1,501,992	$ 8,201	$ 682,693	$ 303,441	$ 507,657
Debt-interest (2)	322,916	73,789	137,565	85,721	25,841
Operating leases	108,726.54	21,543.37	32,909.84	19,446.48	34,826.85
Purchase obligations	1,489,635	1,096,198	376,922	1,803	14,712
Total	$ 3,423,269.54	$ 1,199,731.37	$ 1,230,089.84	$ 410,411.48	$ 583,036.85

(1) The maturities of the Term Loan reflected above are based on the maturities dates prior to the May 2017 amendment to the Credit Facility.
(2) Includes fixed-rate interest only.

The above table excludes unrecognized tax benefits of $19.4 million as of March 31, 2019, since we cannot predict with reasonable certainty the timing of cash settlements with the respective taxing authorities.

In addition to the financial obligations detailed in the table above, we also had obligations related to our benefit plans at March 31, 2019, as detailed in the following table. Our other postretirement benefits are not required to be funded in advance, so benefit payments are paid as they are incurred. Our expected net contributions and payments are included in the table below:

	Pension Benefits	Other Postretirement Benefits
	(in thousands)	
Projected benefit obligation at March 31, 2018	$ 2,234,734	$ 109,455
Plan assets at March 31, 2018	1,796,111	—
Projected contributions by fiscal year		
2020	—	10,881
2021	33,100	10,575
2022	53,900	10,104
2023	54,500	9,558
2024	43,600	9,087
Total 2019 - 2023	$ 185,100	$ 50,205

Current plan documents reserve our right to amend or terminate the plans at any time, subject to applicable collective bargaining requirements for represented employees.

We believe that cash generated by operations and borrowings under the Credit Facility will be sufficient to meet anticipated cash requirements for our current operations for the at least the next twelve months.

Loans under the Credit Facility bear interest, at the Company's option, by reference to a base rate or a rate based on LIBOR, in either case plus an applicable margin determined quarterly based on the Company's Total Leverage Ratio (as defined in the Credit Facility) as of the last day of each fiscal quarter. The Company is also required to pay a quarterly commitment fee on the average daily unused portion of the Credit Facility for each fiscal quarter and fees in connection with the issuance of letters of credit. All outstanding principal and interest under the Credit Facility will be due and payable on the maturity date.

The Credit Facility contains representations, warranties, events of default and covenants customary for financings of this type, including, without limitation, financial covenants under which the Company is obligated to maintain on a consolidated basis, as of the end of each fiscal quarter, a certain minimum Interest Coverage Ratio and maximum Senior Leverage Ratio (in each case as defined in the Credit Facility).

CRITICAL ACCOUNTING POLICIES

Critical accounting policies are those accounting policies that can have a significant impact on the presentation of our financial condition and results of operations, and that require the use of complex and subjective estimates based upon past experience and management's judgment. Because of the uncertainty inherent in such estimates, actual results may differ from these estimates. Below are those policies applied in preparing our consolidated financial statements that management believes are the most dependent on the application of estimates and assumptions. For additional accounting policies, see Note 2 of "Notes to Consolidated Financial Statements."

Allowance for Doubtful Accounts

Trade receivables are presented net of an allowance for doubtful accounts. In determining the appropriate allowance, we consider a combination of factors, such as industry trends, our customers' financial strength and credit standing, and payment and default history. The calculation of the required allowance requires a judgment as to the impact of these and other factors on the ultimate realization of our trade receivables. We believe that these estimates are reasonable and historically have not resulted in material adjustments in subsequent periods when the estimates are adjusted to actual amounts.

Inventories

The Company records inventories at the lower of cost (average-cost or specific-identification methods) or market. The Company expenses general and administrative costs related to products and services provided essentially under commercial terms and conditions as incurred. The Company determines the costs of inventories by the first-in, first-out or average cost methods.

Prior to the adoption of ASU 2014-09, work-in-process inventory was capitalized as pre-production costs. The adoption of ASU 2014-09 changes the Company's accounting for these pre-production costs.

Revenue Recognition and Contract Balances

The Company's revenue is principally from contracts with customers to provide design, development, manufacturing, and support services associated with specific customer programs. The Company regularly enters into long-term master supply agreements that establish general terms and conditions and may define specific program requirements. Many agreements include clauses that provide sole supplier status to the Company for the duration of the program's life. Purchase orders (or authorizations to proceed) are issued pursuant to the master supply agreements. Additionally, a majority of the Company's agreements with customers include options for future purchases. Such options primarily reduce the administrative effort of issuing subsequent purchase orders and do not represent material rights granted to customers. The Company generally enters into agreements directly with its customers and is the principal in all current contracts.

The identification of a contract with a customer for purposes of accounting and financial reporting requires an evaluation of the terms and conditions of agreements to determine whether presently enforceable rights and obligations exist. Management considers a number of factors when making this evaluation that include, but are not limited to, the nature and substance of the business exchange, the specific contractual terms and conditions, the promised products and services, the termination provisions in the contract, as well as the nature and execution of the customer's ordering process and how the Company is authorized to perform work. Generally, presently enforceable rights and obligations are not created until a purchase order is issued by a customer for a specified number of units of product or services. Therefore, the issuance of a purchase order is generally the point at which a contract is identified for accounting and financial reporting purposes.

Management identifies the promises to the customer. Promises are generally explicitly stated in each contract, but managements also evaluates whether any promises are implied based on the terms of the agreement, past business practice, or other facts and circumstances. Each promise is evaluated to determine if it is a performance obligation. A performance obligation is a promise in a contract to transfer a distinct good or service. The Company considers a number of factors when determining whether a promise is contractual performance obligation, including whether the customer can benefit from the good or service on its own or together with other resources that are readily available to the customer, whether the Company provides a significant service of integrating goods or services to deliver a combined output to the customer, or whether the goods or services are highly interdependent. The Company's performance obligations consist of a wide range of engineering design services and manufactured components, as well as spare parts and repairs for original equipment manufacturers (OEMs).

The transaction price for a contract reflects the consideration the Company expects to receive for fully satisfying the performance obligations in the contract. Typically, the transaction price consists solely of fixed consideration but may include variable consideration for contractual provisions such as unpriced contract modifications, cost-sharing provisions, and other receipts or payments to customers. The Company identifies and estimates variable consideration, typically at the most likely amount the Company expects to receive from its customers. Variable consideration is only included in the transaction price to the extent it is probable that a significant reversal of cumulative revenue recognized for the contract will not occur, or when the uncertainty associated with the variable consideration is resolved. The Company's contracts with customers generally require payment under normal commercial terms after delivery with payment typically required within 30 to 120 days of delivery. However, a subset of the Company's current contracts include significant financing components because the timing of the transfer of the underlying products and services under contract are at the customers' discretion. For these contracts, the Company adjusts the transaction price to reflect the effects of the time value of money.

The Company generally is not subject to collecting sales tax and has made an accounting policy election to exclude from the transaction price any sales and other similar taxes collected from customers. As a result, any such collections are accounted for on a net basis.

The total transaction price is allocated to each of the identified performance obligations using the relative stand-alone selling price. The objective of the allocation is to reflect the consideration that the Company expects to receive in exchange for the products or services associated with each performance obligation. Stand-alone selling price is the price at which the Company would sell a promised good or service separately to a customer. Stand-alone selling prices are established at contract inception, and subsequent changes in transaction price are allocated on the same basis as at contract inception. When stand-alone selling prices for the Company's products and services are not observable, the Company uses either the "Expected Cost Plus a Margin" or "Adjusted Market Assessment" approaches to estimate stand-alone selling price. Expected costs are typically derived from the available periodic forecast information.

Revenue is recognized when or as control of promised products or services transfers to a customer and is recognized at the amount allocated to each performance obligation associated with the transferred products or services. Service sales, principally representing repair, maintenance, and engineering activities are recognized over the contractual period or as services are rendered. Sales under long-term contracts with performance obligations satisfied over time are recognized using either an input or output method. The Company recognizes revenue over time as it performs on these contracts because of the continuous transfer of control to the customer as represented by contractual terms that entitle the Company to the reimbursement of costs plus a reasonable profit for work performed to manufacture products for which the Company has no alternate use or for work performed on a customer-owned asset.

With control transferring over time, revenue is recognized based on the extent of progress toward completion of the performance obligation. The Company generally uses the cost-to-cost input method of progress for our contracts because it best depicts the transfer of control to the customer that occurs as work progresses. Under the cost-to-cost method, the extent of progress toward completion is measured based on the proportion of costs incurred to date to the total estimated costs at completion of the performance obligation. The Company reviews its cost estimates on significant contracts on a periodic basis, or when circumstances change and warrant a modification to a previous estimate. Cost estimates are largely based on negotiated or estimated purchase contract terms, historical performance trends and other economic projections. Significant factors that influence these estimates include inflationary trends, technical and schedule risk, internal and subcontractor performance trends, business volume assumptions, asset utilization, and anticipated labor agreements.

Revenue and cost estimates are regularly monitored and revised based on changes in circumstances. Impacts from changes in estimates of net sales and cost of sales are recognized on a cumulative catch-up basis, which recognizes in the current period the cumulative effect of the changes on current and prior periods based on a performance obligation’s percentage of completion. Forward loss reserves for anticipated losses on long-term contracts are recorded in full when such losses become evident, to the extent required, and are included in contract liabilities on the accompanying consolidated balance sheets.

For the fiscal year ended March 31, 2019, cumulative catch-up adjustments resulting from changes in contract values and estimated costs that arose during the fiscal year increased net sales, decreased operating loss, net loss and earnings per share by approximately $7.9 million, $(68.7) million, $(68.7) million and $(1.38), respectively. The cumulative catch-up adjustments to operating income for the fiscal year ended March 31, 2019, included gross favorable adjustments of approximately $46.1 million and gross unfavorable adjustments of approximately $114.8 million. These cumulative catch-up adjustments do not include a non-cash charge the Company recorded as a result of the adoption of ASU 2017-07 of $87.2 million due to a change in estimate from a change in accounting principles, which is presented on the accompanying consolidated statements of operations within cost of sales.

For the fiscal year ended March 31, 2018, cumulative catch-up adjustments resulting from changes in estimates decreased operating loss, net loss and earnings per share by approximately $19.7 million, $13.5 million and $0.27, respectively. The cumulative catch-up adjustments to operating income for the fiscal year ended March 31, 2018, included gross favorable adjustments of approximately $85.8 million and gross unfavorable adjustments of approximately $66.2 million.

For the fiscal year ended March 31, 2017, cumulative catch-up adjustments resulting from changes in estimates decreased operating income, net income and earnings per share by approximately $57.2 million, $52.6 million and $1.07, respectively. The cumulative catch-up adjustments to operating income for the fiscal year ended March 31, 2017, included gross favorable adjustments of approximately $163.3 million and gross unfavorable adjustments of approximately $106.1 million, which includes a reduction to the previously recognized forward losses of $131.4 million for the 747-8 program.

Revenues for performance obligations that are not recognized over time are recognized at the point in time when control transfers to the customer. For performance obligations that are satisfied at a point in time, the Company evaluates the point in time when the customer can direct the use of and obtain the benefits from the products and services. Generally, the shipping terms determine the point in time when control transfers to customers. Shipping and handling activities are not considered performance obligations and related costs are included in cost of sales as incurred.

Differences in the timing of revenue recognition and contractual billing and payment terms result in the recognition contract assets and liabilities. Refer to Note 4 for further discussion.

The portion of the Company's revenue resulting from transactions other than contracts with customers pertains to the amortization of acquired contract liabilities discussed above.

Goodwill and Intangible Assets

The Company accounts for purchased goodwill and intangible assets in accordance with Accounting Standards Codification ("ASC") 350, *Intangibles—Goodwill and Other*. Under ASC 350, purchased goodwill and intangible assets with indefinite lives are not amortized; rather, they are tested for impairment on at least an annual basis. Intangible assets with finite lives are amortized over their useful lives. Upon acquisition, critical estimates are made in valuing acquired intangible assets, which include but are not limited to: future expected cash flows from customer contracts, customer lists, and estimating cash flows from projects when completed; tradename and market position, as well as assumptions about the period of time that customer relationships will continue; and discount rates. Management's estimates of fair value are based upon assumptions believed to be reasonable, but which are inherently uncertain and unpredictable and, as a result, actual results may differ from the assumptions used in determining the fair values.

The Company's operating segments of Integrated Systems, Aerospace Structures and Product Support are also its reporting units. The Chief Executive Officer is the Company's Chief Operating Decision Maker ("CODM"). The Company's CODM evaluates performance and allocates resources based upon review of segment information. Each of the operating segments is composed of a number of operating units which are considered to be components. The components, for which discrete financial information exists, are aggregated for purposes of goodwill impairment testing into three reporting units. The Company's acquisition strategy is to acquire companies that complement and enhance the capabilities of the operating segments of the Company. Each acquisition is assigned to either the Integrated Systems reporting unit, the Aerospace Structures reporting unit or the Product Support reporting unit. The goodwill that results from each acquisition is also assigned to the reporting unit to which the acquisition is allocated, because it is that reporting unit which is intended to benefit from the synergies of the acquisition.

The Company assesses whether goodwill impairment exists using both the qualitative and quantitative assessments. The qualitative assessment involves determining whether events or circumstances exist that indicate it is more likely than not that the fair value of a reporting unit is less than its carrying amount, including goodwill. If based on this qualitative assessment the Company determines it is not more likely than not that the fair value of a reporting unit is less than its carrying amount or if the Company elects not to perform a qualitative assessment, a quantitative assessment is performed as required by ASC 350 to determine whether a goodwill impairment exists at the reporting unit.

The quantitative test is used to compare the carrying amount of the reporting unit's assets to the fair value of the reporting unit. If the fair value exceeds the carrying value, no further evaluation is required and no impairment loss is recognized. If the carrying amount exceeds the fair value, then an impairment loss occurs. The impairment is measured by using the amount by which the carrying value exceeds the fair value not to exceed the amount of recorded goodwill. The determination of the fair value of our reporting units is based, among other things, on estimates of future operating performance of the reporting unit being valued. We are required to complete an impairment test for goodwill and record any resulting impairment losses at least annually. Changes in market conditions, among other factors, may have an impact on these estimates and require interim impairment assessments.

When performing the quantitative impairment test, the Company's methodology includes the use of an income approach which discounts future net cash flows to their present value at a rate that reflects the Company's cost of capital, otherwise known as the discounted cash flow method ("DCF"). These estimated fair values are based on estimates of future cash flows of the businesses. Factors affecting these future cash flows include the continued market acceptance of the products and services offered by the businesses, the development of new products and services by the businesses and the underlying cost of development, the future cost structure of the businesses, and future technological changes. The Company also incorporates market multiples for comparable companies in determining the fair value of our reporting units. Any such impairment would be recognized in full in the reporting period in which it has been identified.

Consistent with the Company's policy, the Company performs an annual assessment in its fiscal fourth quarter and on an interim basis upon the occurrence of events or substantive changes in circumstances that indicate a reporting unit's carrying value may be less than its fair value. No goodwill impairment was identified in the current year.

In fiscal year 2018, as required by ASC 350-20-35-3C, the Company performed an interim assessment of the fair value of its goodwill due to the Company's decision, effective January 1, 2018, to combine the Aerospace Structures and Precision Components reporting segments into one reporting segment. As a result of the change, the Company performed an interim goodwill impairment test which included using a combination of both the market and income approaches to estimate the fair value of each reporting unit. As a result of the impairment test of each reporting unit, the Company recorded a non-cash impairment charge during the fiscal year ended March 31, 2018, of $190.2 million, which is presented on the accompanying consolidated statements of operations within impairment of intangible assets. The Company performed an impairment test of the new reporting unit of Aerospace Structure and recognized an impairment of $345.0 million, which is presented on the consolidated statements of operations within impairment of intangible assets for the fiscal year ended March 31, 2018. The decline in fair value is the result of declining revenues from sustained production rate reductions and sun-setting programs and the slower than previously projected ramp in our development programs and the timing of associated earnings and cash flows. The assessment for the Company's Integrated Systems and Product Support reporting units indicated that their fair value exceeded their carrying amounts.

In the fourth quarter of the fiscal year ended March 31, 2017, consistent with the Company's policy, the Company performed its annual assessment of the fair value of goodwill. The Company concluded that the goodwill related to the Aerospace Structures reporting unit was impaired as of the annual testing date. The Company concluded that the goodwill had a fair value that was lower than its carrying value by an amount that exceeded the remaining goodwill for the reporting unit. Accordingly, the Company recorded a non-cash impairment charge during the fourth quarter of the fiscal year ending March 31, 2017, of $266.3 million, which is presented on the accompanying consolidated statements of operations as impairment of intangible assets. The decline in fair value is the result of declining revenues from production rate reductions on sun-setting programs and the slower than previously projected ramp in our development programs and the timing of associated earnings and cash flows.

Finite-lived intangible assets are amortized over their useful lives ranging from 7 to 30 years. The Company continually evaluates whether events or circumstances have occurred that would indicate that the remaining estimated useful lives of long-lived assets, including intangible assets, may warrant revision or that the remaining balance may not be recoverable. Intangible assets are evaluated for indicators of impairment. When factors indicate that long-lived assets, including intangible assets, should be evaluated for possible impairment, an estimate of the related undiscounted cash flows over the remaining life of the long-lived assets, including intangible assets, is used to measure recoverability based on the primary asset of the asset group. Some of the more important factors management considers include the Company's financial performance relative to expected and historical performance, significant changes in the way the Company manages its operations, negative events that have occurred, and negative industry and economic trends. If the estimated fair value is less than the carrying amount, measurement of the impairment will be based on the difference between the carrying value and fair value of the asset group, generally determined based on the present value of expected future cash flows associated with the use of the asset.

Acquired Contract Liabilities, net

In connection with several of our acquisitions, we assumed existing long-term contracts. Based on our review of these contracts, we concluded that the terms of certain contracts to be either more or less favorable than could be realized in market transactions as of the date of the acquisition. As a result, we recognized acquired contract liabilities, net of acquired contract assets as of the acquisition date of each respective acquisition, based on the present value of the difference between the contractual cash flows of the executory contracts and the estimated cash flows had the contracts been executed at the acquisition date. The liabilities principally relate to long-term contracts that were initially executed at several years prior to the respective acquisition (see Note 3 of notes to consolidated financial statements for further discussion).

The acquired contract liabilities, net, are being amortized as non-cash revenues over the terms of the respective contracts. The Company recognized net amortization of contract liabilities of approximately $67.3 million, $125.1 million and $121.0 million in the fiscal years ended March 31, 2019, 2018, and 2017, respectively, and such amounts have been included in revenues in our results of operations. The balance of the liability as of March 31, 2019, is approximately $184.6 million and, based on the expected delivery schedule of the underlying contracts, the Company estimates annual amortization of the liability as follows 2020—$68.5 million; 2021—$64.6 million; 2022—$23.7 million; 2023—$6.8 million; 2024—$7.5 million; Thereafter—$13.4 million.

Postretirement Plans

The liabilities and net periodic cost of our pension and other postretirement plans are determined using methodologies that involve several actuarial assumptions, the most significant of which are the discount rate, the expected long-term rate of asset return and rate of growth for medical costs. The actuarial assumptions used to calculate these costs are reviewed annually or when a re-measurement is necessary. Assumptions are based upon management's best estimates, after consulting with outside investment advisors and actuaries, as of the measurement date.

The Company estimates the service and interest cost of its pension and other postretirement benefit plans by using the specific spot rates derived from the yield curve used to discount the cash flows reflected in the measurement of the benefit obligation. The Company believes this approach provides a precise measurement of service and interest costs due to the correlation between projected benefit cash flows to the corresponding spot yield curve rates. The Company amortizes actuarial gains and losses over the average life expectancy of inactive plan participants because almost all plan participants are inactive.

The accounting corridor is a defined range within which amortization of net gains and losses is not required. The discount rates at March 31, 2019, ranged from 2.54 - 3.88% compared with a weighted-average of 2.65 - 4.01% at March 31, 2018.

The assumed expected long-term rate of return on assets is the weighted-average rate of earnings expected on the funds invested or to be invested to provide for the benefits included in the Projected Benefit Obligation ("PBO"). The expected average long-term rate of return on assets is based on several factors, including actual historical market index returns, anticipated long-term performance of individual asset classes with consideration given to the related investment strategy, plan expenses and the potential to outperform market index returns. This rate is utilized principally in calculating the expected return on plan assets component of the annual pension expense. To the extent the actual rate of return on assets realized over the course of a year differs from the assumed rate, that year's annual pension expense is not affected. The gain or loss reduces or increases future pension expense over the average remaining life expectancy of inactive plan participants. The expected long-term rate of return for fiscal 2019, 2018 and 2017, was 5.00 - 8.00%. The expected long-term rate of return for fiscal 2020 will be 5.00 - 8.00% .

In addition to our defined benefit pension plans, we provide certain health care and life insurance benefits for some retired employees. Such benefits are unfunded as of March 31, 2019. Employees achieve eligibility to participate in these contributory plans upon retirement from active service if they meet specified age and years of service requirements. Election to participate for eligible employees must be made at the date of retirement. Qualifying dependents at the date of retirement are also eligible for medical coverage. Current plan documents reserve our right to amend or terminate the plans at any time, subject to applicable collective bargaining requirements for represented employees. From time to time, we have made changes to the benefits provided to various groups of plan participants. Premiums charged to most retirees for medical coverage prior to age 65 are based on years of service and are adjusted annually for changes in the cost of the plans as determined by an independent actuary. In addition to this medical inflation cost-sharing feature, the plans also have provisions for deductibles, co-payments, coinsurance percentages, out-of-pocket limits, schedules of reasonable fees, preferred provider networks, coordination of benefits with other plans, and a Medicare carve-out.

In accordance with ASC 715, *Compensation—Retirement Benefits*, we recognized the funded status of our benefit obligation. This funded status is remeasured as of our annual remeasurement date. The funded status is measured as the difference between the fair value of the plan's assets and the PBO or accumulated postretirement benefit obligation of the plan. In order to recognize the funded status, we determined the fair value of the plan assets. The majority of our plan assets are publicly traded investments which were valued based on the market price as of the date of remeasurement. Investments that are not publicly traded were valued based on the estimated fair value of those investments as of the remeasurement date based on our evaluation of data from fund managers and comparable market data.

The Company periodically experiences events or makes changes to its benefit plans that result in curtailment or special charges. Curtailments are recognized when events occur that significantly reduce the expected years of future service of present employees or eliminates the benefits for a significant number of employees for some or all of their future service.

Curtailment losses are recognized when it is probable the curtailment will occur and the effects are reasonably estimable. Curtailment gains are recognized when the related employees are terminated or a plan amendment is adopted, whichever is applicable.

As required under ASC 715, the Company remeasures plan assets and obligations during an interim period whenever a significant event occurs that results in a material change in the net periodic pension cost. The determination of significance is based on judgment and consideration of events and circumstances impacting the pension costs.

See Note 15 of notes to consolidated financial statements for a summary of the key events that affected our net periodic benefit cost and obligations that occurred during the fiscal years ended March 31, 2019, 2018, and 2017.

Pension income, excluding curtailments, settlements and special termination benefits (early retirement incentives) for the fiscal year ended March 31, 2019, was $51.5 million compared with pension income of $61.6 million for the fiscal year ended March 31, 2018, and $66.5 million for the fiscal year ended March 31, 2017. For the fiscal year ending March 31, 2020, the Company expects to recognize pension income of approximately $44.2 million.

Recently Issued Accounting Pronouncements

In February 2018, the FASB issued ASU 2018-02, *Income Statement — Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income* (“ASU 2018-02”). The guidance in ASU 2018-02 allows an entity to elect to reclassify the stranded tax effects related to the Tax Cuts and Jobs Act of 2017 (the “Act”) from accumulated other comprehensive income into retained earnings. ASU 2018-02 is effective for fiscal years beginning after December 15, 2018, with early adoption permitted. We adopted ASU 2018-02 effective April 1, 2019, and have elected not to reclassify any amounts recognized in other comprehensive income into accumulated deficit.

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)* ("ASC 842"), which requires lessees to recognize a right-of-use asset and lease liability on the balance sheet for most lease arrangements and expands disclosures about leasing arrangements for both lessees and lessors, among other items. The new standard is effective for fiscal years beginning after December 15, 2018, which makes the new standard effective for us on April 1, 2019. The Company may apply the transition provisions of ASU 2016-02, as amended, either at the beginning of the earliest period presented in our fiscal year 2020 Form 10-K, which would be April 1, 2018, or on the effective date of adoption, which would be April 1, 2019. Among other requirements, the transition provisions require the lessee to recognize a right-of-use asset and liability for most existing lease arrangements on the date the transition provisions are applied. The Company has elected to apply the transition provisions of this new standard on April 1, 2019. Therefore, periods prior to the effective date of adoption will continue to be reported using current GAAP.

The Company has identified and evaluated the key terms of all of its active leases as of the adoption date and has designed and implemented the appropriate controls to comply with the adoption requirements of ASC 842. The Company is in the process of designing and implementing controls to comply with the prospective accounting and financial reporting requirements of ASC 842 and will complete implementation during the first quarter of fiscal year 2020. The Company is the lessee in substantially all of its lease arrangements. The Company adopted the standard by applying the "package of practical expedients" provided by ASC 842 and did not elect to apply the practical expedient pertaining to the use of hindsight. The Company will also make certain accounting policy elections that are available under ASC 842, including (i) the short-term lease recognition exemption for all leases that qualify, meaning that for these leases, the Company would not recognize right-of-use ("ROU") assets or lease liabilities on our consolidated balance sheets and (ii) the election to use the practical expedient to not separate lease and non-lease components for certain classes of assets, meaning that for these leases, the cash flows related to certain non-lease components are included in the calculation of the ROU asset and lease liability balances on its consolidated balance sheets.

The adoption of this new accounting standard will result in an increase in the recognition of lease liabilities associated with the Company's operating leases in the range of approximately $85.0 million to $95.0 million, for which the majority pertain to real estate leases. Right-of-use assets will also be recognized with a balance comparable to the lease liabilities, adjusted for prepaid and deferred rent balances as of the adoption date. As disclosed in Note 10, the Company has a capital lease liability of $31.3 million as of March 31, 2019. The Company does not expect the impact on the results of operations or cash flows to be material.

Recently Adopted Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board ("FASB") issued ASU 2014-09, *Revenue from Contracts with Customers* ("ASU 2014-09"). Subsequently, the FASB issued several updates to ASU 2014-09, which are codified in Accounting Standards Codification (“ASC”) 606. ASC 606 also includes new guidance on costs related to a contract, which is codified in ASC Subtopic 340-40, *Other Assets and Deferred Costs - Contracts with Customers.* The Company adopted the requirements of ASU 2017-07 on April 1, 2018, and the revenue recognition and contract balances accounting policy discussed above is based on the requirements of this standard. Refer to Note 4 for further discussion on the impact of the adoption of ASC 606.

In March 2017, the FASB issued ASU 2017-07, *Compensation - Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost* ("ASU 2017-07"). ASU 2017-07 requires entities to report the service cost component of net periodic pension and net periodic postretirement benefit cost in the same line item or items as other compensation costs arising from services rendered by the pertinent employees during the period. Further, ASU 2017-07 requires the other components of net periodic pension and net periodic postretirement benefit cost to be presented on the income statement separately from the service cost component and outside a subtotal of income from operations, if one is presented. Additionally, only the service cost component is eligible for capitalization, when applicable. The Company adopted the requirements of ASU 2017-07 on April 1, 2018. Refer to Note 1 for further discussion on the impact of the adoption of ASU 2017-07.

In August 2017, the FASB issued ASU 2017-12, *Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging* ("ASU 2017-12"), which intends to improve and simplify accounting rules around hedge accounting. ASU 2017-12 refines and expands hedge accounting for both financial (i.e., interest rate) and commodity risks. In addition, it creates more transparency around how economic results are presented, both on the face of the financial statements and in the footnotes. The new guidance is effective for annual periods beginning after December 15, 2018, including interim periods within those annual periods. The Company early adopted this guidance on April 1, 2018. The adoption of ASU 2017-12 did not have a material impact on the Company's consolidated financial statements.

In May 2017, the FASB issued ASU 2017-09, *Compensation - Stock Compensation (Topic 718): Scope of Modification Accounting* ("ASU 2017-09"), which provides clarity on determining which changes to the terms and conditions of share-based payment awards require an entity to apply modification accounting under ASC 718. The new guidance is effective for annual periods beginning after December 15, 2017. The amendments should be applied prospectively to an award modified on or after the adoption date. The Company adopted this guidance on April 1, 2018. The adoption of ASU 2017-09 did not have a material impact on the Company's consolidated financial statements.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Commodity Price Risk

Some contracts with our suppliers for raw materials, component parts and other goods are short-term contracts, which are subject to termination on a relatively short-term basis. The prices of our raw materials and component parts fluctuate depending on market conditions, and substantial increases in prices could increase our operating costs, which, as a result of our fixed-price contracts, we may not be able to recoup through increases in the prices of our products. We generally do not employ forward contracts or other financial instruments to hedge commodity price risk, although we continue to review a full range of business options focused on strategic risk management for all material commodities.

Any failure by our suppliers to provide acceptable raw materials, components, kits or subassemblies could adversely affect our production schedules and contract profitability. We assess qualification of suppliers and continually monitor them to control risk associated with such supply base reliance.

To a lesser extent, we also are exposed to fluctuations in the prices of certain utilities and services, such as electricity, natural gas, chemicals and freight. We utilize a range of long-term agreements to minimize procurement expense and supply risk in these areas.

Foreign Exchange Risk

In addition, even when revenues and expenses are matched, we must translate foreign denominated results of operations, assets and liabilities for our foreign subsidiaries to U.S. dollars in our consolidated financial statements. Consequently, increases and decreases in the value of the U.S. dollar as compared to the respective foreign currencies will affect our reported results of operations and the value of our assets and liabilities on our consolidated balance sheets, even if our results of operations or the value of those assets and liabilities has not changed in its original currency. These transactions could significantly affect the comparability of our results between financial periods and/or result in significant changes to the carrying value of our assets, liabilities and stockholders' equity.

We are subject to foreign currency exchange rate risk relating to receipts from customers and payments to suppliers in foreign currencies. We use foreign currency forward contracts to hedge the price risk associated with forecasted foreign denominated payments related to our ongoing business. Foreign currency forward contracts are sensitive to changes in foreign currency exchange rates. At March 31, 2019, a 10% change in the exchange rate in our portfolio of foreign currency contracts would not have material impact on our unrealized gains. Consistent with the use of these contracts to neutralize the effect of exchange rate fluctuations, such unrealized losses or gains would be offset by corresponding gains or losses, respectively, in the remeasurement of the underlying transactions being hedged. When taken together, these forward currency contracts and the offsetting underlying commitments do not create material market risk.

Interest Rate Risk

Our primary exposure to market risk consists of changes in interest rates on borrowings. An increase in interest rates would adversely affect our operating results and the cash flow available after debt service to fund operations and expansion. In addition, an increase in interest rates would adversely affect our ability to pay dividends on our common stock, if permitted to do so under certain of our debt arrangements, including the Credit Facility. We manage exposure to interest rate fluctuations by optimizing the use of fixed and variable rate debt. As of March 31, 2019, approximately 81% of our debt was fixed-rate debt. Our financing policy states that we generally maintain between 50% and 75% of our debt as fixed-rate debt on a fully leveraged basis. The information below summarizes our market risks associated with debt obligations and should be read in conjunction with Note 10 of notes to consolidated financial statements.

The following table presents principal cash flows and the related interest rates. Fixed interest rates disclosed represent the weighted-average rate as of March 31, 2019. Variable interest rates disclosed fluctuate with the LIBOR, federal funds rates and other weekly rates and represent the weighted-average rate at March 31, 2019.

Expected Years of Maturity

	Next 12 Months	13 - 24 Months	25 - 36 Months	37 - 48 Months	49 - 60 Months	Thereafter	Total
Fixed-rate cash flows (in thousands)	$ 8,201	$ 7,256	$ 379,736	$ 302,021	$ 1,422	$ 507,656	$ 1,206,292
Weighted-average interest rate (%)	6.17%	6.19%	6.44%	7.17%	7.74%	3.87%	
Variable-rate cash flows (in thousands)	$ —	$ 80,700	$ 215,000	$ —	$ —	$ —	$ 295,700
Weighted-average interest rate (%)	—%	5.72%	4.47%	—%	—%	—%	

There are no other significant market risk exposures.

Item 8. Financial Statements and Supplementary Data

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of Triumph Group, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Triumph Group, Inc. (the Company) as of March 31, 2019 and 2018, and the related consolidated statements of operations, comprehensive loss, stockholders' (deficit) equity and cash flows for each of the three years in the period ended March 31, 2019, 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 March 31, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended March 31, 2019, in conformity with U.S. generally accepted accounting principles.

We also have also 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 March 31, 2019, 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 May 23, 2019, expressed an unqualified opinion thereon.

Adoption of New Accounting Standards

As discussed in Note 1 to the consolidated financial statements, the Company changed its method for accounting for defined benefit income in the years ended March 31, 2019, 2018, and 2017.

As discussed in Note 4 to the consolidated financial statements, the Company changed its method for accounting for revenue recognition in the year ended March 31, 2019.

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 include examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated 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.

We have served as the Company's auditor since 1993.

/s/ Ernst & Young LLP

Philadelphia, Pennsylvania
May 23, 2019

TRIUMPH GROUP, INC.
CONSOLIDATED BALANCE SHEETS
(Dollars in thousands, except per share data)

	March 31,	
	2019	2018
ASSETS		
Current assets:		
Cash and cash equivalents	$ 92,807	$ 35,819
Trade and other receivables, less allowance for doubtful accounts of $3,646 and $4,032	373,590	376,612
Contract assets	326,667	37,573
Inventories, net of unliquidated progress payments of $0 and $387,146	413,560	1,427,169
Prepaid expenses and other	34,446	44,428
Assets held for sale	—	1,324
Total current assets	1,241,070	1,922,925
Property and equipment, net	543,710	726,003
Goodwill	583,225	592,828
Intangible assets, net	430,954	507,681
Other, net	55,615	57,627
Total assets	$ 2,854,574	$ 3,807,064
LIABILITIES AND STOCKHOLDERS' (DEFICIT) EQUITY		
Current liabilities:		
Current portion of long-term debt	$ 8,201	$ 16,527
Accounts payable	433,783	418,367
Contract liabilities	293,719	321,191
Accrued expenses	239,572	235,914
Liabilities related to assets held for sale	—	440
Total current liabilities	975,275	992,439
Long-term debt, less current portion	1,480,620	1,421,757
Accrued pension and other postretirement benefits, noncurrent	540,479	483,887
Deferred income taxes, noncurrent	6,964	16,582
Other noncurrent liabilities	424,549	441,865
Stockholders' (deficit) equity:		
Common stock, $.001 par value, 100,000,000 shares authorized, 52,460,920 and 52,460,920 shares issued; 49,887,268 and 49,669,848 shares outstanding	52	51
Capital in excess of par value	867,545	851,280
Treasury stock, at cost, 2,573,652 and 2,791,072 shares	(159,154)	(179,082)
Accumulated other comprehensive loss	(487,684)	(367,870)
(Accumulated deficit) Retained earnings	(794,072)	146,155
Total stockholders' (deficit) equity	(573,313)	450,534
Total liabilities and stockholders' (deficit) equity	$ 2,854,574	$ 3,807,064

See notes to consolidated financial statements.

TRIUMPH GROUP, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
(In thousands, except per share data)

	Year ended March 31,		
	2019	2018	2017
Net sales	$ 3,364,930	$ 3,198,951	$ 3,532,799
Operating costs and expenses:			
Cost of sales (exclusive of depreciation shown separately below)	2,924,920	2,607,556	2,774,449
Selling, general and administrative	298,386	292,630	285,001
Depreciation and amortization	149,904	158,368	176,946
Impairment of intangible assets	—	535,227	266,298
Restructuring	31,098	40,069	42,177
Loss on divestitures	235,301	30,741	19,124
	3,639,609	3,664,591	3,563,995
Operating loss	(274,679)	(465,640)	(31,196)
Non-service defined benefit income	(62,105)	(103,234)	(88,085)
Interest expense and other, net	114,619	99,442	80,501
Loss from continuing operations before income taxes	(327,193)	(461,848)	(23,612)
Income tax (benefit) expense	(5,426)	(36,457)	19,340
Net loss	$ (321,767)	$ (425,391)	$ (42,952)
Loss per share—basic:			
Net loss	$ (6.47)	$ (8.60)	$ (0.87)
Weighted-average common shares outstanding—basic	49,698	49,442	49,303
Loss per share—diluted:			
Net loss	$ (6.47)	$ (8.60)	$ (0.87)
Weighted-average common shares outstanding—diluted	49,698	49,442	49,303

See notes to consolidated financial statements.

TRIUMPH GROUP, INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(Dollars in thousands)

	Year ended March 31,		
	2019	2018	2017
Net loss	$ (321,767)	$ (425,391)	$ (42,952)
Other comprehensive loss:			
Foreign currency translation adjustment	10,077	28,529	(28,396)
Defined benefit pension plans and other postretirement benefits:			
Amounts arising during the period - net of tax (expense) benefit:			
Prior service (cost) credit, net of taxes $0, $0 and $0, respectively	(1,139)	21,980	(121)
Actuarial (loss) gain, net of taxes $0, ($283), and $394 and, respectively	(125,540)	10,306	(15,977)
Reclassification to net income - net of tax expense (benefit):			
Amortization of net loss, net of taxes of ($656), ($5), and ($40), respectively	6,314	7,147	5,651
Recognized prior service credits, net of taxes of $0, $0 and $0, respectively	(8,274)	(37,623)	(15,246)
Total defined benefit pension plans and other postretirement benefits, net of taxes	(128,639)	1,810	(25,693)
Cash flow hedges:			
Unrealized gain arising during period, net of tax benefit (expense) of $(228), ($25), and $0, respectively	30	133	6,582
Reclassification of loss included in net earnings, net of tax expense of $228, $14, and $0, respectively	(1,282)	(2,164)	(1,509)
Net unrealized (loss) gain on cash flow hedges, net of tax	(1,252)	(2,031)	5,073
Total other comprehensive (loss) income	(119,814)	28,308	(49,016)
Total comprehensive loss	$ (441,581)	$ (397,083)	$ (91,968)

See notes to consolidated financial statements.

TRIUMPH GROUP, INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' (DEFICIT) EQUITY
(Dollars in thousands)

	Outstanding Shares	Common Stock All Classes	Capital in Excess of Par Value	Treasury Stock	Accumulated Other Comprehensive Loss	Retained Earnings (Accumulated Deficit)	Total
Balance at March 31, 2016	49,328,999	$ 51	$ 851,102	$ (199,415)	$ (347,162)	$ 630,368	$ 934,944
Net loss	—	—	—	—	—	(42,952)	(42,952)
Foreign currency translation adjustment	—	—	—	—	(28,396)	—	(28,396)
Pension liability adjustment, net of income taxes of $434	—	—	—	—	(25,693)	—	(25,693)
Change in fair value of derivatives	—	—	—	—	4,834	—	4,834
Change in fair value of foreign currency hedges, net of income taxes of $0	—	—	—	—	239	—	239
Cash dividends ($0.16 per share)	—	—	—	—	—	(7,927)	(7,927)
Share-based compensation	191,127	—	(4,279)	12,201	—	—	7,922
Repurchase of restricted shares for minimum tax obligation	(5,926)	—	42	(224)	—	—	(182)
Excess tax benefit from exercise of stock options	—	—	2,007	—	—	—	2,007
Employee stock purchase plan	58,829	—	(2,065)	3,742	—	—	1,677
Balance, March 31, 2017	49,573,029	51	846,807	(183,696)	(396,178)	579,489	846,473
Net loss	—	—	—	—	—	(425,391)	(425,391)
Foreign currency translation adjustment	—	—	—	—	28,529	—	28,529
Pension liability adjustment, net of income taxes of ($288)	—	—	—	—	1,810	—	1,810
Change in fair value of derivatives	—	—	—	—	(2,013)	—	(2,013)
Change in fair value of foreign currency hedges, net of income taxes of $11	—	—	—	—	(18)	—	(18)
Cash dividends ($0.16 per share)	—	—	—	—	—	(7,943)	(7,943)
Share-based compensation	56,548	—	6,662	1,287	—	—	7,949
Repurchase of restricted shares for minimum tax obligation	(19,361)	—	—	(483)	—	—	(483)
Employee stock purchase plan	59,632	—	(2,189)	3,810	—	—	1,621
Balance, March 31, 2018	49,669,848	51	851,280	(179,082)	(367,870)	146,155	450,534
Net loss	—	—	—	—	—	(321,767)	(321,767)
Adoption of ASC 606	—	—	—	—	—	(585,015)	(585,015)
Foreign currency translation adjustment	—	—	—	—	10,077	—	10,077
Pension liability adjustment, net of income taxes of ($656)	—	—	—	—	(128,639)	—	(128,639)
Change in fair value of foreign currency hedges, net of income taxes of $228	—	—	—	—	(1,252)	—	(1,252)
Cash dividends ($0.16 per share)	—	—	—		—	(7,971)	(7,971)
Share-based compensation	186,572	—	(1,448)	11,707	—	—	10,259
Repurchase of restricted shares for minimum tax obligation	(42,146)	—	—	(860)	—	—	(860)
Employee stock purchase plan	72,994	—	(3,354)	4,675	—	—	1,321
Other	—	1	21,067	4,406	—	(25,474)	—
Balance, March 31, 2019	49,887,268	$ 52	$ 867,545	$ (159,154)	$ (487,684)	$ (794,072)	$ (573,313)

See notes to consolidated financial statements.

TRIUMPH GROUP, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Dollars in thousands)

	Year ended March 31,		
	2019	2018	2017
Operating Activities			
Net loss	$ (321,767)	$ (425,391)	$ (42,952)
Adjustments to reconcile net loss to net cash (used in) provided by operating activities:			
Depreciation and amortization	149,904	158,368	176,946
Impairment of intangible assets	—	535,227	266,298
Amortization of acquired contract liability	(67,314)	(125,148)	(121,004)
Loss on divestitures, transfers, and assets held for sale	235,301	30,741	19,124
Curtailments, settlements and early retirement incentives	4,032	(25,722)	—
Other amortization included in interest expense	8,770	11,677	5,553
(Recovery) provision for doubtful accounts receivable	(495)	(242)	202
(Benefit) provision for deferred income taxes	(7,939)	(43,108)	9,480
Share-based compensation	10,259	7,949	7,922
Changes in other assets and liabilities, excluding the effects of acquisitions and divestitures:			
Trade and other receivables	(89,728)	(99,620)	118,543
Contract assets	65,191	(5,484)	(6,347)
Inventories	(15,930)	(163,417)	(272,653)
Prepaid expenses and other current assets	(3,144)	(4,239)	11,756
Accounts payable, accrued expenses and income taxes payable	(71,767)	(43,696)	211,560
Accrued pension and other postretirement benefits	(79,911)	(88,464)	(100,012)
Other	10,118	(8,325)	(2,894)
Net cash (used in) provided by operating activities	(174,420)	(288,894)	281,522
Investing Activities			
Capital expenditures	(47,099)	(42,050)	(51,832)
Proceeds from sale of assets	247,647	83,082	86,187
Acquisitions, net of cash acquired	—	(2,818)	9
Net cash provided by investing activities	200,548	38,214	34,364
Financing Activities			
Net increase (decrease) in revolving credit facility	102,113	82,888	(110,000)
Proceeds from issuance of long-term debt	54,600	544,243	24,400
Retirement of debt and capital lease obligations	(113,425)	(387,373)	(144,144)
Payment of deferred financing costs	(1,982)	(17,729)	(14,034)
Dividends paid	(7,971)	(7,943)	(7,927)
Net repayment of government grant	—	—	(14,570)
Repurchase of restricted shares for minimum tax obligations	(860)	(483)	(182)
Net cash provided by (used in) financing activities	32,475	213,603	(266,457)
Effect of exchange rate changes on cash	(1,615)	3,263	(780)
Net change in cash and cash equivalents	56,988	(33,814)	48,649
Cash and cash equivalents at beginning of year	35,819	69,633	20,984
Cash and cash equivalents at end of year	$ 92,807	$ 35,819	$ 69,633

See notes to consolidated financial statements.

TRIUMPH GROUP, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Dollars in thousands, except per share data)

1. BACKGROUND AND BASIS OF PRESENTATION

Triumph Group, Inc. ("Triumph") is a Delaware corporation which, through its operating subsidiaries, designs, engineers, manufactures and sells products for the global aerospace original equipment manufacturers ("OEMs") of aircraft and aircraft components and repairs and overhauls aircraft components and accessories for commercial airline, air cargo carrier and military customers on a worldwide basis. Triumph and its subsidiaries (collectively, the "Company") are organized based on the products and services that they provide. Under this organizational structure, the Company has three reportable segments: Integrated Systems, Aerospace Structures, and Product Support.

Integrated Systems consists of the Company’s operations that provide integrated solutions, including design, development, and support of proprietary components, subsystems and systems, as well as production of complex assemblies using external designs. Capabilities include hydraulic, mechanical and electromechanical actuation, power and control; a complete suite of aerospace gearbox solutions, including engine accessory gearboxes and helicopter transmissions; active and passive heat exchange technology; fuel pumps, fuel metering units and Full Authority Digital Electronic Control fuel systems; hydromechanical and electromechanical primary and secondary flight controls.

Aerospace Structures consists of the Company’s operations that supply commercial, business, regional and military manufacturers with large metallic and composite structures and aircraft interior systems, including air ducting and thermal acoustic insulations systems. Products include wings, wing boxes, fuselage panels, horizontal and vertical tails, subassemblies such as floor grids, and aircraft interior systems, including air ducting and thermal acoustic insulations systems. Aerospace Structures also has the capability to engineer detailed structural designs in metal and composites. Capabilities include advanced composite and interior structures, joining processes such as welding, autoclave bonding and conventional mechanical fasteners and a variety of special processes, including: super plastic titanium forming, aluminum and titanium chemical milling, surface treatments, and integrated testing and certification services.

Product Support consists of the Company’s operations that provide full life cycle solutions for commercial, regional and military aircraft. The Company’s extensive product and service offerings include full post-delivery value chain services that simplify the MRO supply chain. Through its ground support equipment maintenance, component MRO and post production supply chain activities, Product Support is positioned to provide integrated planeside repair solutions globally. Capabilities include metallic and composite aircraft structures; nacelles; thrust reversers; interiors; auxiliary power units; and a wide variety of pneumatic, hydraulic, fuel and mechanical accessories.

Repair services generally involve the replacement and/or remanufacturing of parts, which is similar to the original manufacture of the part. The processes that the Company performs related to repair and overhaul services are essentially the repair of wear parts or replacement of parts that are beyond economic repair. The repair service generally involves remanufacturing a complete part or a component of a part.

The accompanying consolidated financial statements include the accounts of Triumph and its wholly-owned subsidiaries. Intercompany accounts and transactions have been eliminated from the consolidated financial statements.

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. Actual results could differ from those estimates.

Standards Recently Implemented

Adoption of ASU 2017-07

In March 2017, the FASB issued ASU 2017-07, *Compensation-Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost* ("ASU 2017-07"). ASU 2017-07 requires an employer to report the service cost component of net periodic pension benefit cost in the same line item or items as other compensation costs arising from services rendered by the pertinent employees during the period, with other cost components presented separately from the service cost component and outside of income from operations. ASU 2017-07 also allows only the service cost component of net periodic pension benefit cost to be eligible for capitalization when applicable. ASU 2017-07 was effective for years beginning after December 15, 2017. The Company adopted this standard on April 1, 2018, applying the presentation requirements retrospectively. The Company elected to apply the practical expedient, which allows it to reclassify amounts disclosed previously in the employee benefit plans note as the basis for applying retrospective presentation for comparative periods as it is impracticable to determine the disaggregation of the cost components for amounts capitalized and amortized in those periods. Provisions related to presentation of the service cost component eligibility for capitalization were applied prospectively.

(Dollars in thousands, except per share data)

The effect of the retrospective presentation change related to the net periodic benefit cost of our defined benefit pension and postretirement plans on our consolidated statements of operations was as follows:

	Twelve Months Ended		
	As Previously Reported March 31, 2018	Impact of Adoption of ASU 2017-07	As Adjusted March 31, 2018
Cost of sales	$ 2,533,153	$ 74,403	$ 2,607,556
Selling, general and administrative	289,521	3,109	292,630
Pension settlement charge	(25,722)	25,722	—
Non-service defined benefit income	—	(103,234)	(103,234)

	Twelve Months Ended		
	As Previously Reported March 31, 2017	Impact of Adoption of ASU 2017-07	As Adjusted March 31, 2017
Cost of sales	$ 2,689,818	$ 84,631	$ 2,774,449
Selling, general and administrative	281,547	3,454	285,001
Pension settlement charge	—	—	—
Non-service defined benefit income	—	(88,085)	(88,085)

During the first quarter of the fiscal year ended March 31, 2019, the Company recorded a non-cash charge related to the adoption of ASU 2017-07 of $87,241 due to an inseparable change in estimate from a change in accounting principles, increasing loss per share by $1.76. This charge is presented on the accompanying consolidated statements of operations within "Cost of sales." In the Company's segment reporting presented in Note 21, this charge is included in Aerospace Structures operating income and is excluded from Segment Adjusted EBITDAP.

Adoption of ASU 2017-12

In August 2017, the FASB issued ASU 2017-12, *Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities* (“ASU 2017-12”), which expands component and fair value hedging, specifies the presentation of the effects of hedging instruments, and eliminates the separate measurement and presentation of hedge ineffectiveness. ASU 2017-12 is effective for fiscal years beginning after December 15, 2018, with early adoption permitted. The Company adopted ASU 2017-12 as of April 1, 2018. The adoption of ASU 2017-12 did not have a material impact on the Company’s consolidated financial statements.

Standards Issued Not Yet Implemented

In February 2018, the FASB issued ASU 2018-02, *Income Statement — Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income* (“ASU 2018-02”). The guidance in ASU 2018-02 allows an entity to elect to reclassify the stranded tax effects related to the Tax Cuts and Jobs Act of 2017 (the “Act”) from accumulated other comprehensive income into retained earnings. ASU 2018-02 is effective for fiscal years beginning after December 15, 2018, with early adoption permitted. We adopted ASU 2018-02 effective April 1, 2019, and have elected not to reclassify any amounts recognized in other comprehensive income into accumulated deficit.

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)* ("ASC 842"), which requires lessees to recognize a right-of-use asset and lease liability on the balance sheet for most lease arrangements and expands disclosures about leasing arrangements for both lessees and lessors, among other items. The new standard is effective for fiscal years beginning after December 15, 2018, which makes the new standard effective for us on April 1, 2019. The Company may apply the transition provisions of ASU 2016-02, as amended, either at the beginning of the earliest period presented in our fiscal year 2020 Form

(Dollars in thousands, except per share data)

10-K, which would be April 1, 2018, or on the effective date of adoption, which would be April 1, 2019. Among other requirements, the transition provisions require the lessee to recognize a right-of-use asset and liability for most existing lease arrangements on the date the transition provisions are applied. The Company has elected to apply the transition provisions of this new standard on April 1, 2019. Therefore, periods prior to the effective date of adoption will continue to be reported using current GAAP.

The Company has identified and evaluated the key terms of all of its active leases as of the adoption date and has designed and implemented the appropriate controls to comply with the adoption requirements of ASC 842. The Company is in the process of designing and implementing controls to comply with the prospective accounting and financial reporting requirements of ASC 842 and will complete implementation during the first quarter of fiscal year 2020. The Company is the lessee in substantially all of its lease arrangements. The Company adopted the standard by applying the "package of practical expedients" provided by ASC 842 and did not elect to apply the practical expedient pertaining to the use of hindsight. The Company will also make certain accounting policy elections that are available under ASC 842, including (i) the short-term lease recognition exemption for all leases that qualify, meaning that for these leases, the Company would not recognize right-of-use ("ROU") assets or lease liabilities on our consolidated balance sheet and (ii) the election to use the practical expedient to not separate lease and non-lease components for certain classes of assets, meaning that for these leases, the cash flows related to certain non-lease components are included in the calculation of the ROU asset and lease liability balances on its consolidated balance sheet.

The adoption of this new accounting standard will result in an increase in the recognition of lease liabilities associated with the Company's operating leases in the range of approximately $85,000 to $95,000, for which the majority pertain to real estate leases. Right-of-use assets will also be recognized with a balance comparable to the lease liabilities, adjusted for prepaid and deferred rent balances as of the adoption date. As disclosed in Note 10, the Company has a capital lease liability of $31,292 as of March 31, 2019. The Company does not expect the impact on the results of operations or cash flows to be material.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Cash Equivalents

Cash equivalents consist of highly liquid investments with a maturity of three months or less at the time of purchase. Fair value of cash equivalents approximates carrying value.

Trade and Other Receivables, net

Trade and other receivables are recorded net of an allowance for doubtful accounts. Trade and other receivables include amounts billed and currently due from customers, certain estimated contract changes and amounts retained by the customer pending contract completion. The Company performs ongoing credit evaluations of its customers and generally does not require collateral. The Company records the allowance for doubtful accounts based on prior experience and for specific collectibility matters when they arise. The Company writes off balances against the reserve when collectibility is deemed remote. The Company's trade and other receivables are exposed to credit risk; however, the risk is limited due to the diversity of the customer base.

Trade and other receivables, net comprised of the following:

	March 31,	
	2019	2018
Total trade receivables	336,888	363,990
Other receivables	40,348	16,654
Total trade and other receivables	377,236	380,644
Less: Allowance for doubtful accounts	(3,646)	(4,032)
Total trade and other receivables, net	$ 373,590	$ 376,612

Inventories

The Company records inventories at the lower of cost (average-cost or specific-identification methods) or market. The Company expenses general and administrative costs related to products and services provided essentially under commercial terms and conditions as incurred. The Company determines the costs of inventories sold by the first-in, first-out or average cost methods.

Prior to the adoption of ASU 2014-09, work-in-process inventory was capitalized as pre-production costs. The adoption of ASU 2014-09 changes the Company's accounting for these pre-production costs. Refer to Note 4 for further discussion.

Advance Payments and Progress Payments

Advance payments and progress payments received on contracts-in-process are first offset against related contract assets, with any excess amount reflected in current liabilities under the contract liabilities caption on the accompanying consolidated balance sheets.

Property and Equipment

Property and equipment, which include equipment under capital lease and leasehold improvements, are recorded at cost and depreciated over the estimated useful lives of the related assets, or the lease term if shorter in the case of leasehold improvements, using the straight-line method. Buildings and improvements are depreciated over a period of 15 to 39.5 years, and machinery and equipment are depreciated over a period of 7 to 15 years (except for furniture, fixtures and computer equipment which are depreciated over a period of 3 to 10 years).

Goodwill and Intangible Assets

The Company accounts for goodwill and intangible assets in accordance with Accounting Standards Codification ("ASC") 350, *Intangibles—Goodwill and Other*. Under ASC 350, goodwill and intangible assets with indefinite lives are not amortized; rather, they are tested for impairment on at least an annual basis. Intangible assets with finite lives are amortized over their useful lives. Upon acquisition, critical estimates are made in valuing acquired intangible assets, which include, but are not limited to, future expected cash flows from customer contracts, customer lists, and estimating cash flows from projects when completed; tradename and market position, as well as assumptions about the period of time that customer relationships will continue; and discount rates. Management's estimates of fair value are based upon assumptions believed to be reasonable, but which are inherently uncertain and unpredictable and, as a result, actual results may differ from the assumptions used in determining the fair values.

The Company's operating segments of Integrated Systems, Aerospace Structures, and Product Support are also its reporting units. The Chief Executive Officer is the Company's Chief Operating Decision Maker ("CODM"). The Company's CODM evaluates performance and allocates resources based upon review of segment information. Each of the operating segments is composed of a number of operating units, which are considered to be components. The components, for which discrete financial information exists, are aggregated for purposes of goodwill impairment testing into three reporting units. The Company's acquisition strategy is to acquire companies that complement and enhance the capabilities of the operating segments of the Company. Each acquisition is assigned to one of the Company's reporting units. The goodwill that results from each acquisition is also assigned to the reporting unit to which the acquisition is allocated, because it is that reporting unit which is intended to benefit from the synergies of the acquisition.

The Company assesses whether goodwill impairment exists using both the qualitative and quantitative assessments. The qualitative assessment involves determining whether events or circumstances exist that indicate it is more likely than not that the fair value of a reporting unit is less than its carrying amount, including goodwill. If based on this qualitative assessment the Company determines it is not more likely than not that the fair value of a reporting unit is less than its carrying amount or if the Company elects not to perform a qualitative assessment, a quantitative assessment is performed as required by ASC 350 to determine whether a goodwill impairment exists at the reporting unit.

The quantitative test is used to compare the carrying amount of the reporting unit's assets to the fair value of the reporting unit. If the fair value exceeds the carrying value, no further evaluation is required and no impairment loss is recognized. If the carrying amount exceeds the fair value, then an impairment loss occurs. The impairment is measured by using the amount by which the carrying value exceeds the fair value not to exceed the amount of recorded goodwill. The determination of the fair value of our reporting units is based, among other things, on estimates of future operating performance of the reporting unit being valued. The Company is required to complete an impairment test for goodwill and record any resulting impairment losses at least annually. Changes in market conditions, among other factors, may have an impact on these estimates and require interim impairment assessments.

When performing the quantitative impairment test, the Company's methodology includes the use of an income approach which discounts future net cash flows to their present value at a rate that reflects the Company's cost of capital, otherwise known as the discounted cash flow method ("DCF"). These estimated fair values are based on estimates of future cash flows of the businesses. Factors affecting these future cash flows include the continued market acceptance of the products and services offered by the businesses, the development of new products and services by the businesses and the underlying cost of development, the future cost structure of the businesses and future technological changes. The Company also incorporates market multiples for comparable companies in determining the fair value of our reporting units. Any such impairment would be recognized in full in the reporting period in which it has been identified.

Consistent with the Company's policy, the Company performs an annual assessment in its fiscal fourth quarter and on an interim basis upon the occurrence of events or substantive changes in circumstances that indicate a reporting unit's carrying value may be less than its fair value. No goodwill impairment was identified in the current year.

In fiscal year 2018, as required by ASC 350-20-35-3C, the Company performed an interim assessment of the fair value of its goodwill due to the Company's decision, effective January 1, 2018, to combine the Aerospace Structures and Precision Components reporting segments into one reporting segment. As a result of the change, the Company performed an interim goodwill impairment test which included using a combination of both the market and income approaches to estimate the fair value of each reporting unit. As a result of the impairment test of each reporting unit, the Company recorded a non-cash impairment charge during the fiscal year ended March 31, 2018, of $190,227, which is presented on the accompanying consolidated statements of operations within impairment of intangible assets. The Company performed an impairment test of the new reporting unit of Aerospace Structure and recognized an impairment of $345,000, which is presented on the consolidated statements of operations within impairment of intangible assets for the fiscal year ended March 31, 2018. The decline in fair value is the result of declining revenues from sustained production rate reductions and sun-setting programs and the slower than previously projected ramp in our development programs and the timing of associated earnings and cash flows. The assessment for the Company's Integrated Systems and Product Support reporting units indicated that their fair value exceeded their carrying amounts.

In the fourth quarter of the fiscal year ended March 31, 2017, consistent with the Company's policy, the Company performed its annual assessment of the fair value of goodwill. The Company concluded that the goodwill related to the Aerospace Structures reporting unit was impaired as of the annual testing date. The Company concluded that the goodwill had a fair value that was lower than its carrying value by an amount that exceeded the remaining goodwill for the reporting unit. Accordingly, the Company recorded a non-cash impairment charge during the fourth quarter of the fiscal year ending March 31, 2017, of $266,298, which is presented on the accompanying consolidated statements of operations as impairment of intangible assets. The decline in fair value is the result of declining revenues from production rate reductions on sun-setting programs and the slower than previously projected ramp in our development programs and the timing of associated earnings and cash flows.

Finite-lived intangible assets are amortized over their useful lives ranging from 7 to 30 years. The Company continually evaluates whether events or circumstances have occurred that would indicate that the remaining estimated useful lives of long-lived assets, including intangible assets, may warrant revision or that the remaining balance may not be recoverable. Intangible assets are evaluated for indicators of impairment. When factors indicate that long-lived assets, including intangible assets, should be evaluated for possible impairment, an estimate of the related undiscounted cash flows over the remaining life of the long-lived assets, including intangible assets, is used to measure recoverability based on the primary asset of the asset group. Some of the more important factors management considers include the Company's financial performance relative to expected and historical performance, significant changes in the way the Company manages its operations, negative events that have occurred, and negative industry and economic trends. If the estimated fair value is less than the carrying amount, measurement of the impairment will be based on the difference between the carrying value and fair value of the asset group, generally determined based on the present value of expected future cash flows associated with the use of the asset.

Refer to below for the Company's accounting policy regarding fair value measurements and the definition of fair value levels.

Deferred Financing Costs

Financing costs are deferred and amortized to Interest expense and other on the accompanying consolidated statements of operations over the related financing period using the effective interest method or the straight-line method when it does not differ materially from the effective interest method. The Company records deferred financing costs as a direct deduction from the carrying value of that debt liability; however, the policy does exclude deferred financing costs relating to revolving debt instruments. These deferred financing costs are recorded in other, net on the accompanying consolidated balance sheets as of March 31, 2019 and 2018. Total deferred financing costs, net of accumulated amortization of $13,170 and $28,445, respectively, are recorded as of March 31, 2019 and 2018. Make-whole payments in connection with early debt retirements are classified as cash flows used in financing activities.

Acquired Contract Liabilities, Net

In connection with several of our acquisitions, we assumed existing long-term contracts. Based on our review of these contracts, we concluded that the terms of certain contracts to be either more or less favorable than could be realized in market transactions as of the date of the acquisition. As a result, we recognized acquired contract liabilities, net of acquired contract assets as of the acquisition date of each respective acquisition, based on the present value of the difference between the contractual cash flows of the executory contracts and the estimated cash flows had the contracts been executed at the acquisition date. The liabilities principally relate to long-term contracts that were initially executed several years prior to the respective acquisition. The Company measured these net liabilities in the year they were acquired under the measurement provisions of ASC 820, *Fair Value Measurement*, which is based on the price to transfer the obligation to a market participant at the measurement date, assuming that the net liabilities will remain outstanding in the marketplace.

Included in the net sales of the Integrated Systems and Aerospace Structures is the non-cash amortization of acquired contract liabilities recognized as fair value adjustments through purchase accounting from various acquisitions. The Company recognized net amortization of contract liabilities of $67,314, $125,148 and $121,004 in the fiscal years ended March 31, 2019, 2018, and 2017, respectively, and such amounts have been included in revenues in results of operations. The balance of the liability as of March 31, 2019, is $184,612 and, based on the expected delivery schedule of the underlying contracts, the Company estimates annual amortization of the liability as follows: 2020—$68,529; 2021—$64,641; 2022—$23,701; 2023—$6,821; 2024—$7,522; Thereafter $13,398.

Revenue Recognition and Contract Balances

The Company's revenue is principally from contracts with customers to provide design, development, manufacturing, and support services associated with specific customer programs. The Company regularly enters into long-term master supply agreements that establish general terms and conditions and may define specific program requirements. Many agreements include clauses that provide sole supplier status to the Company for the duration of the program’s life. Purchase orders (or authorizations to proceed) are issued pursuant to the master supply agreements. Additionally, a majority of the Company’s agreements with customers include options for future purchases. Such options primarily reduce the administrative effort of issuing subsequent purchase orders and do not represent material rights granted to customers. The Company generally enters into agreements directly with its customers and is the principal in all current contracts.

The identification of a contract with a customer for purposes of accounting and financial reporting requires an evaluation of the terms and conditions of agreements to determine whether presently enforceable rights and obligations exist. Management considers a number of factors when making this evaluation that include, but are not limited to, the nature and substance of the business exchange, the specific contractual terms and conditions, the promised products and services, the termination provisions in the contract, as well as the nature and execution of the customer’s ordering process and how the Company is authorized to perform work. Generally, presently enforceable rights and obligations are not created until a purchase order is issued by a customer for a specified number of units of product or services. Therefore, the issuance of a purchase order is generally the point at which a contract is identified for accounting and financial reporting purposes.

Management identifies the promises to the customer. Promises are generally explicitly stated in each contract, but managements also evaluates whether any promises are implied based on the terms of the agreement, past business practice, or other facts and circumstances. Each promise is evaluated to determine if it is a performance obligation. A performance obligation is a promise in a contract to transfer a distinct good or service. The Company considers a number of factors when determining whether a promise is contractual performance obligation, including whether the customer can benefit from the good or service on its own or together with other resources that are readily available to the customer, whether the Company provides a significant service of integrating goods or services to deliver a combined output to the customer, or whether the goods or services are highly interdependent. The Company’s performance obligations consist of a wide range of engineering design services and manufactured components, as well as spare parts and repairs for original equipment manufacturers (OEMs).

The transaction price for a contract reflects the consideration the Company expects to receive for fully satisfying the performance obligations in the contract. Typically, the transaction price consists solely of fixed consideration but may include variable consideration for contractual provisions such as unpriced contract modifications, cost-sharing provisions, and other receipts or payments to customers. The Company identifies and estimates variable consideration, typically at the most likely amount the Company expects to receive from its customers. Variable consideration is only included in the transaction price to the extent it is probable that a significant reversal of cumulative revenue recognized for the contract will not occur, or when the uncertainty associated with the variable consideration is resolved. The Company's contracts with customers generally require payment under normal commercial terms after delivery with payment typically required within 30 to 120 days of delivery. However, a subset of the Company’s current contracts include significant financing components because the timing of the transfer of the underlying products and services under contract are at the customers' discretion. For these contracts, the Company adjusts the transaction price to reflect the effects of the time value of money.

The Company generally is not subject to collecting sales tax and has made an accounting policy election to exclude from the transaction price any sales and other similar taxes collected from customers. As a result, any such collections are accounted for on a net basis.

The total transaction price is allocated to each of the identified performance obligations using the relative stand-alone selling price. The objective of the allocation is to reflect the consideration that the Company expects to receive in exchange for the products or services associated with each performance obligation. Stand-alone selling price is the price at which the Company would sell a promised good or service separately to a customer. Stand-alone selling prices are established at contract inception, and subsequent changes in transaction price are allocated on the same basis as at contract inception. When stand-alone selling prices for the Company's products and services are not observable, the Company uses either the "Expected Cost Plus a Margin" or "Adjusted Market Assessment" approaches to estimate stand-alone selling price. Expected costs are typically derived from the available periodic forecast information.

Revenue is recognized when or as control of promised products or services transfers to a customer and is recognized at the amount allocated to each performance obligation associated with the transferred products or services. Service sales, principally representing repair, maintenance, and engineering activities are recognized over the contractual period or as services are rendered. Sales under long-term contracts with performance obligations satisfied over time are recognized using either an input or output method. The Company recognizes revenue over time as it performs on these contracts because of the continuous transfer of control to the customer as represented by contractual terms that entitle the Company to the reimbursement of costs plus a reasonable profit for work performed to manufacture products for which the Company has no alternate use or for work performed on a customer-owned asset.

With control transferring over time, revenue is recognized based on the extent of progress toward completion of the performance obligation. The Company generally uses the cost-to-cost input method of progress for our contracts because it best depicts the transfer of control to the customer that occurs as work progresses. Under the cost-to-cost method, the extent of progress toward completion is measured based on the proportion of costs incurred to date to the total estimated costs at completion of the performance obligation. The Company reviews its cost estimates on significant contracts on a periodic basis, or when circumstances change and warrant a modification to a previous estimate. Cost estimates are largely based on negotiated or estimated purchase contract terms, historical performance trends and other economic projections. Significant factors that influence these estimates include inflationary trends, technical and schedule risk, internal and subcontractor performance trends, business volume assumptions, asset utilization, and anticipated labor agreements.

Revenue and cost estimates are regularly monitored and revised based on changes in circumstances. Impacts from changes in estimates of net sales and cost of sales are recognized on a cumulative catch-up basis, which recognizes in the current period the cumulative effect of the changes on current and prior periods based on a performance obligation's percentage of completion. Forward loss reserves for anticipated losses on long-term contracts are recorded in full when such losses become evident, to the extent required, and are included in contract liabilities on the accompanying consolidated balance sheets.

For the fiscal year ended March 31, 2019, cumulative catch-up adjustments resulting from changes in contract values and estimated costs that arose during the fiscal year increased revenue, operating loss, net loss and loss per share by approximately $7,944, $(68,694), $(68,694) and $(1.38), respectively. The cumulative catch-up adjustments to operating income for the fiscal year ended March 31, 2019, included gross favorable adjustments of approximately $46,074 and gross unfavorable adjustments of approximately $114,768. These cumulative catch-up adjustments do not include a non-cash charge the Company recorded as a result of the adoption of ASU 2017-07 of $87,241 due to a change in estimate from a change in accounting principles, which is presented on the accompanying consolidated statements of operations within cost of sales.

For the fiscal year ended March 31, 2018, cumulative catch-up adjustments resulting from changes in estimates decreased operating loss, net loss and decreased loss per share by approximately $19,677, $13,479 and $0.27, respectively. The cumulative catch-up adjustments to operating income for the fiscal year ended March 31, 2018, included gross favorable adjustments of approximately $85,844 and gross unfavorable adjustments of approximately $66,167.

For the fiscal year ended March 31, 2017, cumulative catch-up adjustments resulting from changes in estimates decreased operating loss, net loss and loss per share by approximately $57,153, $52,598 and $1.07, respectively. The cumulative catch-up adjustments to operating income for the fiscal year ended March 31, 2017, included gross favorable adjustments of approximately $163,274 and gross unfavorable adjustments of approximately $106,121 which includes a reduction to the previously recognized forward losses of $131,400 on the 747-8 program.

Revenues for performance obligations that are not recognized over time are recognized at the point in time when control transfers to the customer. For performance obligations that are satisfied at a point in time, the Company evaluates the point in time when the customer can direct the use of and obtain the benefits from the products and services. Generally, the shipping terms determine the point in time when control transfers to customers. Shipping and handling activities are not considered performance obligations and related costs are included in cost of sales as incurred.

Differences in the timing of revenue recognition and contractual billing and payment terms result in the recognition contract assets and liabilities. Refer to Note 4 for further discussion.

The portion of the Company's revenue resulting from transactions other than contracts with customers pertains to the amortization of acquired contract liabilities discussed above.

Research and Development Expense

Research and development expense (which includes certain amounts subject to reimbursement from customers) was approximately $49,895, $72,763 and $112,418 for the fiscal years ended March 31, 2019, 2018, and 2017, respectively.

Retirement Benefits

Defined benefit pension plans are recognized in the consolidated financial statements on an actuarial basis. A significant element in determining the Company's pension income (expense) is the expected long-term rate of return on plan assets. This expected return is an assumption as to the average rate of earnings expected on the funds invested or to be invested to provide for the benefits included in the projected pension benefit obligation. The Company applies this assumed long-term rate of return to a calculated value of plan assets, which recognizes changes in the fair value of plan assets in a systematic manner over five years. This produces the expected return on plan assets that is included in pension income (expense). The difference between this expected return and the actual return on plan assets is deferred. The net deferral of past asset gains (losses) affects the calculated value of plan assets and, ultimately, future pension income (expense).

The Company periodically experiences events or makes changes to its benefit plans that result in curtailment or special charges. Curtailments are recognized when events occur that significantly reduce the expected years of future service of present employees or eliminates the benefits for a significant number of employees for some or all of their future service.

Curtailment losses are recognized when it is probable the curtailment will occur and the effects are reasonably estimable. Curtailment gains are recognized when the related employees are terminated or a plan amendment is adopted, whichever is applicable.

As required under ASC 715, *Compensation — Retirement Benefits*, the Company remeasures plan assets and obligations during an interim period whenever a significant event occurs that results in a material change in the net periodic pension cost. The determination of significance is based on judgment and consideration of events and circumstances impacting the pension costs.

At March 31 of each year, the Company determines the fair value of its pension plan assets as well as the discount rate to be used to calculate the present value of plan liabilities. The discount rate is an estimate of the interest rate at which the pension benefits could be effectively settled. In estimating the discount rate, the Company looks to rates of return on high-quality, fixed-income investments currently available and expected to be available during the period to maturity of the pension benefits. The Company uses a portfolio of fixed-income securities, which receive at least the second-highest rating given by a recognized ratings agency.

Fair Value Measurements

Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. When determining fair value measurements for assets and liabilities required to be recorded at fair value, the Company considers the principal or most advantageous market in which it would transact and also considers assumptions that market participants would use when pricing an asset or liability. The fair value hierarchy has three levels of inputs that may be used to measure fair value: Level 1—Unadjusted quoted prices in active markets for identical assets or liabilities; Level 2—Unadjusted quoted prices in active markets for similar assets or liabilities, or unadjusted quoted prices for identical or similar assets or liabilities in markets that are not active, or inputs other than quoted prices that are observable for the asset or liability; and Level 3—Unobservable inputs for the asset or liability. The Company has applied fair value measurements to its divestitures (refer to Note 3), when measuring goodwill impairment in fiscal year 2018 (see Note 8), and to its pension and postretirement plan assets (see Note 15).

Foreign Currency Translation

The determination of the functional currency for the Company's foreign subsidiaries is made based on appropriate economic factors. The functional currency of the Company's subsidiaries Triumph Aviation Services—Asia and Triumph Structures—Thailand is the U.S. dollar since that is the currency in which that entity primarily generates and expends cash. The functional currency of the Company's remaining subsidiaries is the local currency, since that is the currency in which those entities primarily generate and expend cash. Assets and liabilities of these subsidiaries are translated at the rates of exchange at the balance sheet date. Income and expense items are translated at average monthly rates of exchange. The resultant translation adjustments are included in accumulated other comprehensive income (refer to Note 13). Gains and losses arising from foreign currency transactions are included in earnings.

Income Taxes

The Company accounts for income taxes using the asset and liability method. The asset and liability method requires recognition of deferred tax assets and liabilities for expected future tax consequences of temporary differences that currently exist between tax bases and financial reporting bases of the Company's assets and liabilities. A valuation allowance is provided on deferred taxes if it is determined that it is more likely than not that the asset will not be realized.

Significant management judgment is required to determine the amount of benefit to be recognized in relation to an uncertain tax position. The Company uses a two-step process to evaluate tax positions. The first step requires an entity to determine whether it is more likely than not (greater than 50% chance) that the tax position will be sustained. The second step requires an entity to recognize in the financial statements the benefit of a tax position that meets the more-likely-than-not recognition criterion. The amounts ultimately paid upon resolution of issues raised by taxing authorities may differ materially from the amounts accrued and may materially impact the financial statements of the Company in future periods. The Company recognizes penalties and interest accrued related to income tax liabilities in the provision for income taxes on its consolidated statements of operations.

Stock-Based Compensation

The Company recognizes compensation expense for share-based awards based on the fair value of those awards at the date of grant. The Company has classified share-based compensation within selling, general and administrative expenses to correspond with the same line item as the majority of the cash compensation paid to employees. Upon the exercise of stock options or vesting of restricted stock, the Company first transfers treasury stock, then will issue new shares. Refer to Note 16 for further details.

During fiscal year 2019, the Company reviewed the accounting treatment of the issuance of treasury stock to settle share-based compensation arrangements with its employees. As a result of this review, the Company determined that the difference between the historical cost of treasury shares and the consideration received in exchange for those shares upon stock option exercise or vesting should be recognized as a reduction to retained earnings or, in the absence of retained earnings, to capital in excess of par. The Company reclassified $25,474 to retained earnings representing differences in certain treasury stock transactions occurring prior to April 1, 2018, that had previously been recorded as reductions to capital in excess of par. The Company also refined its calculations of the historical cost of treasury stock, resulting in a reduction of treasury stock of $4,406 which also impacted the reclassification to retained earnings. Beginning in fiscal year 2019, the Company now has an accumulated deficit and therefore records the difference as a reduction of capital in excess of par.

Supplemental Cash Flow Information

For the fiscal year ended March 31, 2019, the Company received $4,701 as income tax refunds, net of taxes paid. For the fiscal years ended March 31, 2018 and 2017, the Company paid $11,190 and $7,930 respectively, for income taxes, net of income tax refunds received.

Warranty Reserves

A reserve has been established to provide for the estimated future cost of warranties on our delivered products. The Company periodically reviews the reserves and adjustments are made accordingly. A provision for warranty on products delivered is made on the basis of historical experience and identified warranty issues. Warranties cover such factors as non-conformance to specifications and defects in material and workmanship. The majority of the Company's agreements include a three-year warranty, although certain programs have warranties up to 20 years. Warranty reserves are included in accrued expenses and other noncurrent liabilities on the consolidated balance sheets. The warranty reserves for the fiscal years ended March 31, 2019 and 2018, were $58,395 and $69,588, respectively.

3. DIVESTED OPERATIONS AND ASSETS HELD FOR SALE

Fiscal 2019 Divestitures

In March 2019, the Company sold all of the shares of (i) Triumph Fabrications - San Diego, Inc. and Triumph Fabrications - Ft. Worth, Inc. (together, "Fabrications"), (ii) Triumph Structures – Kansas City, Inc., Triumph Structures – Wichita, Inc., Triumph Gear Systems – Toronto, ULC and Triumph Northwest (The Triumph Group Operations, Inc.) (together, "Machining"), and Triumph Aviation Services - NAAS Division, Inc. ("NAAS"). Total cash proceeds net of transaction costs for the sales of Fabrications, Machining, and NAAS were approximately $133,000, $43,000, and $18,000, respectively. A portion of the proceeds associated with the sale of Machining included consideration in the form of a note receivable of $10,000. As a result of the sales of Fabrications and Machining, the Company recognized gains (losses) of approximately $54,000 and $(116,000), respectively. The sale of NAAS resulted in an immaterial gain.

In February 2019, the Company transitioned responsibility for the Global 7500 wing program manufacturing operations of Aerospace Structures to Bombardier at which point Bombardier assumed the program's assets and obligations. As a result of this transfer, the Company recognized a loss of approximately $169,000. The Company continues to provide transition services related to infrastructure support reducing in scope over the next several months, as well as a sublease of the building in Red Oak, TX dedicated to the manufacturer of the Global 7500 wing to Bombardier.

In July 2018 and August 2018, respectively, the Company sold all of the shares of Triumph Structures - East Texas, Inc. as well as all of the shares of Triumph Structures - Los Angeles, Inc., and Triumph Processing, Inc. for combined cash proceeds net of transactions costs of approximately $43,000 and a note receivable of $7,000. The note receivable was collected in October 2018. As a result of these sales, the Company recognized losses of approximately $17,202 which are presented on the accompanying consolidated statements of operations within loss on divestitures. With the exception of NAAS, the operating results for the fiscal 2019 divestitures are included in Aerospace Structures ("fiscal 2019 Aerospace Structures Divestitures") through the date of divestiture. The operating results for NAAS are including in Product Support through the date of divestiture.

Fiscal 2018 Divestitures

In March 2018, the Company sold all of the shares of Triumph Structures - Long Island, LLC ("TS-LI") for cash proceeds of $9,500 and a note receivable of $1,400. The note receivable was collected in July 2018. As a result of the sale of TS-LI, the Company recognized a loss of $10,370. The operating results of TS-LI were included in Aerospace Structures through the date of divestiture.

In September 2017, the Company sold all of the shares of Triumph Processing - Embee Division, Inc. ("Embee") for total cash proceeds of $64,986. As a result of the sale of Embee, the Company recognized a loss of $17,857. The operating results of Embee were included in Integrated Systems through the date of divestiture.

Fiscal 2017 Divestitures

In December 2016, the Company entered into a definitive agreement to divest the assets and business of Triumph Air Repair, the Auxiliary Power Unit Overhaul Operations of Triumph Aviation Services - Asia, Ltd. and Triumph Engines - Tempe ("Engines and APU") for total cash proceeds of $60,364. As a result, the Company recognized a loss of $14,263 on the sale. The operating results of Engines and APU were included in Product Support through the date of divestiture. The transaction closed during the quarter ended June 30, 2017. An option to purchase the repair part line of Triumph Aviation Services - Asia, Ltd. was executed by the buyer of Engines and APU in May 2018 for total cash proceeds of $14,000. The related assets and liabilities were presented as held for sale on the accompanying consolidated balance sheet as of March 31, 2018. This transaction closed in January 2019. The consideration received, net of the related assets and liabilities, resulted in a gain of $12,000 recognized in the fourth quarter of fiscal year 2019.

In September 2016, the Company sold all of the shares of Triumph Aerospace Systems-Newport News, Inc. ("TAS-Newport News") for total cash proceeds of $9,000. As a result of the sale of TAS-Newport News, the Company recognized a loss of $4,861 which is presented on the accompanying consolidated statements of operations as loss on divestitures. The operating results of TAS-Newport News were included in Integrated Systems through the date of disposal.

The disposal of these entities does not represent a strategic shift and is not expected to have a major effect on the Company's operations or financial results, as defined by ASC 205-20, *Discontinued Operations*; as a result, the disposals do not meet the criteria to be classified as discontinued operations.

4. REVENUE RECOGNITION AND CONTRACTS WITH CUSTOMERS

Adoption of ASU 2014-09

In May 2014, the Financial Accounting Standards Board (the "FASB") issued Accounting Standards Update ("ASU") No. 2014-09, *Revenue from Contracts with Customers (Topic 606)* ("ASU 2014-09" or "ASC 606") that supersedes Accounting Standards Codification ("ASC") Topic 605 ("legacy GAAP"). Subsequently, the FASB issued several updates to ASU 2014-09, codified in ASC 606. ASU 2014-09 includes new guidance on costs related to a contract, which is codified in ASC Subtopic 340-40. The Company adopted ASC 606 using the modified retrospective method ("method") effective as of April 1, 2018 ("date of initial application"). Under this method, the cumulative effect of the adoption of ASC 606 is recognized as an adjustment to retained earnings on the date of initial application ("Transition Adjustment"), and the comparative financial statements for prior periods are not adjusted and continue to be reported under legacy GAAP. The Transition Adjustment was a decrease to retained earnings of $585,015. Financial information for fiscal years 2019 and 2018 is presented under ASC 606 and under legacy GAAP, respectively. The tables below reflect adjusted fiscal year 2019 financial statement amounts as if the Company had been reporting under legacy GAAP for items that are materially different.

The adoption of ASC 606 does not impact the Company's cash flows or the underlying economics of the Company's contracts with customers. However, the pattern and timing of revenue and profit recognition, as well as financial statement presentation and disclosures, has changed.

The significant changes and the qualitative and quantitative impact of the adoption of ASC 606 are noted below:

a. Revenue from Contracts with Customers

Generally, the Company no longer uses the units-of-delivery method, and the historical use of contract blocks to define contracts for accounting purposes has been replaced by accounting contracts as identified under ASC 606. The Company's accounting contracts under ASC 606 are for the specific number of units for which orders have been received, which is typically for fewer units than what was used to define contract blocks under legacy GAAP. In most of the Company's contracts, the customer has options or requirements to purchase additional products and services that do not represent material rights since the options are at their stand-alone pricing.

The primary effect of the Company's adoption of ASC 606 (outside of the Aerospace Structures segment) was to recognize revenue over time for certain of its contracts, which is a change from recognition based on shipping terms under the legacy GAAP accounting policy.

b. Capitalized Preproduction Costs

Under legacy GAAP, certain capitalized preproduction costs were deferred over the life of the contract block; in certain situations this is not permitted under ASC 606. Accordingly, capitalized preproduction costs of $865,843 (pre-tax), net of previously recognized forward loss reserves of $343,983 (pretax), were eliminated, which was included in the Transition Adjustment.

c. Contract Assets and Contract Liabilities

Contract assets primarily represent revenues recognized for performance obligations that have been satisfied but for which amounts have not been billed. Contract assets in the amount of $565,414 were established in the Transition Adjustment.

Contract liabilities primarily represent cash received that is in excess of revenues recognized and is contingent upon the satisfaction of performance obligations. Contract liabilities in the amount of $288,287 were established in the Transition Adjustment, which reflects consideration received prior to the date of initial application that previously represented customer advances and additional forward losses due to change in block sizes. Contract liabilities representing cash received that is in excess of revenue recognized will be recognized as revenue earlier if the options are not fully exercised, or immediately if the contract is terminated prior to the options being fully exercised. Contract liabilities representing forward losses are derecognized when the related costs have been paid and the liabilities have been extinguished.

TRIUMPH GROUP, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)
(Dollars in thousands, except per share data)

d. Contract Costs

The Company's accounting for preproduction, tooling and certain other costs has not changed since these costs generally do not fall within the scope of ASC 340-40, however certain related assets have been reclassified from inventory to other noncurrent assets as they are contract assets that will be realized over a period in excess of twelve months. Incurred production costs for anticipated contracts (satisfaction of performance obligations, which have commenced because the Company expects the customer to exercise options) continue to be classified as inventory.

e. Practical Expedients

The Company has adopted ASC 606 only for contracts that were not substantially completed under legacy GAAP on the date of initial application. For these contracts, the Company has reflected the aggregate effect of all modifications executed prior to the date of initial application when identifying satisfied and unsatisfied performance obligations, for determining the transaction price and for allocating the transaction price.

The following tables summarize the impacts of adopting ASC 606 on the Company's consolidated financial statements for the twelve months ended March 31, 2019.

	Fiscal Year Ended March 31, 2019		
	As Reported	**Impact of Adoption of ASC Topic 606**	**As Adjusted**
Net sales	$ 3,364,930	$ (158,759)	$ 3,206,171
Cost of sales (exclusive of depreciation and amortization)	2,924,920	37,425	2,962,345
Selling, general and administrative	298,386	6,451	304,837
Loss on divestitures	235,301	222,116	457,417
Interest expense and other	114,619	(5,603)	109,016
Net loss *	(321,767)	(419,149)	(740,916)
Loss per share			
Basic	$ (6.47)	$ (8.43)	$ (14.90)
Diluted	$ (6.47)	$ (8.43)	$ (14.90)

* The Company did not have a net tax effect on the Transition Adjustment due to having a full valuation allowance position.

	As Reported March 31, 2019	**Impact of Adoption of ASC Topic 606**	**As Adjusted March 31, 2019**
Assets			
Trade and other receivables	$ 373,590	$ (31,172)	$ 342,418
Contract assets, short term	326,667	(324,320)	2,347
Inventories, net	413,560	382,505	796,065
Other, net	55,615	(34,185)	21,430
Total assets	2,854,574	(7,172)	2,847,402
Liabilities			
Contract liabilities	293,719	(193,410)	100,309
Other noncurrent liabilities	424,549	20,477	445,026
Stockholders' (deficit) equity			
Accumulated other comprehensive loss	(487,684)	10	(487,674)
Accumulated (deficit) retained earnings	(794,072)	165,751	(628,321)
Total liabilities and stockholders' (deficit) equity	(573,313)	(7,172)	(580,485)

(Dollars in thousands, except per share data)

Disaggregation of Revenue

The Company disaggregates revenue based on the method of measuring satisfaction of the performance obligation either over time or at a point in time. Additionally, the Company disaggregates revenue based upon the end market where products and services are transferred to the customer. The Company’s principal operating segments and related revenue are discussed in Note 21, Segments.

The following table shows disaggregated net sales satisfied overtime and at a point in time (excluding intercompany sales) for the twelve months ended March 31, 2019:

	Integrated Systems	Aerospace Structures	Product Support	Total
	Fiscal Year Ended March 31, 2019			
Satisfied over time	$ 291,414	$ 1,832,422	$ 257,148	$ 2,380,984
Satisfied at a point in time	708,111	189,841	18,680	916,632
Revenue from contracts with customers	999,525	2,022,263	275,828	3,297,616
Amortization of acquired contract liabilities	34,121	33,193	—	67,314
Total revenue	$ 1,033,646	$ 2,055,456	$ 275,828	$ 3,364,930

The following table shows disaggregated net sales by end market (excluding intercompany sales) for the twelve months ended March 31, 2019:

	Integrated Systems	Aerospace Structures	Product Support	Total
	Fiscal Year Ended March 31, 2019			
Commercial aerospace	$ 516,956	$ 1,020,649	$ 213,606	$ 1,751,211
Military	364,973	237,501	44,054	646,528
Business jets	61,099	699,747	2,550	763,396
Regional	29,779	36,038	15,618	81,435
Non-aviation	26,718	28,328	—	55,046
Revenue from contracts with customers	999,525	2,022,263	275,828	3,297,616
Amortization of acquired contract liabilities	34,121	33,193	—	67,314
Total revenue	$ 1,033,646	$ 2,055,456	$ 275,828	$ 3,364,930

Contract Assets and Liabilities

Contract assets primarily represent revenues recognized for performance obligations that have been satisfied or partially satisfied but for which amounts have not been billed. This typically occurs when revenue is recognized over time but the Company's contractual right to bill the customer and receive payment is conditional upon the satisfaction of additional performance obligations in the contract, such as final delivery of the product. Contract assets are recognized when the revenue associated with the contract is recognized prior to billing and derecognized when billed in accordance with the terms of the contract. The Company performs ongoing evaluations of the potential impairment of its contract assets based on prior experience and specific matters when they arise. No impairments to contract assets were recorded for the year ended March 31, 2019.

Contract liabilities are recorded when customers remit contractual cash payments in advance of the Company satisfying performance obligations under contractual arrangements, including those with performance obligations to be satisfied over a period of time. Contract liabilities other than those pertaining to forward loss reserves are derecognized when or as revenue is recognized.

Contract modifications can also impact contract asset and liability balances. When contracts are modified to account for changes in contract specifications and requirements, we consider 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 (either as an increase in or a reduction of 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.

(Dollars in thousands, except per share data)

Contract balances are classified as assets or liabilities on a contract-by-contract basis at the end of each reporting period. The following table summarizes our contract assets and liabilities balances:

	March 31, 2019	March 31, 2018	Change
Contract assets	$ 326,667	$ 37,573	$ 289,094
Contract liabilities	(450,051)	(391,088)	(58,963)
Net contract asset	$ (123,384)	$ (353,515)	$ 230,131

The increase in contract assets reflects the effect of the adoption of ASC 606 of approximately $565,000 as well as revenue recognized during the period from performance obligations satisfied or partially satisfied in previous periods of $7,944. Additionally, $196,764 in contract assets were derecognized and included in the gain/(loss) calculations associated with the divestitures described in Note 3. The remainder of the current change in contract assets is the result of current year billings on contract assets established in the Transition Adjustment, net of any contract assets originating subsequent to the ASC 606 Transition Adjustment. The increase in contract liabilities reflects the effect of the adoption of ASC 606 of approximately $288,000 and the net impact of revenue recognized in excess of additional customer advances during the period. For the period ended March 31, 2019, the Company recognized $178,400 of revenue that was included in the contract liability balance at the beginning of the period. Noncurrent contract liabilities presented in other noncurrent liabilities on the accompanying consolidated balance sheets as of March 31, 2019 and 2018, were $156,332 and $69,897 respectively.

Performance Obligations

Customers generally contract with the Company for requirements in a segment relating to a specific program, and the Company’s performance obligations consist of a wide range of engineering design services and manufactured components, as well as spare parts and repairs for OEMs. A single contract may contain multiple performance obligations consisting of both recurring and nonrecurring elements.

As of March 31, 2019, the Company has the following unsatisfied, or partially unsatisfied, performance obligations that are expected to be recognized in the future as noted in the table below. The Company expects options to be exercised in addition to the amounts presented below.

	Total	Less than 1 year	1-3 years	4-5 years	More than 5 years
Unsatisfied performance obligations	$ 4,251,879	$ 2,175,956	$ 1,266,116	$ 325,073	$ 484,734

(Dollars in thousands, except per share data)

5. INVENTORIES

Inventories are stated at the lower of cost (average-cost or specific-identification methods) or market. The components of inventories are as follows:

	March 31,	
	2019	2018
Raw materials	$ 35,883	$ 69,069
Work-in-process, including manufactured and purchased components	277,996	1,591,952
Finished goods	42,399	95,234
Rotable assets	57,282	58,060
Less: unliquidated progress payments	—	(387,146)
Total inventories	$ 413,560	$ 1,427,169

At March 31, 2018, work-in-process inventory previously included capitalized preproduction costs on development programs. Capitalized preproduction costs included nonrecurring engineering, planning and design, including applicable overhead, incurred before production is manufactured on a regular basis. Significant customer-directed work changes also caused preproduction costs to be incurred. These costs are typically recovered over a contractually determined number of ship set deliveries.

Following the adoption of ASU 2014-09, the capitalized preproduction costs and forward loss provisions associated with these programs were recognized in the transition adjustment. At March 31, 2018, the balance of development program inventory, composed principally of capitalized preproduction costs, excluding progress payments related to the Company's contracts with Bombardier for the Global 7500 program and Embraer for the second generation E-Jet program was $664,283 and $217,482, respectively.

As described in Note 3, in February 2019, the Company transitioned the Global 7500 wing manufacturing operations and assets to Bombardier at which point Bombardier assumed the program’s assets and obligations.

In March 2019, the Company entered into a definitive agreement to assign the contracts associated with the Embraer programs to one of the Company's subcontractors. The Company will continue to participate in the Embraer programs as a subcontractor for the production of the rudder and elevator structures. The Embraer programs are still in the early production stages, as these aircrafts are scheduled to enter service in 2019. Transition of these programs from development to recurring production levels is dependent upon the success of the programs achieving flight testing and certification, as well as the ability of the Embraer programs to generate acceptable levels of aircraft sales. While the Company has reduced its exposure pertaining to these programs as a result of the contract assignment, the failure to achieve these milestones and level of sales or significant cost overruns may result in additional forward losses.

(Dollars in thousands, except per share data)

6. PROPERTY AND EQUIPMENT

Net property and equipment is:

	March 31, 2019	March 31, 2018
Land	$ 52,333	$ 61,410
Construction-in-process	25,310	21,364
Buildings and improvements	320,289	371,947
Furniture, fixtures and computer equipment	152,725	166,800
Machinery and equipment	661,315	973,805
	1,211,972	1,595,326
Less: accumulated depreciation	668,262	869,323
	$ 543,710	$ 726,003

Depreciation expense for the fiscal years ended March 31, 2019, 2018, and 2017, was $97,323, $101,873 and $123,199, respectively, which includes depreciation of assets under capital lease.

7. GOODWILL AND OTHER INTANGIBLE ASSETS

The following is a summary of the changes in the carrying value of goodwill by reportable segment, for the fiscal years ended March 31, 2019 and 2018:

	Integrated Systems	Aerospace Structures	Product Support	Total
Balance, March 31, 2018	$ 523,893	$ —	$ 68,935	$ 592,828
Goodwill associated with dispositions	—	—	(2,788)	(2,788)
Effect of exchange rate changes	(6,789)	—	(26)	(6,815)
Balance, March 31, 2019	$ 517,104	$ —	$ 66,121	$ 583,225

	Integrated Systems	Aerospace Structures	Product Support	Total
Balance, March 31, 2017	$ 541,155	$ 532,418	$ 69,032	$ 1,142,605
Goodwill recognized in connection with acquisitions	—	—	—	—
Impairment of goodwill	—	(535,227)	—	(535,227)
Goodwill associated with dispositions	(27,709)	—	—	(27,709)
Effect of exchange rate changes	10,447	2,809	(97)	13,159
Balance, March 31, 2018	$ 523,893	$ —	$ 68,935	$ 592,828

As of March 31, 2019 and 2018, Aerospace Structures had goodwill of $1,246,454 and $1,399,128, respectively, which was fully impaired.

(Dollars in thousands, except per share data)

Intangible Assets

The components of intangible assets, net are as follows:

	March 31, 2019			
	Weighted-Average Life (in Years)	Gross Carrying Amount	Accumulated Amortization	Net
Customer relationships	17.7	$ 551,093	$ (245,626)	$ 305,467
Product rights, technology and licenses	11.4	54,850	(43,978)	10,872
Noncompete agreements and other	16.7	2,656	(1,041)	1,615
Tradenames	10.0	150,000	(37,000)	113,000
Total intangibles, net		$ 758,599	$ (327,645)	$ 430,954

	March 31, 2018			
	Weighted-Average Life (in Years)	Gross Carrying Amount	Accumulated Amortization	Net
Customer relationships	17.3	$ 606,148	$ (240,779)	$ 365,369
Product rights, technology and licenses	11.4	55,253	(41,858)	13,395
Noncompete agreements and other	16.3	2,756	(965)	1,791
Tradenames	10.0	150,000	(22,874)	127,126
Total intangibles, net		$ 814,157	$ (306,476)	$ 507,681

Amortization expense for the fiscal years ended March 31, 2019, 2018, and 2017, was $52,581, $56,495 and $53,746, respectively. Amortization expense for the five fiscal years succeeding March 31, 2019, by year is expected to be as follows: 2020: $48,382; 2021: $48,382; 2022: $48,185; 2023: $47,961; 2024: $47,961 and thereafter: $190,083.

8. ACCRUED EXPENSES

Accrued expenses consist of the following items:

	March 31,	
	2019	2018
Accrued pension	$ 742	$ 764
Accrued other postretirement benefits	10,758	11,584
Accrued compensation and benefits	102,009	101,775
Accrued interest	12,374	11,873
Warranty reserve	18,977	24,319
Accrued workers' compensation	17,635	17,888
Accrued income tax	5,974	4,852
All other	71,103	62,859
Total accrued expenses	$ 239,572	$ 235,914

(Dollars in thousands, except per share data)

9. LEASES

At March 31, 2019, future minimum payments under noncancelable operating leases with initial or remaining terms of more than one year were as follows: 2020—$21,543; 2021—$18,516; 2022—$14,394; 2023—$11,037; 2024—$8,409 and thereafter—$34,828 through 2031. In the normal course of business, operating leases are generally renewed or replaced by other leases.

Total rental expense was $25,694, $42,676 and $39,114 for the fiscal years ended March 31, 2019, 2018, and 2017, respectively.

10. LONG-TERM DEBT

Long-term debt consists of the following:

	March 31,	
	2019	2018
Revolving credit facility	$ 215,000	$ 112,887
Receivable securitization facility	80,700	107,800
Capital leases	31,292	59,546
Senior notes due 2021	375,000	375,000
Senior notes due 2022	300,000	300,000
Senior notes due 2025	500,000	500,000
Less: debt issuance costs	(13,171)	(16,949)
	1,488,821	1,438,284
Less: current portion	8,201	16,527
	$ 1,480,620	$ 1,421,757

Revolving Credit Facility

In July 2018, the Company, its subsidiary co-borrowers and guarantors entered into a Tenth Amendment to the Credit Agreement (the “Tenth Amendment” and the existing Credit Agreement as amended by the Tenth Amendment, the "Credit Agreement") and with the Administrative Agent and the Lenders party thereto. Among other things, the Tenth Amendment modifies certain financial covenants and other terms and lowered the capacity to $700,000 upon the earlier of completion of certain asset sales or March 31, 2019. The fiscal 2019 divestitures described in Note 3 resulted in this reduction occurring as of March 8, 2019. The Tenth Amendment also adds an additional mandatory prepayment provision requiring that the Company prepay the outstanding revolving credit loans as set forth in the Tenth Amendment.

In connection with the Tenth Amendment to the Credit Agreement, the Company incurred $1,694 of financing costs. These costs, along with the $8,961 of unamortized financing costs subsequent to the Ninth Amendment, are being amortized over the remaining term of the Credit Agreement. In accordance with the reduction in the capacity of the Credit Agreement, the Company wrote off a proportional amount of unamortized financing fees existing prior to the Tenth Amendment.

In July 2017, the Company entered into a Ninth Amendment to the Credit Agreement (the “Ninth Amendment” and the Existing Credit Agreement as amended by the Ninth Amendment, the “Credit Agreement”) with the Administrative Agent and the Lenders party thereto which, among other things, (i) permitted the Company to incur High Yield Indebtedness (as defined in the Credit Agreement) in an aggregate principal amount of up to $500,000, subject to the Company’s obligations to apply the net proceeds from the offering to repay the outstanding principal amount of the term loans in full, (ii) limited the mandatory prepayment provisions to eliminate the requirement that net proceeds received from the incurrence of Permitted Indebtedness (as defined in the Credit Agreement), including the High Yield Indebtedness, be applied to reduce the revolving credit commitments once the revolving credit commitments were reduced to $800,000, (iii) amended certain covenants and other terms and (iv) modified the interest rate and letter of credit pricing tiers.

In connection with the amendment to the Credit Agreement, the Company incurred $633 of financing costs. These costs, along with the $13,226 of unamortized financing costs subsequent to the amendment, are being amortized over the remaining term of the Credit Agreement. In accordance with the reduction in the capacity of the Credit Agreement, the Company wrote-off a proportional amount of unamortized financing fees prior to the amendment.

In May 2017, the Company entered into an Eighth Amendment to the Third Amended and Restated Credit Agreement, among the Company and its lenders which, among other things, (i) eliminated the total leverage ratio financial covenant, (ii) increased the maximum permitted senior secured leverage ratio financial covenant applicable to each fiscal quarter, commencing with the fiscal quarter ended March 31, 2017, and revised the step-downs applicable to such financial covenant, (iii) reduced the aggregate principal amount of commitments under the revolving line of credit to $850,000 from $1,000,000, (iv) modified the maturity date of the term loans so that all of the term loans mature on March 31, 2019, and (v) established a new higher pricing tier for the interest rate, commitment fee and letter of credit fee pricing provisions.

Pursuant to the Credit Facility, the Company can borrow, repay and reborrow revolving credit loans, and cause to be issued letters of credit, in an aggregate principal amount not to exceed $700,000 outstanding at any time. The Credit Facility bears interest at either: (i) LIBOR plus between 1.50% and 3.50%; (ii) the prime rate; or (iii) an overnight rate at the option of the Company. The applicable interest rate is based upon the Company’s ratio of total indebtedness to earnings before interest, taxes, depreciation and amortization. In addition, the Company is required to pay a commitment fee of 0.50% on the unused portion of the Credit Facility. The Company’s obligations under the Credit Facility are guaranteed by the Company’s domestic subsidiaries. The Credit Facility matures May 2021.

The obligations under the Credit Facility and related documents are secured by liens on substantially all assets of the Company and its domestic subsidiaries pursuant to an Amended and Restated Guarantee and Collateral Agreement, dated as of November 19, 2013, among the administrative agent, the Company and the subsidiaries of the Company party thereto.

At March 31, 2019, there were $215,000 in outstanding borrowings and $30,773 in letters of credit under the Credit Facility primarily to support insurance policies. At March 31, 2018, there were $112,887 in borrowings and $30,641 in letters of credit outstanding. The level of unused borrowing capacity under the Credit Facility varies from time to time depending in part upon the Company's compliance with financial and other covenants set forth in the related agreement. The Credit Facility contains certain affirmative and negative covenants, including limitations on specified levels of indebtedness to earnings before interest, taxes, depreciation and amortization, and interest coverage requirements, and includes limitations on, among other things, liens, mergers, consolidations, sales of assets, payment of dividends and incurrence of debt. If an event of default were to occur under the Credit Facility, the lenders would be entitled to declare all amounts borrowed under it immediately due and payable. The occurrence of an event of default under the Credit Facility could also cause the acceleration of obligations under certain other agreements. The Company is in compliance with all such covenants as of March 31, 2019. As of March 31, 2019, the Company had borrowing capacity under the Credit Facility of $454,227 after reductions for borrowings and letters of credit outstanding under the Credit Facility.

The Credit Facility also provided for a variable rate term loan (the "2013 Term Loan"). The Company repaid the outstanding principal amount of the 2013 Term Loan in quarterly installments, on the first business day of each January, April, July and October. The 2013 Term Loan was paid in full with the proceeds from the Senior Notes due 2025 (see below).

Receivables Securitization Program

In November 2017, the Company amended its receivable securitization facility (the "Securitization Facility"), decreasing the purchase limit from $225,000 to $125,000 and extending the term through November 2020. In connection with the Securitization Facility, the Company sells on a revolving basis certain eligible accounts receivable to Triumph Receivables, LLC, a wholly owned special-purpose entity, which in turn sells a percentage ownership interest in the receivables to commercial paper conduits sponsored by financial institutions. The Company is the servicer of the accounts receivable under the Securitization Facility. As of March 31, 2019, the maximum amount available under the Securitization Facility was $125,000. Interest rates are based on prevailing market rates for short-term commercial paper plus a program fee and a commitment fee. The program fee is 0.13% on the amount outstanding under the Securitization Facility. Additionally, the commitment fee is 0.50% on 100% of the maximum amount available under the Securitization Facility. At March 31, 2019, $80,700 was outstanding under the Securitization Facility. The Company securitizes its accounts receivable, which are generally non-interest-bearing, in transactions that are accounted for as borrowings pursuant to the *Transfers and Servicing* topic of the ASC.

The agreement governing the Securitization Facility contains restrictions and covenants which include limitations on the making of certain restricted payments; creation of certain liens; and certain corporate acts such as mergers, consolidations and the sale of substantially all assets. The Company was in compliance with all such covenants as of March 31, 2019.

Capital Leases

During the fiscal years ended March 31, 2019, 2018, and 2017, the Company entered into new capital leases in the amounts of $2,756, $8,166 and $13,066, respectively.

Senior Notes due 2021

On February 26, 2013, the Company issued $375,000 principal amount of 4.875% Senior Notes due 2021 (the "2021 Notes"). The 2021 Notes were sold at 100% of principal amount and have an effective interest yield of 4.875%. Interest on the 2021 Notes accrues at the rate of 4.875% per annum and is payable semiannually in cash in arrears on April 1 and October 1 of each year, commencing on October 1, 2013. In connection with the issuance of the 2021 Notes, the Company incurred approximately $6,327 of costs, which were deferred and are being amortized on the effective interest method over the term of the 2021 Notes.

The 2021 Notes are the Company's senior unsecured obligations and rank equally in right of payment with all of its other existing and future senior unsecured indebtedness and senior in right of payment to all of its existing and future subordinated indebtedness. The 2021 Notes are guaranteed on a full, joint and several basis by each of the Guarantor Subsidiaries.

The Company is obligated to offer to repurchase the 2021 Notes at a price of (i) 101% of their principal amount plus accrued and unpaid interest, if any, as a result of certain change of control events and (ii) 100% of their principal amount plus accrued and unpaid interest, if any, in the event of certain asset sales. These restrictions and prohibitions are subject to certain qualifications and exceptions.

The 2021 Indenture contains covenants that, among other things, limit the Company's ability and the ability of any of the Guarantor Subsidiaries to (i) grant liens on its assets, (ii) make dividend payments, other distributions or other restricted payments, (iii) incur restrictions on the ability of the Guarantor Subsidiaries to pay dividends or make other payments, (iv) enter into sale and leaseback transactions, (v) merge, consolidate, transfer or dispose of substantially all of their assets, (vi) incur additional indebtedness, (vii) use the proceeds from sales of assets, including capital stock of restricted subsidiaries, and (viii) enter into transactions with affiliates.

Senior Notes due 2022

On June 3, 2014, the Company issued $300,000 principal amount of 5.25% Senior Notes due 2022 (the "2022 Notes"). The 2022 Notes were sold at 100% of principal amount and have an effective interest yield of 5.25%. Interest on the 2022 Notes accrues at the rate of 5.25% per annum and is payable semiannually in cash in arrears on June 1 and December 1 of each year, commencing on December 1, 2014. In connection with the issuance of the 2022 Notes, the Company incurred approximately $4,990 of costs, which were deferred and are being amortized on the effective interest method over the term of the 2022 Notes.

The 2022 Notes are the Company's senior unsecured obligations and rank equally in right of payment with all of its other existing and future senior unsecured indebtedness and senior in right of payment to all of its existing and future subordinated indebtedness. The 2022 Notes are guaranteed on a full, joint and several basis by each of the Guarantor Subsidiaries.

The Company is obligated to offer to repurchase the 2022 Notes at a price of (i) 101% of their principal amount plus accrued and unpaid interest, if any, as a result of certain change-of-control events and (ii) 100% of their principal amount plus accrued and unpaid interest, if any, in the event of certain asset sales. These restrictions and prohibitions are subject to certain qualifications and exceptions.

The 2022 Indenture contains covenants that, among other things, limit the Company's ability and the ability of any of the Guarantor Subsidiaries to (i) grant liens on its assets, (ii) make dividend payments, other distributions or other restricted payments, (iii) incur restrictions on the ability of the Guarantor Subsidiaries to pay dividends or make other payments, (iv) enter into sale and leaseback transactions, (v) merge, consolidate, transfer or dispose of substantially all of their assets, (vi) incur additional indebtedness, (vii) use the proceeds from sales of assets, including capital stock of restricted subsidiaries, and (viii) enter into transactions with affiliates.

Senior Notes Due 2025

On August 17, 2017, the Company issued $500,000 principal amount of 7.75% Senior Notes due 2025 (the "2025 Notes"). The 2025 Notes were sold at 100% of principal amount and have an effective interest yield of 7.75%. Interest on the 2025 Notes accrues at the rate of 7.75% per annum and is payable semiannually in cash in arrears on February 15 and August 15 of each year, commencing on February 15, 2018. In connection with the issuance of the 2025 Notes, the Company incurred approximately $8,779 of costs, which were deferred and are being amortized on the effective interest method over the term of the 2025 Notes.

(Dollars in thousands, except per share data)

The 2025 Notes are the Company's senior unsecured obligations and rank equally in right of payment with all of its other existing and future senior unsecured indebtedness and senior in right of payment to all of its existing and future subordinated indebtedness. The 2025 Notes are guaranteed on a full, joint and several basis by each of the Guarantor Subsidiaries.

The Company may redeem some or all of the 2025 Notes prior to August 15, 2020 by paying a "make-whole" premium. The Company may redeem some or all of the 2025 Notes on or after August 15, 2020, at specified redemption prices. In addition, prior to August 15, 2020, the Company may redeem up to 35% of the 2025 Notes with the net proceeds of certain equity offerings at a redemption price equal to 107.75% of the aggregate principal amount plus accrued and unpaid interest, if any, subject to certain limitations set forth in the indenture governing the 2025 Notes (the "2025 Indenture").

The Company is obligated to offer to repurchase the 2025 Notes at a price of (i) 101% of their principal amount plus accrued and unpaid interest, if any, as a result of certain change-of-control events and (ii) 100% of their principal amount plus accrued and unpaid interest, if any, in the event of certain asset sales. These restrictions and prohibitions are subject to certain qualifications and exceptions.

The 2025 Indenture contains covenants that, among other things, limit the Company's ability and the ability of any of the guarantor subsidiaries to (i) grant liens on its assets, (ii) make dividend payments, other distributions or other restricted payments, (iii) incur restrictions on the ability of the Guarantor Subsidiaries to pay dividends or make other payments, (iv) enter into sale and leaseback transactions, (v) merge, consolidate, transfer or dispose of substantially all of their assets, (vi) incur additional indebtedness, (vii) use the proceeds from sales of assets, including capital stock of restricted subsidiaries, and (viii) enter into transactions with affiliates.

Financial Instruments Not Recorded at Fair Value

Carrying amounts and the related estimated fair values of the Company's long-term debt not recorded at fair value in the consolidated financial statements are as follows:

March 31, 2019		March 31, 2018	
Carrying Value	Fair Value	Carrying Value	Fair Value
$ 1,488,821	$ 1,568,037	$ 1,438,284	$ 1,446,151

The fair value of the long-term debt was calculated based on either interest rates available for debt with terms and maturities similar to the Company's existing debt arrangements or broker quotes on our existing debt (Level 2 inputs).

Interest paid on indebtedness during the fiscal years ended March 31, 2019, 2018, and 2017, amounted to $99,981, $86,345 and $72,533, respectively.

As of March 31, 2019, the maturities of long-term debt are as follows: 2020—$8,201; 2021—$87,956; 2022—$594,736; 2023—$302,021; 2024—$1,422; and thereafter—$507,656 through 2032.

(Dollars in thousands, except per share data)

11. OTHER NONCURRENT LIABILITIES

Other noncurrent liabilities are composed of the following items:

	March 31,	
	2019	2018
Acquired contract liabilities, net	$ 184,612	$ 274,167
Accrued warranties	39,418	45,269
Accrued workers' compensation	13,501	14,278
Noncurrent contract liabilities	156,332	69,897
Deferred grant income	2,929	3,891
Deferred rent	9,854	17,737
Environmental contingencies	16,040	9,330
Income tax reserves	551	580
All other	1,312	6,716
Total other noncurrent liabilities	$ 424,549	$ 441,865

12. INCOME TAXES

The components of loss from continuing operations before income taxes are as follows:

	Year ended March 31,		
	2019	2018	2017
Foreign	$ (18,336)	$ (57,673)	$ 23,398
Domestic	(308,857)	(404,175)	(47,010)
	$ (327,193)	$ (461,848)	$ (23,612)

The components of income tax (benefit) expense are as follows:

	Year ended March 31,		
	2019	2018	2017
Current:			
Federal	$ (1,253)	$ 1,130	$ 5,074
State	431	88	445
Foreign	3,335	5,433	4,341
	2,513	6,651	9,860
Deferred:			
Federal	(9,076)	(44,262)	9,782
State	1,593	(14,672)	(3,166)
Foreign	(456)	15,826	2,864
	(7,939)	(43,108)	9,480
	$ (5,426)	$ (36,457)	$ 19,340

TRIUMPH GROUP, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)
(Dollars in thousands, except per share data)

A reconciliation of the statutory federal income tax rate to the effective tax rate is as follows:

	Year ended March 31,		
	2019	2018	2017
Statutory federal income tax rate	21.0 %	31.5 %	35.0 %
State and local income taxes, net of federal tax benefit	4.6	3.2	12.2
Goodwill impairment	—	(29.6)	(394.7)
Disposition of business	3.2	(0.3)	40.8
Domestic production activities deduction	—	—	9.6
Miscellaneous permanent items and nondeductible accruals	(1.2)	(0.2)	(18.0)
Research and development tax credit	3.3	3.2	43.5
Foreign tax credits	(0.7)	1.2	40.9
Valuation allowance	(28.5)	(3.4)	106.3
Tax reform	0.4	5.1	—
Global Intangible Low-Taxed Income	(1.3)	—	—
Other (including foreign rate differential and FIN 48)	0.9	(2.8)	42.5
Effective income tax rate	1.7 %	7.9 %	(81.9)%

The components of deferred tax assets and liabilities are as follows:

	March 31,	
	2019	2018
Deferred tax assets:		
Net operating loss and other credit carryforwards	$ 309,961	$ 187,254
Inventory	17,849	39,351
Capitalized research and development	—	14,345
Accruals and reserves	41,091	28,012
Interest carryforward	24,457	—
Pension and other postretirement benefits	126,337	114,090
Acquired contract liabilities, net	45,479	65,724
	565,174	448,776
Valuation allowance	(399,013)	(146,770)
Net deferred tax assets	166,161	302,006
Deferred tax liabilities:		
Deferred revenue	27,159	149,309
Property and equipment	46,538	63,570
Goodwill and other intangible assets	93,272	104,028
Prepaid expenses and other	6,156	1,588
	173,125	318,495
Net deferred tax liabilities	$ 6,964	$ 16,489

The Company follows ASC 740, *Income Taxes*, which prescribes a recognition threshold and measurement attribute criteria for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return, as well as guidance on derecognition, classification, interest and penalties, accounting in interim periods, disclosure and transition.

On December 22, 2017, the U.S. Government enacted comprehensive tax legislation referred to as the Tax Cuts and Jobs Act (the “Act”). The Act introduced tax reform that reduced the current corporate federal income tax rate from 35% to 21%, among other changes. The Act makes broad and complex changes to the U.S. tax code, and it will take time to fully evaluate the impact of these changes on the Company. The Company has completed its analysis of the Act and has recorded an additional tax liability of $1,646 resulting from an increase to the previous estimate of the transition tax on unremitted earnings of our foreign businesses; this liability was offset by available foreign tax credits. The Company has elected to treat the Act’s global intangible low-taxed income (“GILTI”) as a period expense and has included estimated GILTI tax related to current year operations in the Company's annualized effective tax rate.

A valuation allowance, if needed, reduces deferred tax assets to the amount expected to be realized. When determining the amount of net deferred tax assets that are more likely than not to be realized, the Company assesses all available positive and negative evidence. This evidence includes, but is not limited to, prior earnings history, expected future earnings, carry-back and carry-forward periods and the feasibility of ongoing tax strategies that could potentially enhance the likelihood of the realization of a deferred tax asset. The weight given to the positive and negative evidence is commensurate with the extent the evidence may be objectively verified. As such, it is generally difficult for positive evidence regarding projected future taxable income exclusive of reversing taxable temporary differences to outweigh objective negative evidence of recent financial reporting losses.

Based on these criteria and the relative weighting of both the positive and negative evidence available, and in particular the activity surrounding the Company's prior earnings history, including the forward losses and intangible impairments previously recognized, management determined that it was necessary to establish a valuation allowance against principally all of its net deferred tax assets. Given the objective verifiable negative evidence of a three-year cumulative loss and the weighting of all available positive evidence, the Company excluded projected taxable income (aside from reversing taxable temporary differences) from the assessment of income that could be used as a source of taxable income to realize the deferred tax assets.

During fiscal year 2019, the Company adjusted the valuation allowance against the consolidated net deferred tax asset by $252,243 primarily due to an increase in the net operating loss and changes to temporary differences related to the adoption of ASC 606. As of March 31, 2019, management determined that it was necessary to maintain a valuation allowance against principally all of its net deferred tax assets.

As of March 31, 2019, the Company has net operating loss carryforwards of $625,383, $1,193,153 and $152,489 for U.S. federal, state and foreign jurisdictions, respectively.

The effective income tax rate for the fiscal year ended March 31, 2019, was 1.7% as compared to 7.9% for the fiscal year ended March 31, 2018. The effective income tax rate for the fiscal year ended March 31, 2019, included the benefit of the R&D tax credit of $10,852, the benefit of the foreign tax credit of $2,307, and the change in the valuation allowance of $93,311. Due to the current year pretax loss, the effective tax rate drivers on a percentage basis are amplified. Accordingly, a year-over-year comparison of the effective tax rate may not be indicative of changes in the Company's tax position.

The Company has been granted income tax holiday as an incentive to attract foreign investment by the Government of Thailand. The tax holidays expire in various years through 2026. We do not have any other tax holidays in the jurisdictions in which we operate. The income tax benefit attributable to the tax status of our subsidiaries in Thailand was approximately $2,160 or $0.04 per diluted share in fiscal 2019, $1,530 or $0.03 per diluted share in fiscal 2018 and $928 or $0.02 per diluted share in fiscal 2017.

At March 31, 2019, cumulative undistributed earnings of foreign subsidiaries, for which no U.S. income or foreign withholding taxes have been recorded is $134,621. As the Company currently intends to indefinitely reinvest all such earnings, no provision has been made for income taxes that may become payable upon distribution of such earnings, and it is not practicable to determine the amount of the related unrecognized deferred income tax liability.

The Company has classified uncertain tax positions as noncurrent income tax liabilities unless expected to be paid in one year.

As of March 31, 2019 and 2018, the total amount of unrecognized tax benefits was $19,152 and $11,532, respectively, all of which would impact the effective rate, if recognized. The Company anticipates that total unrecognized tax benefits may be reduced by zero in the next 12 months.

With a few exceptions, the Company is no longer subject to U.S. federal, state, or local income tax examinations for fiscal years ended before March 31, 2014, or foreign income tax examinations by tax authorities for fiscal years ended before March 31, 2012.

(Dollars in thousands, except per share data)

As of March 31, 2019, the Company is subject to examination in one state and no foreign jurisdictions. The Company has filed appeals in a prior state examination related to fiscal years ended March 31, 1999 through March 31, 2005. Because of net operating losses acquired as part of the acquisition of Vought, the Company is subject to U.S. federal income tax examinations and various state jurisdiction examinations for the period ended June 16, 2010, and after related to previously filed Vought tax returns. The Company believes appropriate provisions for all outstanding issues have been made for all jurisdictions and all open years.

A reconciliation of the liability for uncertain tax positions, which are included in deferred taxes for the fiscal years ended March 31, 2019 and 2018, follows:

	Year ended March 31,		
	2019	2018	2017
Beginning balance	$ 11,759	$ 10,696	$ 9,670
Additions for tax positions related to the current year	7,364	1,032	730
Additions for tax positions of prior years	250	31	296
Ending balance	$ 19,373	$ 11,759	$ 10,696

13. STOCKHOLDERS' EQUITY

In March 2019, the Company adopted a tax benefits preservation plan (the "Plan") designed to preserve Triumph’s ability to utilize its net operating loss carryforwards and other tax attributes (collectively, "Tax Benefits"). The Plan is similar to plans adopted by other public companies with significant Tax Benefits. The Company intends to submit the Plan for stockholder approval at the Company’s next annual meeting of stockholders. At the meeting, the Company will also seek stockholder approval to amend the Company’s amended and restated certificate of incorporation, in order to permit issuance of Rights (as defined below) relating to preferred stock (the "Stockholder Approval").

Under the Plan, Triumph is declaring a dividend distribution of one right (a Right) for each share of its common stock outstanding at the close of business on March 25, 2019. The Rights will trade with Triumph’s common shares and will expire on March 13, 2020, unless the Plan is approved by the stockholders until March 13, 2022, at a stockholder meeting held before March 13, 2020. The Rights also will expire: (i) if the Rights are redeemed or exchanged as provided in the Plan; (ii) if the Board determines that the Plan is no longer necessary or desirable for the preservation of the Tax Benefits; or (iii) if the Board determines that no Tax Benefits, once realized, as applicable, may be carried forward (in which case, the Rights will expire on the first date of the relevant taxable year for which such determination is made).

Pursuant to the Plan, if a stockholder (or group) becomes a 5% stockholder after adoption of the Plan without meeting certain customary exceptions, the Rights would become exercisable and entitle stockholders (other than the 5% stockholder or group causing the rights to become exercisable) to purchase additional shares of Triumph at a significant discount, resulting in significant dilution in the economic interest and voting power of the 5% stockholder or group causing the Rights to become exercisable. Stockholders owning five percent or more of Triumph’s outstanding shares at the time of adoption of the Plan are grandfathered and will only cause the Rights to distribute and become exercisable if they acquire an additional one percent or more of Triumph’s outstanding shares. Under the Plan, the Board has the ability to determine in its sole discretion that any person shall not be deemed an acquiring person and therefore that the Rights shall not become exercisable if such person becomes a 5% stockholder. The adoption of the Plan and the dividend distribution did not have an impact on our consolidated financial statements.

In 2014, the Company's Board of Directors authorized an increase in the Company's existing stock repurchase program by up to 5,000,000 shares of its common stock in addition to the 500,800 shares authorized under prior authorizations. As of March 31, 2019, the Company remains able to purchase an additional 2,277,789 shares. Repurchases may be made from time to time in open market transactions, block purchases, privately negotiated transactions or otherwise at prevailing prices. No time limit has been set for completion of the program.

The holders of the common stock are entitled to one vote per share on all matters to be voted upon by the stockholders of Triumph.

The Company has preferred stock of $0.01 par value, 250,000 shares authorized. At March 31, 2019 and 2018, zero shares of preferred stock were outstanding.

(Dollars in thousands, except per share data)

Accumulated Other Comprehensive Loss

Changes in accumulated other comprehensive loss ("AOCI") by component for the years ended March 31, 2019 and 2018, were as follows:

	Currency Translation Adjustment	Unrealized Gains and Losses on Derivative Instruments	Defined Benefit Pension Plans and Other Postretirement Benefits	Total (1)
Balance March 31, 2017	$ (87,212)	$ 2,153	$ (311,119)	$ (396,178)
AOCI before reclassifications	28,529	133	32,286	60,948
Amounts reclassified from AOCI	—	(2,164)	(30,476) (2)	(32,640)
Net current period OCI	28,529	(2,031)	1,810	28,308
Balance March 31, 2018	(58,683)	122	(309,309)	(367,870)
AOCI before reclassifications	(15,770)	30	(126,679)	(142,419)
Amounts reclassified from AOCI	(3) 25,847	(1,282)	(1,960) (2)	22,605
Net current period OCI	10,077	(1,252)	(128,639)	(119,814)
Balance March 31, 2019	$ (48,606)	$ (1,130)	$ (437,948)	$ (487,684)

(1) Net of tax.
(2) Includes amortization of actuarial losses and recognized prior service (credits) costs, which are included in the net periodic pension cost of which a portion is allocated to production as inventoried costs.
(3) Includes amounts transferred from cumulative translation adjustments as a result of the sale of Triumph Gear Systems – Toronto.

14. LOSS PER SHARE

The following is a reconciliation between the weighted-average common shares outstanding used in the calculation of basic and diluted loss per share:

	Year ended March 31,		
	2019	2018	2017
		(thousands)	
Weighted-average common shares outstanding—basic	49,698	49,442	49,303
Net effect of dilutive stock options and non-vested stock (1)	—	—	—
Weighted-average common shares outstanding—diluted	49,698	49,442	49,303

(1) For the fiscal years ended March 31, 2019, 2018, and 2017, incremental shares of 244, 238, and 131, respectively, have been excluded due to the net loss in each period.

15. EMPLOYEE BENEFIT PLANS

Defined Contribution Pension Plan

The Company sponsors a defined contribution 401(k) plan, under which salaried and certain hourly employees may defer a portion of their compensation. Eligible participants may contribute to the plan up to the allowable amount as determined by the plan of their regular compensation before taxes. The Company generally matches contributions up to 75% of the first 6% of compensation contributed by the participant. Effective January 1, 2019, the Company match that applies to all nonunion employees and some union employees was increased from 50% of the first 6% contributed by the participant to 75% of the first 6% contributed by the participant. All contributions and Company matches are invested at the direction of the employee in one or more investment options offered under the plan. Company matching contributions vest immediately and aggregated to $13,685, $13,616 and $14,163 for the fiscal years ended March 31, 2019, 2018, and 2017, respectively.

Defined Benefit Pension and Other Postretirement Benefit Plans

The Company sponsors several defined benefit pension plans covering some of its employees. Most employees are ineligible to participate in the plans or have ceased to accrue additional benefits under the plans. Benefits under the defined benefit plans are based on years of service and, for most non-represented employees, on average compensation for certain years. It is the Company's policy to fund at least the minimum amount required for all qualified plans, using actuarial cost methods and assumptions acceptable under applicable government regulations, by making payments into a trust separate from us.

In addition to the defined benefit pension plans, the Company provides certain health care benefits for eligible retired employees. Such benefits are unfunded as of March 31, 2019. Employees achieve eligibility to participate in these contributory plans upon retirement from active service if they meet specified age and years of service requirements. Election to participate for some employees must be made at the date of retirement. Qualifying dependents of eligible retirees at the date of retirement are also eligible for medical coverage. Current plan documents reserve the right to amend or terminate the plans at any time, subject to applicable collective bargaining requirements for represented employees. From time to time, changes have been made to the benefits provided to various groups of plan participants. Premiums paid by the Company for most retirees for medical coverage prior to age 65 are capped and are based on years of service. Overall premiums are adjusted annually for changes in the cost of the plans as determined by an independent actuary. In addition to this medical inflation cost-sharing feature, the plans also have provisions for deductibles, co-payments, coinsurance percentages, out-of-pocket limits, schedules of reasonable fees, preferred provider networks, coordination of benefits with other plans and a Medicare carve-out.

The Company also sponsors an unfunded supplemental executive retirement plan ("SERP") that provides retirement benefits to certain key employees. Benefits under this plan have been frozen.

In accordance with ASC 715, the Company has recognized the funded status of the benefit obligation as of March 31, 2019 and 2018, on the accompanying consolidated balance sheets. The funded status is measured as the difference between the fair value of the plans' assets and the PBO or accumulated postretirement benefit obligation of the plan. The majority of the plan assets are publicly traded investments which were valued based on the market price as of the measurement date. Investments that are not publicly traded were valued based on the estimated fair value of those investments based on our evaluation of data from fund managers and comparable market data.

The following table sets forth the Company's consolidated defined benefit pension plans for its union and non-union employees and its SERP as of March 31, 2019 and 2018, and the amounts recorded on the consolidated balance sheets at March 31, 2019 and 2018. Company contributions include amounts contributed directly to plan assets and indirectly as benefits paid from the Company's assets. Benefit payments reflect the total benefits paid from the plans and the Company's assets. Information on the plans includes both the domestic qualified and nonqualified plans and the foreign qualified plans.

TRIUMPH GROUP, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)
(Dollars in thousands, except per share data)

	Pension Benefits		Other Postretirement Benefits	
	Year ended March 31,		Year ended March 31,	
	2019	2018	2019	2018
Change in projected benefit obligations				
Projected benefit obligation at beginning of year	$ 2,277,816	$ 2,346,990	$ 119,164	$ 164,128
Service cost	3,292	4,505	227	391
Interest cost	79,446	75,189	4,039	4,393
Actuarial loss (gain)	48,931	19,110	(2,576)	(17,780)
Plan amendments	1,138	(1,939)	—	(20,042)
Participant contributions	196	187	833	885
Settlements	—	(3,233)	—	—
Special termination benefits	4,032	—	—	—
Benefits paid	(176,398)	(168,464)	(12,232)	(12,811)
Currency translation adjustment	(3,719)	5,471	—	—
Projected benefit obligation at end of year	$ 2,234,734	$ 2,277,816	$ 109,455	$ 119,164
Accumulated benefit obligation at end of year	$ 2,229,188	$ 2,272,505	$ 109,455	$ 119,164
Assumptions used to determine benefit obligations at end of year				
Discount rate	2.54 - 3.88%	2.65 - 4.01%	3.77%	3.93%
Rate of compensation increase	3.50 - 4.50%	3.50 - 4.50%	N/A	N/A

TRIUMPH GROUP, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)
(Dollars in thousands, except per share data)

	Pension Benefits		Other Postretirement Benefits	
	Year ended March 31,		Year ended March 31,	
	2019	2018	2019	2018
Change in fair value of plan assets				
Fair value of plan assets at beginning of year	$ 1,903,901	$ 1,900,372	$ —	$ —
Actual return on plan assets	67,753	164,281	—	—
Settlements	—	(3,233)	—	—
Participant contributions	196	187	833	885
Company contributions	4,580	5,124	11,399	11,926
Benefits paid	(176,398)	(168,464)	(12,232)	(12,811)
Currency translation adjustment	(3,921)	5,634	—	—
Fair value of plan assets at end of year	$ 1,796,111	$ 1,903,901	$ —	$ —
Funded status (underfunded)				
Funded status	$ (438,623)	$ (373,915)	$ (109,455)	$ (119,164)
Reconciliation of amounts recognized on the consolidated balance sheets				
Pension asset—noncurrent	$ 3,900	$ 3,155	$ —	$ —
Accrued benefit liability—current	(742)	(764)	(10,758)	(11,584)
Accrued benefit liability—noncurrent	(441,781)	(376,306)	(98,697)	(107,580)
Net amount recognized	$ (438,623)	$ (373,915)	$ (109,455)	$ (119,164)
Reconciliation of amounts recognized on accumulated other comprehensive income				
Prior service credits	$ 780	$ (3,978)	$ (14,497)	$ (75,261)
Actuarial losses (gains)	682,226	570,933	(67,985)	(19,151)
Income tax (benefits) expenses related to above items	(204,594)	(205,250)	42,016	42,016
Unamortized benefit plan costs (gains)	$ 478,412	$ 361,705	$ (40,466)	$ (52,396)

(Dollars in thousands, except per share data)

The components of net periodic benefit cost for fiscal years ended March 31, 2019, 2018, and 2017 are as follows:

	Pension Benefits			Other Postretirement Benefits		
	Year Ended March 31,			Year Ended March 31,		
	2019	2018	2017	2019	2018	2017
Components of net periodic pension cost						
Service cost	$ 3,292	$ 4,505	$ 6,538	$ 227	$ 391	$ 716
Interest cost	79,446	75,189	72,638	4,039	4,393	4,987
Expected return on plan assets	(147,411)	(152,346)	(155,991)	—	—	—
Amortization of prior service credit cost	(3,619)	(2,841)	(1,782)	(4,655)	(8,537)	(13,464)
Amortization of net loss	16,822	13,905	12,115	(9,851)	(7,275)	(6,588)
Curtailment gain (loss)	—	29	—	—	(26,274)	—
Settlements	—	523	—	—	—	—
Special termination benefits	4,032	—	—	—	—	—
Total net periodic benefit (income) expense	$ (47,438)	$ (61,036)	$ (66,482)	$ (10,240)	$ (37,302)	$ (14,349)
Assumptions used to determine net periodic pension cost						
Discount rate	2.65 - 4.01%	2.87 - 4.06%	3.25 - 3.93%	3.93%	3.62 - 3.93%	3.73%
Expected long-term rate on assets	5.00 - 8.00%	6.50 - 8.00%	6.50 - 8.00%	N/A	N/A	N/A
Rate of compensation increase	3.50 - 4.50%	3.50 - 4.50%	3.50 - 4.50%	N/A	N/A	N/A

The discount rate is determined annually as of each measurement date, based on a review of yield rates associated with long-term, high-quality corporate bonds. At the end of each year, the discount rate is primarily determined using the results of bond yield curve models based on a portfolio of high-quality bonds matching notional cash inflows with the expected benefit payments for each significant benefit plan.

The expected return on plan assets is determined based on a market-related value of plan assets, which is a smoothed asset value. The market-related value of assets is calculated by recognizing investment performance that is different from that expected on a straight-line basis over five years. Actuarial gains and losses are amortized over the average remaining life expectancy of inactive participants for plans that are predominantly inactive and over the expected future service for active participants for other plans, but only to the extent unrecognized gains or losses exceed a corridor equal to 10% of the greater of the projected benefit obligation or market-related value of assets.

The Company estimates the service and interest cost of its pension and other postretirement benefit plans by using the specific spot rates derived from the yield curve used to discount the cash flows reflected in the measurement of the benefit obligation. The Company believes this approach provides a precise measurement of service and interest costs due to the correlation between projected benefit cash flows to the corresponding spot yield curve rates. The Company amortizes actuarial gains and losses over the average life expectancy of inactive plan participants because almost all plan participants are inactive.

During the fiscal year ended March 31, 2019, the Society of Actuaries released a new mortality projection scale that reduced expected future mortality improvements for participants of U.S. pension plans. The Company has reflected this projection scale in the measurement of our U.S. pension and other postretirement benefit plans as of March 31, 2019. This change resulted in a decrease in the benefit obligation.

The Company periodically experiences events or makes changes to its benefit plans that result in curtailment or special charges. Curtailments are recognized when events occur that significantly reduce the expected years of future service of present employees or eliminates the benefits for a significant number of employees for some or all of their future service.

(Dollars in thousands, except per share data)

Curtailment losses are recognized when it is probable the curtailment will occur and the effects are reasonably estimable. Curtailment gains are recognized when the related employees are terminated or a plan amendment is adopted, whichever is applicable.

As required under ASC 715, the Company remeasures plan assets and obligations during an interim period whenever a significant event occurs that results in a material change in the net periodic pension cost. The determination of significance is based on judgment and consideration of events and circumstances impacting the pension costs.

The following summarizes the key events whose effects on net periodic benefit cost and obligations are included in the tables above:

- In February 2019, the Company transferred its Global 7500 wing manufacturing operations to Bombardier. In conjunction with this transaction, the Company provided special termination pension benefits to certain pension participants who transferred employment from Triumph to Bombardier. This change resulted in the recognition of a charge of $4,032 for special termination benefits.
- In March 2018, the Company ratified a new collective bargaining agreement with a group of union-represented employees, who were working without an agreement. The agreement resulted in plan amendments for one of our pension plans and our postretirement welfare benefit plan. These amendments eliminated future service under the plans and generated curtailments, which accelerated $11,146 of prior service credits for the postretirement welfare benefits plan and accelerates $29 of prior service costs for the pension plan. These amounts were included in curtailment and settlement gain, net on the consolidated statement of operations.
- In November 2017, the Company announced an amendment to the postretirement welfare benefits plan for its non-represented employee participants. Effective January 1, 2018, the Company eliminated and reduced certain welfare benefits for non-represented retirees and active participants. Those changes resulted in a decrease in the OPEB obligation of $17,652 and a curtailment gain of $15,099 included in curtailment and settlement gain, net on the consolidated statement of operations.

The following table shows those amounts expected to be recognized in net periodic benefit costs during the fiscal year ending March 31, 2020:

	Pension Benefits	Other Postretirement Benefits
Amounts expected to be recognized in FY 2020 net periodic benefit costs		
Prior service credit	$ (1,114)	$ (4,655)
Actuarial loss	$ 21,439	$ (9,767)

Expected Pension Benefit Payments

The total estimated future benefit payments for the pension plans are expected to be paid from the plan assets and company funds. The other postretirement plan benefit payments reflect the Company's portion of the funding. Estimated future benefit payments from plan assets and Company funds for the next ten years are as follows:

Year	Pension Benefits	Other Postretirement Benefits*
2020	$ 173,599	$ 10,881
2021	168,172	10,575
2022	164,132	10,104
2023	161,925	9,558
2024	157,505	9,087
2025 - 2029	727,250	37,219

* Net of expected Medicare Part D subsidies of $523 to $733 per year.

(Dollars in thousands, except per share data)

Plan Assets, Investment Policy and Strategy

The table below sets forth the Company's target asset allocation for fiscal 2019 and the actual asset allocations at March 31, 2019 and 2018.

	Target Allocation	Actual Allocation March 31,	
Asset Category	**Fiscal 2019**	**2019**	**2018**
Equity securities	40% - 50%	45%	45%
Fixed income securities	40% - 50%	48	48
Alternative investment funds	0% - 10%	5	5
Other	0% - 5%	2	2
Total		100%	100%

Pension plan assets are invested in various asset classes that are expected to produce a sufficient level of diversification and investment return over the long-term. The investment goals are to exceed the assumed actuarial rate of return over the long-term within reasonable and prudent levels of risks and to meet future obligations.

Asset/liability studies are conducted on a regular basis to provide guidance in setting investment goals for the pension portfolio and its asset allocation. The asset allocation aims to prudently achieve a strong, risk-adjusted return while seeking to minimize funding level volatility and improve the funded status of the plans. The pension plans currently employ a liability-driven investment ("LDI") approach, where assets and liabilities move in the same direction. The goal is to limit the volatility of the funding status and cover part, but not all, of the changes in liabilities. Most of the liabilities' changes are due to interest rate movements.

To balance expected risk and return, allocation targets are established and monitored against acceptable ranges. All investment policies and procedures are designed to ensure that the plans' investments are in compliance with the Employee Retirement Income Security Act of 1974 ("ERISA"). Guidelines are established defining permitted investments within each asset class. Each investment manager has contractual guidelines to ensure that investments are made within the parameters of their asset class or in the case of multi-asset class managers, the parameters of their multi-asset class strategy. Certain investments are not permitted at any time, including investment directly in employer securities and uncovered short sales.

The tables below provide the fair values of the Company's plan assets at March 31, 2019 and 2018, by asset category. The table also identifies the level of inputs used to determine the fair value of assets in each category (refer to Note 2 for definition of levels).

TRIUMPH GROUP, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)
(Dollars in thousands, except per share data)

	March 31, 2019			
	Level 1	Level 2	Level 3	Total
Assets				
Cash and cash equivalents	$ 25,798	$ 6,189	$ —	$ 31,987
Equity securities				
International	161,132	—	—	161,132
U.S. equity	8,464	—	—	8,464
U.S. commingled fund	489,463	—	—	489,463
International commingled fund	39,797	—	—	39,797
Fixed income securities				
Corporate bonds	—	24,942	—	24,942
Government securities	—	109,306	—	109,306
U.S. commingled fund	654,269	—	—	654,269
Other				
Insurance contracts	—	—	1,021	1,021
Total investment in securities—assets	$ 1,378,923	$ 140,437	$ 1,021	$ 1,520,381

U.S. equity commingled fund	4,690
International equity commingled fund	96,867
U.S. fixed income commingled fund	76,766
Private equity and infrastructure	95,760
Other	1,693
Total investment measured at NAV as a practical expedient	$ 275,776
Receivables	1,238
Payables	(1,284)
Total plan assets	$ 1,796,111

(Dollars in thousands, except per share data)

	March 31, 2018			
	Level 1	Level 2	Level 3	Total
Assets				
Cash and cash equivalents	$ 25,559	$ 6,670	$ —	$ 32,229
Equity securities				
International	164,033	—	—	164,033
U.S. equity	63,037	—	—	63,037
U.S. commingled fund	533,177	—	—	533,177
International commingled fund	46,147	—	—	46,147
Fixed income securities				
Corporate bonds	—	118,474	—	118,474
Government securities	—	11,815	—	11,815
U.S. commingled fund	681,807	—	—	681,807
International commingled fund	—	—	—	—
Other fixed income	—	—	—	—
Other				
Insurance contracts	—	—	1,256	1,256
Total investment in securities—assets	$ 1,513,760	$ 136,959	$ 1,256	$ 1,651,975
U.S. equity commingled fund				4,428
International equity commingled fund				44,779
U.S. fixed income commingled fund				105,721
Private equity and infrastructure				94,305
Other				1,598
Total investment measured at NAV as a practical expedient				$ 250,831
Receivables				1,238
Payables				(143)
Total plan assets				$ 1,903,901

Cash equivalents and other short-term investments are primarily held in registered short-term investment vehicles which are valued using a market approach based on quoted market prices of similar instruments.

Public equity securities, including common stock, are primarily valued using a market approach based on the closing fair market prices of identical instruments in the principal market on which they are traded. Commingled funds that are open-ended mutual funds for which the fair value per share is determined and published by the respective mutual fund sponsor and is the basis for current observable transactions are categorized as Level 1 fair value measures.

Investments in commingled funds and private equity and infrastructure funds are carried at net asset value ("NAV") as a practical expedient to estimate fair value. The NAV is the total value of the fund divided by the number of shares outstanding. Adjustments to NAV, if any, are determined based on evaluation of data provided by fund managers, including valuation of the underlying investments derived using inputs such as cost, operating results, discounted future cash flows and market-based comparable data. In accordance with ASC 820-10, investments that are measured at NAV practical expedient are not classified in the fair value hierarchy; however, their fair value amounts are presented in these tables to permit reconciliation of the fair value hierarchy to the total plan assets disclosed in this footnote.

Corporate, government agency bonds and mortgage-backed securities are primarily valued using a market approach with inputs that include broker quotes, benchmark yields, base spreads and reported observable trades for identical or comparable instruments.

(Dollars in thousands, except per share data)

Other investments include private equity and infrastructure funds and insurance contracts. Investments in private equity and infrastructure funds are carried at estimated fair value based on NAV as a practical expedient and other appropriate adjustments to NAV as determined based on an evaluation of data provided by fund managers, including valuations of the underlying investments derived using inputs such as cost, operating results, discounted future cash flows, and market-based comparable data.

Assumptions and Sensitivities

The discount rate is determined as of each measurement date, based on a review of yield rates associated with long-term, high-quality corporate bonds. The calculation separately discounts benefit payments using the spot rates from a long-term, high-quality corporate bond yield curve.

The effect of a 25 basis-point change in discount rates as of March 31, 2019, is shown below:

	Pension Benefits	Other Postretirement Benefits
Increase of 25 basis points		
Obligation	* $ (56,167)	$ (2,131)
Net periodic expense	11	(223)
Decrease of 25 basis points		
Obligation	* $ 58,699	$ 2,214
Net periodic expense	(3)	231

* Excludes impact to plan assets due to the LDI investment approach discussed above under "Plan Assets, Investment Policy and Strategy."

The long-term rate of return assumption represents the expected average rate of earnings on the funds invested to provide for the benefits included in the benefit obligations. The long-term rate of return assumption is determined based on a number of factors, including historical market index returns, the anticipated long-term asset allocation of the plans, historical plan return data, plan expenses and the potential to outperform market index returns. For fiscal 2019, the expected long-term rate of return on assets was 5.00 - 8.00%. For fiscal 2020, the expected long-term rate of return is 5.00 - 8.00%.

A significant factor used in estimating future per capita cost of covered health care benefits for our retirees and us is the health care cost trend rate assumption. The rate used at March 31, 2019, was 6.20% and is assumed to decrease gradually to 4.50% by fiscal 2027 and remain at that level thereafter. The effect of a one-percentage-point change in the health care cost trend rate in each year is shown below:

	Other Postretirement Benefits	
	One-Percentage-Point Increase	One-Percentage-Point Decrease
Net periodic expense	$ 224	$ (206)
Obligation	4,831	(4,448)

Anticipated Contributions to Defined Benefit and Postretirement Welfare Benefit Plans

The Company does not expect to contribute to its qualified U.S. defined benefit pension plans and expects to contribute $1,408 to its nonqualified and non-U.S. pension plans. The Company expects to contribute $10,881 to its postretirement welfare benefits plan during fiscal 2020. No plan assets are expected to be returned to the Company in fiscal 2020.

(Dollars in thousands, except per share data)

16. STOCK COMPENSATION PLANS

The Company has stock incentive plans under which employees and non-employee directors may be granted equity awards to acquire shares of the Company's common stock at the fair value at the time of the grant. The stock incentive and compensation plans under which outstanding equity awards have been granted to employees, officers and non-employee directors are the Triumph Group 2018 Equity Plan (the "2018 Plan"), the Triumph Group 2013 Equity and Cash Incentive Plan (the “2013 Plan”), the 2016 Directors’ Equity Compensation Plan, as amended (the “Directors’ Plan”), and the Amended and Restated Directors’ Stock Incentive Plan (the “Prior Directors’ Plan”). The Prior Directors’ Plan expired by its terms during fiscal 2017. The current stock incentive and compensation plans used for future awards are the 2013 Plan for employees, officers and consultants, the Directors’ Plan, and the 2018 Plan. In addition, in April 2016, the Board approved a separate employment inducement plan under which stock options and restricted stock awards were granted to Daniel J. Crowley as new hire and retention awards (the “Crowley Plan”). The 2018 Plan, the 2013 Plan, the Directors’ Plan, and the Prior Directors’ Plan are collectively referred to in this note as the plans.

Since fiscal 2006, the management and compensation committee has utilized restricted stock and restricted stock units as its primary form of share-based incentive compensation. The restricted stock and restricted stock units are subject to graded vesting, generally over a three year period, and are subject to forfeiture should the grantee's employment be terminated prior to an applicable vesting date. The share-based payment expense arising from restricted stock and restricted stock unit expense is included in capital in excess of par value. The fair value of restricted shares under the Company's restricted stock plans is determined by the product of the number of shares granted and the grant date market price of the Company's common stock. The awards contain service conditions and may also contain performance or market conditions that affect the number of shares that vest. The fair value of restricted stock and restricted stock unit awards is expensed on a straight-line basis over the requisite service period which is typically the vesting period.

The Company recognized $10,259, $7,949 and $7,922 of share-based compensation expense during the fiscal years ended March 31, 2019, 2018, and 2017, respectively. The total income tax benefit recognized for share-based compensation arrangements for fiscal years ended March 31, 2019, 2018, and 2017, was $2,622, $0 and $2,851, respectively.

A summary of the Company's stock option activity and related information for its option plans for the fiscal year ended March 31, 2019, was as follows:

	Options	Weighted-Average Exercise Price per share	Weighted-Average Remaining Contractual Term (in Years)	Aggregate Intrinsic Value
Outstanding at March 31, 2018	150,000	$ 30.86	8	$ —
Granted	—	—		
Outstanding at March 31, 2019	150,000	$ 30.86	7	$ —

At March 31, 2019 and 2018, 5,586,421 shares and 4,034,003 shares of common stock, respectively, were available for issuance under the plans. A summary of the status of the Company's non-vested shares/units of restricted stock and deferred stock units as of March 31, 2019, and changes during the fiscal year ended March 31, 2019, is presented below:

	Shares	Weighted-Average Grant Date Fair Value
Non-vested restricted awards and deferred stock units at March 31, 2018	842,940	$ 37.92
Granted	746,994	21.30
Vested	(219,034)	31.12
Forfeited	(289,521)	29.25
Non-vested restricted awards and deferred stock units at March 31, 2019	1,081,379	$ 26.01

The fair value of employee restricted stock which vested during fiscal 2019 was $7,031. The tax benefit from vested restricted stock was $214, $303 and $182 during the fiscal years ended March 31, 2019, 2018, and 2017, respectively. The weighted-average grant date fair value of share-based grants in the fiscal years ended March 31, 2019, 2018, and 2017, was $21.30, $38.23 and $33.70, respectively. Expected future compensation expense on restricted stock net of expected forfeitures, is approximately $12,223, which is expected to be recognized over the remaining weighted-average vesting period of 1.5 years.

17. COMMITMENTS AND CONTINGENCIES

Certain of the Company's business operations and facilities are subject to a number of federal, state, local and foreign environmental laws and regulations. Former owners generally indemnify the Company for environmental liabilities related to the assets and businesses acquired which existed prior to the acquisition dates. In the opinion of management, there are no significant environmental contingent liabilities which would have a material effect on the financial condition or operating results of the Company which are not covered by such indemnification.

The Company's risk related to pension projected obligations as of March 31, 2019, is significant. This amount is currently in excess of the related plan assets. Benefit plan assets are invested in a diversified portfolio of investments in both the equity and debt categories, as well as limited investments in real estate and other alternative investments. The market value of all of these investment categories may be adversely affected by external events and the movements and volatility in the financial markets, including such events as the current credit and real estate market conditions. Declines in the market values of our plan assets could expose the total asset balance to significant risk which may cause an increase to future funding requirements. The Company's potential risk related to OPEB projected obligations as of March 31, 2019, is also significant.

Some raw materials and operating supplies are subject to price and supply fluctuations caused by market dynamics. The Company's strategic sourcing initiatives seek to find ways of mitigating the inflationary pressures of the marketplace. In recent years, these inflationary pressures have affected the market for raw materials. However, the Company believes that raw material prices will remain stable through the remainder of fiscal 2020 and after that, experience increases that are in line with inflation. Additionally, the Company generally does not employ forward contracts or other financial instruments to hedge commodity price risk.

The Company's suppliers' failure to provide acceptable raw materials, components, kits and subassemblies would adversely affect production schedules and contract profitability. The Company maintains an extensive qualification and performance surveillance system to control risk associated with such supply base reliance. The Company is dependent on third parties for certain information technology services. To a lesser extent, the Company is also exposed to fluctuations in the prices of certain utilities and services, such as electricity, natural gas, chemical processing and freight. The Company utilizes a range of long-term agreements and strategic aggregated sourcing to optimize procurement expense and supply risk in these categories.

In the ordinary course of business, the Company is involved in disputes, claims and lawsuits with employees, suppliers and customers, as well as governmental and regulatory inquiries, that it deems to be immaterial. Some may involve claims or potential claims of substantial damages, fines, penalties or injunctive relief. While the Company cannot predict the outcome of any pending or future litigation or proceeding and no assurances can be given, the Company does not believe that any pending matter will have a material effect, individually or in the aggregate, on its financial position or results of operations.

18. RESTRUCTURING COSTS

The Company committed to various restructuring plans involving certain of its businesses, as well as the consolidation of certain of its facilities over the past several years. These plans are nearing completion, and as a result, the Company will have reduced its footprint by approximately 4.3 million square feet, will have reduced headcount by approximately 2,500 employees, and will have amended certain contracts. The Company originally estimated that it would record aggregate pretax charges of $195,000 to $210,000 related to these programs, which represent employee termination benefits, contract termination costs, accelerated depreciation, a nd facility closure and other exit costs. These charges have resulted in cash outlays and will continue to do so until the completion of the related programs. As of March 31, 2019, the Company has updated its estimate of the expected aggregate pretax charge to $216,000 upon completion of the restructuring. From the initiation of the plans in fiscal 2016 through the year ended March 31, 2019, the Company has incurred $208,000 and expects to incur approximately $8,000 of additional pretax charges. A substantial portion of the costs incurred to date have been through operations that have since been divested. The Company is considering whether additional programs, which could impact the estimated aggregate pretax charge estimate, may further support the achievement of the overall strategic objective of the restructuring plans.

(Dollars in thousands, except per share data)

The following table provides a summary of the Company's current aggregate cost estimates by major type of expense associated with the restructuring plans noted above:

Type of expense	Total estimated amount expected to be incurred
Termination benefits	$ 51,000
Facility closure and other exit costs (1)	32,000
Contract termination costs	20,000
Accelerated depreciation charges (2)	36,000
Other (3)	77,000
	$ 216,000

(1) Includes costs to transfer product lines among facilities and outplacement and employee relocation costs.

(2) Accelerated depreciation charges are recorded as part of depreciation and amortization on the consolidated statement of operations.

(3) Consists of other costs directly related to the plan, including project management, legal and regulatory costs.

The restructuring charges recognized by type and by segment consisted of the following:

	Fiscal year ended March 31, 2019				
	Integrated Systems	Aerospace Structures	Product Support	Corporate	Total
Termination benefits	$ 5,558	$ 13,426	$ 2,064	$ 6,233	$ 27,281
Facility closure and other exit costs	1,464	—	—	—	1,464
Other	2,353	—	—	—	2,353
Total	9,375	13,426	2,064	6,233	31,098

	Fiscal year ended March 31, 2018				
	Integrated Systems	Aerospace Structures	Product Support	Corporate	Total
Termination benefits	$ 139	$ 3,742	$ —	$ 158	$ 4,039
Facility closure and other exit costs	866	9,321	—	—	10,187
Other	1,937	4,016	779	19,111	25,843
Total restructuring	2,942	17,079	779	19,269	40,069
Depreciation and amortization	2,376	629	—	—	3,005
Total	$ 5,318	$ 17,708	$ 779	$ 19,269	$ 43,074

	Fiscal year ended March 31, 2017				
	Integrated Systems	Aerospace Structures	Product Support	Corporate	Total
Termination benefits	$ 1,449	$ 1,669	$ 147	$ —	$ 3,265
Facility closure and other exit costs	—	5,285	526	—	5,811
Other	49	10,576	280	22,196	33,101
Total restructuring	1,498	17,530	953	22,196	42,177
Depreciation and amortization	732	9,886	180	—	10,798
Total	$ 2,230	$ 27,416	$ 1,133	$ 22,196	$ 52,975

Termination benefits include employee retention, severance and benefit payments for terminated employees. Facility closure costs include general operating costs incurred subsequent to production shutdown as well as equipment relocation and other associated costs. Contract termination costs include costs associated with terminating existing leases and supplier agreements. Other costs include legal, outplacement and employee relocation costs, and other employee-related costs.

19. CUSTOMER CONCENTRATION

Trade and other accounts receivable from The Boeing Company ("Boeing") represented approximately 18% and 10% of total accounts receivable as of March 31, 2019 and 2018, respectively. Trade and other accounts receivable from Gulfstream represented approximately 11% and 16% of total accounts receivable as of March 31, 2019 and 2018, respectively. Trade and other accounts receivable from Bombardier represented approximately 13% and 1% of total accounts receivable as of March 31, 2019 and 2018, respectively. The Company had no other significant concentrations of credit risk.

Sales to Boeing for fiscal 2019 were $1,031,107, or 31% of net sales, of which $229,062, $788,061, and $13,984 were from Integrated Systems, Aerospace Structures and Product Support, respectively. Sales to Boeing for fiscal 2018 were $1,004,274, or 31% of net sales, of which $206,740, $788,151, and $9,383 were from Integrated Systems, Aerospace Structures and Product Support, respectively. Sales to Boeing for fiscal 2017 were $1,243,981, or 35% of net sales, of which $209,669, $1,004,075, and $30,237 were from Integrated Systems, Aerospace Structures and Product Support, respectively.

Sales to Gulfstream for fiscal 2019 were $361,451, or 11% of net sales, of which $2,324, $358,382, and $745 were from Integrated Systems, Aerospace Structures, and Product Support, respectively. Sales to Gulfstream for fiscal 2018 were $421,985, or 13% of net sales, of which $1,313, $420,204, and $468 were from Integrated Systems, Aerospace Structures and Product Support, respectively. Sales to Gulfstream for fiscal 2017 were $440,998, or 12% of net sales, of which $1,881, $438,880, and $237 were from Integrated Systems, Aerospace Structures and Product Support, respectively.

No other single customer accounted for more than 10% of the Company's net sales; however, the loss of any significant customer, including Boeing and/or Gulfstream, could have a material adverse effect on the Company and its operating subsidiaries.

The Company currently generates a majority of its revenue from clients in the commercial aerospace industry, the business jet industry and the military. The Company's growth and financial results are largely dependent on continued demand for its products and services from clients in these industries. If any of these industries experiences a downturn, clients in these sectors may conduct less business with the Company.

20. COLLECTIVE BARGAINING AGREEMENTS

Approximately 19% of the Company's labor force is covered under collective bargaining agreements. As of March 31, 2019, none of the Company's collectively bargained workforce are working under contracts that have expired or are set to expire within one year.

The collective bargaining agreement with our union employees with International Association of Machinists and Aerospace Workers ("IAM") District 751 at our Spokane, Washington facility expired May 11, 2016, subsequently, the Company settled the strike and agreed to a new collective bargaining agreement with its union employees with IAM District 751, resulting in a charge of $15,700 due to disruption costs.

During the fiscal year ended March 31, 2018, the Company ratified a collective bargaining agreement with its union employees with United Autoworkers of America and its Local Union 848 at its Red Oak, Texas facility.

During the fiscal year ended March 31, 2019, the Company ratified a collective bargaining agreement with its union employees with United Autoworkers of America and its Local Union 952 at its Tulsa, Oklahoma facility. Also occurring during the fiscal year ended March 31, 2019, the Stuart Florida facility production and maintenance employees elected the United Autoworkers of America, Local #2505, to represent them in collective bargaining with the Company. As of the close of the fiscal year, the union and the Company were still engaged in initial contract discussions.

21. SEGMENTS

The Company reports financial performance based on the following three reportable segments: Integrated Systems, Aerospace Structures and Product Support. The Company’s reportable segments are aligned with how the business is managed, and the Company's views of the markets it serves. The Chief Operating Decision Maker (the "CODM") evaluates performance and allocates resources based upon review of segment information. The CODM utilizes earnings before interest, income taxes, depreciation and amortization, and pension (“Adjusted EBITDAP”) as a primary measure of segment profitability to evaluate performance of its segments and allocate resources.

Segment Adjusted EBITDAP is total segment revenue reduced by operating expenses (less depreciation and amortization) identifiable with that segment. Corporate includes general corporate administrative costs and any other costs not identifiable with one of the Company’s segments, including loss on divestitures of $235,301 for the year ended March 31, 2019.

The Company does not accumulate net sales information by product or service or groups of similar products and services, and therefore the Company does not disclose net sales by product or service because to do so would be impracticable.

TRIUMPH GROUP, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)
(Dollars in thousands, except per share data)

Selected financial information for each reportable segment is as follows:

	Year Ended March 31,		
	2019	2018	2017
Net sales:			
Integrated Systems	$ 1,042,947	$ 986,351	$ 1,040,805
Aerospace Structures	2,062,404	1,954,729	2,172,768
Product Support	283,743	281,913	338,325
Elimination of inter-segment sales	(24,164)	(24,042)	(19,099)
	$ 3,364,930	$ 3,198,951	$ 3,532,799
Loss from continuing operations before income taxes:			
Operating (loss) income:			
Integrated Systems [1]	$ 157,615	$ 185,401	$ 200,209
Aerospace Structures [1]	(152,407)	(568,164)	(177,489)
Product Support	43,479	45,702	55,801
Corporate	(323,366)	(128,579)	(109,717)
	(274,679)	(465,640)	(31,196)
Non-service defined benefit income	(62,105)	(103,234)	(88,085)
Interest expense and other	114,619	99,442	80,501
	$ (327,193)	$ (461,848)	$ (23,612)
Depreciation and amortization:			
Integrated Systems	$ 29,052	$ 35,986	$ 40,332
Aerospace Structures	111,431	113,786	126,116
Product Support	6,321	6,744	9,037
Corporate	3,100	1,852	1,461
	$ 149,904	$ 158,368	$ 176,946
Impairment charge of intangible assets:			
Aerospace Structures	—	535,227	266,298
	$ —	$ 535,227	$ 266,298
Amortization of acquired contract liabilities, net:			
Integrated Systems	$ 34,121	$ 38,293	$ 36,760
Aerospace Structures	33,193	86,855	84,244
	$ 67,314	$ 125,148	$ 121,004
Adjusted EBITDAP:			
Integrated Systems [1]	$ 152,546	$ 183,094	$ 203,781
Aerospace Structures [1]	13,072	(6,006)	130,681
Product Support	49,800	52,446	64,838
Corporate [1]	(84,965)	(95,986)	(89,132)
	$ 130,453	$ 133,548	$ 310,168

____

[1] Prior period information has been reclassified as a result of the Company's adoption of ASU 2017-07 on a retrospective basis in the fiscal year ended March 31, 2019. In accordance with the adoption of this guidance, prior year amounts related to

(Dollars in thousands, except per share data)

the components of net periodic pension and postretirement benefit cost other than service costs have been reclassified from cost of sales and selling, general and administrative expense to non-service pension (benefit) on the consolidated statements of operations for all periods presented. Accordingly, income of $1,804 and $75,708 for Integrated Systems and Aerospace Structures, respectively, was reclassified into other income for the year ended March 31, 2018. Accordingly, income of $1,085 and $87,000 for Integrated Systems and Aerospace Structures, respectively, was reclassified into other income for the year ended March 31, 2017. The Company also recorded a non-cash charge related to the adoption of ASU 2017-07 of $87,241 due to an inseparable change in estimate from a change in accounting principles, which is presented on the accompanying consolidated statements of operations within cost of sales. Loss on divestitures adjusted within Corporate was $235,301.

	Year Ended March 31,		
	2019	2018	2017
Capital expenditures:			
Integrated Systems	$ 12,410	$ 6,146	$ 16,487
Aerospace Structures	30,581	29,519	30,434
Product Support	3,324	2,206	2,630
Corporate	784	4,179	2,281
	$ 47,099	$ 42,050	$ 51,832

	March 31,	
	2019	2018
Total Assets:		
Integrated Systems	$ 1,215,350	$ 1,225,770
Aerospace Structures	1,257,039	2,260,416
Product Support	271,813	281,101
Corporate	110,372	39,777
	$ 2,854,574	$ 3,807,064

During fiscal years ended March 31, 2019, 2018, and 2017, the Company had foreign sales of $960,299, $758,936 and $768,703, respectively. The Company reports as foreign sales those sales with delivery points outside of the United States. As of March 31, 2019 and 2018, the Company had foreign long-lived assets of $294,990 and $222,841, respectively.

TRIUMPH GROUP, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)
(Dollars in thousands, except per share data)

22. SELECTED CONSOLIDATING FINANCIAL STATEMENTS OF PARENT, GUARANTORS AND NON-GUARANTORS

The 2021 Notes, the 2022 Notes and the 2025 Notes are fully and unconditionally guaranteed on a joint and several basis by Guarantor Subsidiaries. The total assets, stockholders' equity, revenue, earnings and cash flows from operating activities of the Guarantor Subsidiaries exceeded a majority of the consolidated total of such items as of and for the periods reported. The only consolidated subsidiaries of the Company that are not guarantors of the 2021 Notes, the 2022 Notes and the 2025 Notes (the "Non-Guarantor Subsidiaries") are: (i) the receivables securitization special purpose entity, and (ii) the foreign operating subsidiaries. The following tables present condensed consolidating financial statements' including Triumph Group, Inc. (the "Parent"), the Guarantor Subsidiaries and the Non-Guarantor Subsidiaries. Such financial statements include balance sheets as of March 31, 2019 and 2018, statements of operations and comprehensive income for the fiscal years ended March 31, 2019, 2018, and 2017, and statements of cash flows for the fiscal years ended March 31, 2019, 2018, and 2017.

SUMMARY CONDENSED CONSOLIDATING BALANCE SHEETS:

	March 31, 2019				
	Parent	Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Eliminations	Consolidated Total
Current assets:					
Cash and cash equivalents	$ 70,192	$ 429	$ 22,186	$ —	$ 92,807
Trade and other receivables, net	10,150	123,153	240,287	—	373,590
Contract Assets	—	322,698	3,969	—	326,667
Inventories	—	339,038	74,522	—	413,560
Prepaid expenses and other	22,152	7,611	4,683	—	34,446
Total current assets	102,494	792,929	345,647	—	1,241,070
Property and equipment, net	11,276	449,489	82,945	—	543,710
Goodwill and other intangible assets, net	—	912,279	101,900	—	1,014,179
Other, net	14,630	34,664	6,321	—	55,615
Intercompany investments and advances	1,112,100	230,437	88,697	(1,431,234)	—
Total assets	$ 1,240,500	$ 2,419,798	$ 625,510	$ (1,431,234)	$ 2,854,574
Current liabilities:					
Current portion of long-term debt	$ 1,904	$ 6,297	$ —	$ —	$ 8,201
Accounts payable	6,571	396,542	30,670	—	433,783
Accrued expenses	58,301	445,542	29,448	—	533,291
Total current liabilities	66,776	848,381	60,118	—	975,275
Long-term debt, less current portion	1,469,543	11,077	—	—	1,480,620
Intercompany debt	262,718	2,017,003	372,888	(2,652,609)	—
Accrued pension and other postretirement benefits, noncurrent	6,067	534,412	—	—	540,479
Deferred income taxes and other	8,709	408,838	13,966	—	431,513
Total stockholders' equity	(573,313)	(1,399,913)	178,538	1,221,375	(573,313)
Total liabilities and stockholders' equity	$ 1,240,500	$ 2,419,798	$ 625,510	$ (1,431,234)	$ 2,854,574

TRIUMPH GROUP, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)
(Dollars in thousands, except per share data)

SUMMARY CONSOLIDATING BALANCE SHEETS:

	March 31, 2018				
	Parent	Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Eliminations	Consolidated Total
Current assets:					
Cash and cash equivalents	$ 44	$ —	$ 35,775	$ —	$ 35,819
Trade and other receivables, net	1,686	77,924	297,002	—	376,612
Contract assets	—	37,573	—	—	37,573
Inventories	—	1,312,747	114,422	—	1,427,169
Prepaid and other	17,513	15,712	11,203	—	44,428
Assets held for sale	—	—	1,324	—	1,324
Total current assets	19,243	1,443,956	459,726	—	1,922,925
Property and equipment, net	11,984	594,437	119,582	—	726,003
Goodwill and other intangible assets, net	—	973,954	126,555	—	1,100,509
Other, net	21,930	29,904	5,793	—	57,627
Intercompany investments and advances	1,987,599	81,542	73,184	(2,142,325)	—
Total assets	$ 2,040,756	$ 3,123,793	$ 784,840	$ (2,142,325)	$ 3,807,064
Current liabilities:					
Current portion of long-term debt	$ 903	$ 15,624	$ —	$ —	$ 16,527
Accounts payable	12,088	356,236	50,043	—	418,367
Accrued expenses	46,679	467,674	42,752	—	557,105
Liabilities related to assets held for sale	—	—	440	—	440
Total current liabilities	59,670	839,534	93,235	—	992,439
Long-term debt, less current portion	1,380,867	40,890	—	—	1,421,757
Intercompany debt	134,590	1,952,042	524,788	(2,611,420)	—
Accrued pension and other postretirement benefits, noncurrent	6,484	477,403	—	—	483,887
Deferred income taxes and other	8,611	427,724	22,112	—	458,447
Total stockholders' equity	450,534	(613,800)	144,705	469,095	450,534
Total liabilities and stockholders' equity	$ 2,040,756	$ 3,123,793	$ 784,840	$ (2,142,325)	$ 3,807,064

TRIUMPH GROUP, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)
(Dollars in thousands, except per share data)

CONDENSED CONSOLIDATING STATEMENTS OF OPERATIONS AND COMPREHENSIVE (LOSS) INCOME:

	Fiscal year ended March 31, 2019				
	Parent	Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Eliminations	Consolidated Total
Net sales	$ —	$ 3,076,976	$ 368,139	$ (80,185)	$ 3,364,930
Operating costs and expenses:					
Cost of sales	—	2,717,508	287,597	(80,185)	2,924,920
Selling, general and administrative	78,921	186,563	32,902	—	298,386
Depreciation and amortization	3,099	129,435	17,370	—	149,904
Restructuring	6,233	24,865	—	—	31,098
Loss on divestitures	234,963	379	(41)	—	235,301
	323,216	3,058,750	337,828	(80,185)	3,639,609
Operating loss	(323,216)	18,226	30,311	—	(274,679)
Intercompany interest and charges	(154,100)	145,901	8,199	—	—
Non-service defined benefit income	264	(60,434)	(1,935)	—	(62,105)
Interest expense and other	102,338	17,854	(5,573)	—	114,619
Loss from continuing operations, before income taxes	(271,718)	(85,095)	29,620	—	(327,193)
Income tax (benefit) expense	(220)	(8,920)	3,714	—	(5,426)
Net loss	(271,498)	(76,175)	25,906	—	(321,767)
Other comprehensive (loss) income	(1,252)	(128,639)	10,077	—	(119,814)
Total comprehensive loss	$ (272,750)	$ (204,814)	$ 35,983	$ —	$ (441,581)

TRIUMPH GROUP, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)
(Dollars in thousands, except per share data)

CONDENSED CONSOLIDATING STATEMENTS OF OPERATIONS AND COMPREHENSIVE (LOSS) INCOME:

	Fiscal year ended March 31, 2018				
	Parent	Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Eliminations	Consolidated Total
Net sales	$ —	$ 2,918,508	$ 360,286	$ (79,843)	$ 3,198,951
Operating costs and expenses:					
Cost of sales	—	2,395,961	291,438	(79,843)	2,607,556
Selling, general and administrative	102,733	158,203	31,694	—	292,630
Depreciation and amortization	1,851	139,688	16,829	—	158,368
Restructuring	19,269	15,423	5,377	—	40,069
Loss on divestitures	30,741	—	—	—	30,741
Impairment of intangible asset	—	469,717	65,510	—	535,227
	154,594	3,178,992	410,848	(79,843)	3,664,591
Operating (loss) income	(154,594)	(260,484)	(50,562)	—	(465,640)
Intercompany interest and charges	(159,038)	150,772	8,266	—	—
Non-service defined benefit income	(25,722)	(74,990)	(2,522)	—	(103,234)
Interest expense and other	86,181	11,216	2,045	—	99,442
(Loss) income from continuing operations, before income taxes	(56,015)	(347,482)	(58,351)	—	(461,848)
Income tax (benefit) expense	(17,619)	(34,134)	15,296	—	(36,457)
Net income (loss)	(38,396)	(313,348)	(73,647)	—	(425,391)
Other comprehensive (loss) income	(2,031)	1,810	28,529	—	28,308
Total comprehensive income (loss)	$ (40,427)	$ (311,538)	$ (45,118)	$ —	$ (397,083)

TRIUMPH GROUP, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)
(Dollars in thousands, except per share data)

CONDENSED CONSOLIDATING STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME (LOSS):

	Fiscal year ended March 31, 2017				
	Parent	Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Eliminations	Consolidated Total
Net sales	$ —	$ 3,229,136	$ 379,960	$ (76,297)	$ 3,532,799
Operating costs and expenses:					
Cost of sales	—	2,545,419	305,327	(76,297)	2,774,449
Selling, general and administrative	66,822	186,259	31,920	—	285,001
Depreciation and amortization	1,461	158,757	16,728	—	176,946
Loss on divestiture	19,124	—	—	—	19,124
Restructuring charge	22,196	19,076	905	—	42,177
Impairment charge of intangible asset	—	266,298	—	—	266,298
	109,603	3,175,809	354,880	(76,297)	3,563,995
Operating (loss) income	(109,603)	53,327	25,080	—	(31,196)
Intercompany interest and charges	(183,115)	174,240	8,875	—	—
Non-service defined benefit income	—	(86,603)	(1,482)	—	(88,085)
Interest expense and other	75,483	11,689	(6,671)	—	80,501
Income (loss) from continuing operations, before income taxes	(1,971)	(45,999)	24,358	—	(23,612)
Income tax expense (benefit)	23,729	(8,962)	4,573	—	19,340
Net income (loss)	(25,700)	(37,037)	19,785	—	(42,952)
Other comprehensive loss	5,073	(25,693)	(28,396)	—	(49,016)
Total comprehensive income (loss)	$ (20,627)	$ (62,730)	$ (8,611)	$ —	$ (91,968)

(Dollars in thousands, except per share data)

CONDENSED CONSOLIDATING STATEMENTS OF CASH FLOWS:

	Fiscal year ended March 31, 2019				
	Parent	Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Eliminations	Consolidated Total
Net (loss) income	$ (271,498)	$ (76,175)	$ 25,906	$ —	$ (321,767)
Adjustments to reconcile net (loss) income to net cash provided by operating activities	8,189	(117,699)	38,274	218,583	147,347
Net cash (used in) provided by operating activities	(263,309)	(193,874)	64,180	218,583	(174,420)
Capital expenditures	(784)	(40,965)	(5,350)	—	(47,099)
Proceeds from sale of assets and businesses	—	178,662	68,985	—	247,647
Net cash (used in) provided by investing activities	(784)	137,697	63,635	—	200,548
Net decrease in revolving credit facility	102,113	—	—	—	102,113
Proceeds on issuance of debt	—	—	54,600	—	54,600
Retirements and repayments of debt	(1,380)	(30,345)	(81,700)	—	(113,425)
Payments of deferred financing costs	(1,982)	—	—	—	(1,982)
Dividends paid	(7,971)	—	—	—	(7,971)
Repurchase of restricted shares for minimum tax obligation	(860)	—	—	—	(860)
Intercompany financing and advances	244,321	86,951	(112,689)	(218,583)	—
Net cash used in financing activities	334,241	56,606	(139,789)	(218,583)	32,475
Effect of exchange rate changes on cash and cash equivalents	—	—	(1,615)	—	(1,615)
Net change in cash and cash equivalents	70,148	429	(13,589)	—	56,988
Cash and cash equivalents at beginning of year	44	—	35,775	—	35,819
Cash and cash equivalents at end of year	$ 70,192	$ 429	$ 22,186	$ —	$ 92,807

(Dollars in thousands, except per share data)

CONDENSED CONSOLIDATING STATEMENTS OF CASH FLOWS:

	Fiscal year ended March 31, 2018				
	Parent	Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Eliminations	Consolidated Total
Net income (loss)	$ (38,396)	$ (313,348)	$ (73,647)	$ —	$ (425,391)
Adjustments to reconcile net income (loss) to net cash provided by operating activities	(25,181)	93,849	65,048	2,781	136,497
Net cash provided by operating activities	(63,577)	(219,499)	(8,599)	2,781	(288,894)
Capital expenditures	(4,179)	(32,445)	(5,426)	—	(42,050)
Proceeds from sale of assets and businesses	—	82,445	637	—	83,082
Cash used for businesses and intangible assets acquired	—	—	(2,818)	—	(2,818)
Net cash used in investing activities	(4,179)	50,000	(7,607)	—	38,214
Net increase in revolving credit facility	82,888	—	—	—	82,888
Proceeds on issuance of debt	500,000	743	43,500	—	544,243
Retirements and repayments of debt	(314,999)	(23,774)	(48,600)	—	(387,373)
Payments of deferred financing costs	(17,729)	—	—	—	(17,729)
Dividends paid	(7,943)	—	—	—	(7,943)
Repurchase of restricted shares for minimum tax obligation	(483)	—	—	—	(483)
Intercompany financing and advances	(193,876)	168,393	28,264	(2,781)	—
Net cash used in financing activities	47,858	145,362	23,164	(2,781)	213,603
Effect of exchange rate changes on cash and cash equivalents	—	—	3,263	—	3,263
Net change in cash and cash equivalents	(19,898)	(24,137)	10,221	—	(33,814)
Cash and cash equivalents at beginning of year	19,942	24,137	25,554	—	69,633
Cash and cash equivalents at end of year	$ 44	$ —	$ 35,775	$ —	$ 35,819

TRIUMPH GROUP, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)
(Dollars in thousands, except per share data)

CONDENSED CONSOLIDATING STATEMENTS OF CASH FLOWS:

	Fiscal year ended March 31, 2017				
	Parent	Guarantor Subsidiaries	Non-Guarantor Subsidiaries	Eliminations	Consolidated Total
Net (loss) income	$ (25,700)	$ (37,037)	$ 19,785	$ —	$ (42,952)
Adjustments to reconcile net (loss) income to net cash provided by operating activities	36,295	260,469	12,443	15,267	324,474
Net cash provided by (used in) operating activities	10,595	223,432	32,228	15,267	281,522
Capital expenditures	(2,281)	(37,436)	(12,115)	—	(51,832)
Proceeds from sale of assets and businesses	45,288	23,316	17,583	—	86,187
Cash used for businesses and intangible assets acquired	—	9	—	—	9
Net cash used in investing activities	43,007	(14,111)	5,468	—	34,364
Net increase in revolving credit facility	(110,000)	—	—	—	(110,000)
Proceeds on issuance of debt	—	—	24,400	—	24,400
Retirements and repayments of debt	(28,473)	(12,871)	(102,800)	—	(144,144)
Payments of deferred financing costs	(14,034)	—	—	—	(14,034)
Dividends paid	(7,927)	—	—	—	(7,927)
Repayment of governmental grant	—	(14,570)	—	—	(14,570)
Repurchase of restricted shares for minimum tax obligation	(182)	—	—	—	(182)
Intercompany financing and advances	125,412	(157,944)	47,799	(15,267)	—
Net cash used in financing activities	(35,204)	(185,385)	(30,601)	(15,267)	(266,457)
Effect of exchange rate changes on cash and cash equivalents	—	—	(780)	—	(780)
Net change in cash and cash equivalents	18,398	23,936	6,315	—	48,649
Cash and cash equivalents at beginning of year	1,544	201	19,239	—	20,984
Cash and cash equivalents at end of year	$ 19,942	$ 24,137	$ 25,554	$ —	$ 69,633

TRIUMPH GROUP, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)
(Dollars in thousands, except per share data)

23. QUARTERLY FINANCIAL INFORMATION (UNAUDITED)

	Fiscal 2019				Fiscal 2018			
	June 30	Sept. 30	Dec. 31	Mar. 31	June 30	Sept. 30	Dec. 31 (2)	Mar. 31 (3)
BUSINESS SEGMENT SALES								
Integrated Systems	$ 241,039	$ 260,717	$ 252,437	$ 288,754	$ 238,136	$ 233,765	$ 239,198	$ 275,252
Aerospace Structures	532,387	528,367	490,337	511,314	483,314	447,771	473,273	550,371
Product Support	66,215	72,199	71,446	73,883	66,433	68,366	68,039	79,075
Inter-segment Elimination	(6,741)	(6,175)	(6,325)	(4,924)	(6,194)	(4,746)	(5,264)	(7,838)
TOTAL SALES	$ 832,900	$ 855,108	$ 807,895	$ 869,027	$ 781,689	$ 745,156	$ 775,246	$ 896,860
GROSS PROFIT (1)	$ 38,742	$ 107,357	$ 72,007	$ 131,239	$ 113,180	$ 121,908	$ 120,229	$ 140,632
OPERATING INCOME (LOSS)								
Integrated Systems	$ 35,409	$ 39,866	$ 39,947	$ 42,394	$ 46,982	$ 41,641	$ 42,216	$ 54,562
Aerospace Structures	(79,587)	(22,744)	(49,813)	(264)	(22,488)	(9,052)	(193,155)	(343,469)
Product Support	7,669	11,514	11,421	12,876	8,437	11,233	12,399	13,633
Corporate	(30,039)	(30,637)	(18,488)	(244,203)	(33,899)	(43,851)	(15,666)	(35,163)
TOTAL OPERATING LOSS	$ (66,548)	$ (2,001)	$ (16,933)	$ (189,197)	$ (968)	$ (29)	$ (154,206)	$ (310,437)
NET LOSS	$ (76,534)	$ (14,676)	$ (30,945)	$ (199,612)	$ (1,931)	$ (5,378)	$ (113,252)	$ (304,830)
Basic Loss per share	$ (1.54)	$ (0.30)	$ (0.62)	$ (4.01)	$ (0.04)	$ (0.11)	$ (2.29)	$ (6.16)
Diluted Loss per share	$ (1.54)	$ (0.30)	$ (0.62)	$ (4.01)	$ (0.04)	$ (0.11)	$ (2.29)	$ (6.16)

* Difference due to rounding.

(1) Gross profit includes depreciation.

(2) Includes impairment of goodwill of $190,227 in Aerospace Structures.

(3) Includes impairment of goodwill of $345,000 in Aerospace Structures.

TRIUMPH GROUP, INC.
SCHEDULE II—VALUATION AND QUALIFYING ACCOUNTS
(Dollars in thousands)

	Balance at beginning of year	Additions charged to (income) expense	Additions(1)	(Deductions)(2)	Balance at end of year
For year ended March 31, 2019:					
Allowance for doubtful accounts receivable	$ 4,032	(495)	750	(641)	$ 3,646
For year ended March 31, 2018:					
Allowance for doubtful accounts receivable	$ 4,559	773	(987)	(313)	$ 4,032
For year ended March 31, 2017:					
Allowance for doubtful accounts receivable	$ 6,492	202	307	(2,442)	$ 4,559

(1) Additions consist of trade and other receivable recoveries and miscellaneous adjustments.

(2) Deductions represent write-offs of related account balances.

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

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our Exchange Act reports is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate, to allow timely decisions regarding required disclosure. In designing and evaluating the disclosure controls and procedures, 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 evaluating the cost-benefit relationship of possible controls and procedures.

As of March 31, 2019, we completed an evaluation, under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, of the effectiveness of the design and operation of our disclosure controls and procedures. Based on the foregoing, our principal executive officer and principal financial officer concluded that our disclosure controls and procedures were effective at the reasonable assurance level as of March 31, 2019.

MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

The management of Triumph Group, Inc. ("Triumph") is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934. Triumph's internal control system over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles. The Company's internal control over financial reporting includes those policies and procedures that:

(i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company;

(ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with U.S. 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

(iii) 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 inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation. Also, projections of any evaluation of effectiveness to future periods are subject to risk that controls may become inadequate because of changes in condition, or that the degree of compliance with the policies or procedures may deteriorate.

Triumph's management assessed the effectiveness of Triumph's internal control over financial reporting as of March 31, 2019. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) ("COSO") in Internal Control—Integrated Framework. Based on management's assessment and those criteria, management believes that Triumph maintained effective internal control over financial reporting as of March 31, 2019.

Triumph's independent registered public accounting firm, Ernst & Young LLP, has audited Triumph's effectiveness of internal control over financial reporting. This report appears on the following page.

/s/ Daniel J. Crowley

Daniel J. Crowley
President, Chief Executive Officer and Director

/s/ James F. McCabe, Jr.

James F. McCabe, Jr.
Senior Vice President and
Chief Financial Officer

/s/ Thomas A. Quigley, III

Thomas A. Quigley, III
Vice President and Controller

May 23, 2019

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of Triumph Group, Inc.

Opinion on Internal Control over Financial Reporting

We have audited Triumph Group, Inc.'s internal control over financial reporting as of March 31, 2019, 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, Triumph Group, Inc. (the Company) maintained, in all material respects, effective internal control over financial reporting as of March 31, 2019, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the consolidated balance sheets of Triumph Group, Inc. as of March 31, 2019 and 2018, the related consolidated statements of operations, comprehensive loss, stockholders' (deficit) equity and cash flows for each of the three years in the period ended March 31, 2019, and the related notes and financial statement schedule listed in the Index at Item 15(a) and our report dated May 23, 2019, 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

Philadelphia, Pennsylvania
May 23, 2019

Changes in Internal Control Over Financial Reporting

In addition to management's evaluation of disclosure controls and procedures as discussed above, we continue to review and enhance our policies and procedures for internal control over financial reporting.

We have developed and implemented a formal set of internal controls and procedures for financial reporting in accordance with the SEC's rules regarding management's report on internal controls. As a result of continued review and testing by management and by our internal and independent auditors, or as a result of newly adopted accounting standards, additional changes may be made to our internal controls and procedures. However, we did not make any changes to our internal control over financial reporting in the fourth quarter of fiscal 2019 that has materially affected or is reasonably likely to materially affect our internal control over financial reporting.

Item 9B. Other Information

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

The information required for directors is incorporated herein by reference to our definitive Proxy Statement for our 2019 Annual Meeting of Stockholders, which shall be filed within 120 days after the end of our fiscal year (the "2019 Proxy Statement"). Information required by this item concerning executive officers is included in Part I of this Annual Report on Form 10-K.

Delinquent Section 16(a) Reports

The information required regarding Section 16(a) beneficial ownership reporting compliance is incorporated herein by reference to the 2019 Proxy Statement.

Code of Business Conduct

The information required regarding our Code of Business Conduct is incorporated herein by reference to the 2019 Proxy Statement.

Stockholder Nominations

The information required with respect to any material changes to the procedures by which stockholders may recommend nominees to the Company's board of directors is incorporated herein by reference to the 2019 Proxy Statement.

Audit Committee and Audit Committee Financial Expert

The information required with respect to the Audit Committee and Audit Committee financial experts is incorporated herein by reference to the 2019 Proxy Statement.

Item 11. Executive Compensation

The information required under this item is incorporated herein by reference to the 2019 Proxy Statement.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information required under this item is incorporated herein by reference to the 2019 Proxy Statement.

Item 13. Certain Relationships and Related Transactions and Director Independence

The information required under this item is incorporated herein by reference to the 2019 Proxy Statement.

Item 14. Principal Accountant Fees and Services

The information required under this item is incorporated herein by reference to the 2019 Proxy Statement.

Table of Contents

PART IV

Item 15. Exhibits, Financial Statement Schedules

(a) Financial Statements

(1) The following consolidated financial statements are included in Item 8 of this report:

(2) The following financial statement schedule is included in this report:

All other schedules have been omitted as not applicable or because the information is included elsewhere in the Consolidated Financial Statements or notes thereto.

(3) The following is a list of exhibits. Where so indicated, exhibits which were previously filed are incorporated by reference.

		Incorporated by Reference to			
Exhibit Number	Exhibit Description	Form	File No.	Exhibit(s)	Filing Date
3.1	Amended and Restated Certificate of Incorporation of Triumph Group, Inc.	10-K	001-12235	3.1	May 22, 2009
3.1.1	Certificate of Amendment of Amended and Restated Certificate of Incorporation of Triumph Group, Inc.	8-K	001-12235	3.1	July 20, 2012
3.1.2	Form of Certificate of Designations, Preferences and Rights of Series B Junior Participating Preferred Stock	8-K	001-12235	3.1	March 13, 2019
3.2	Amended and Restated By-Laws of Triumph Group, Inc.	8-K	001-12235	3.1	April 26, 2019
4.1	Form of certificate evidencing Common Stock of Triumph Group, Inc.	8-K	001-12235	4.2	March 13, 2019
4.2	Indenture, dated as of February 26, 2013, between Triumph Group, Inc. and U.S. Bank National Association, as trustee	8-K	001-12235	4.1	March 1, 2013
4.2.1	Form of 4.875% Senior Subordinated Notes due 2021(included as Exhibit A to Exhibit 4.1)	8-K	001-12235	4.2	March 1, 2013
4.3	Indenture, dated as of June 3, 2014, between Triumph Group, Inc. and U.S. Bank National Association, as trustee	8-K	001-12235	4.1	June 5, 2014
4.3.1	Form of 5.250% Senior Notes due 2022 (included as Exhibit A to the Indenture filed as Exhibit 4.1)	8-K	001-12235	4.2	June 5, 2014

Exhibit Number	Exhibit Description	Incorporated by Reference to Form	File No.	Exhibit(s)	Filing Date
4.4	Second Supplemental Indenture dated as of May 18, 2016 by and among Triumph Group, Inc., the guarantors signatory thereto and U.S. Bank National Association, as trustee, relating to the 4.875% Senior Notes due 2021	10-K	001-12235	4.12	May 27, 2016
4.5	Indenture, dated as of August 17, 2017, between Triumph Group, Inc. and U.S. Bank National Association, as trustee	8-K	001-12235	4.1	August 18, 2017
4.6	Form of 7.750% Senior Notes due 2025 (included as Exhibit A to the Indenture filed as Exhibit 4.1).	8-K	001-12235	4.2	August 18, 2017
4.7	Tax Benefits Preservation Plan, dated as of March 13, 2019, between Triumph Group, Inc. and Computershare Trust Company, N.A.	8-K	001-12235	4.3	March 13, 2019
4.8	Description of Securities	#	#	#	#
10.1	Amended and Restated Directors' Stock Incentive Plan	10-K	001-12235	10.1	May 29, 2012
10.1.1	Form of Deferred Stock Unit Award Agreement under the Amended and Restated Directors' Stock Incentive Plan	10-K	001-12235	10.2	May 30, 2013
10.2	Triumph Group, Inc. 2004 Stock Incentive Plan*	10-K	001-12235	10.3	May 30, 2013
10.2.1	Form of Stock Award Agreement under the 2004 Stock Incentive Plan*	10-K	001-12235	10.7	May 22, 2009
10.2.2	Form of letter confirming Stock Award Agreement under the 2004 Stock Incentive Plan*	10-K	001-12235	10.8	May 22, 2009
10.3	Triumph Group, Inc. Supplemental Executive Retirement Plan effective January 1, 2003*	10-K	001-12235	10.17	June 12, 2003
10.4	Compensation for the non-employee members of the Board of Directors of Triumph Group, Inc.	8-K	001-12235	10.1	November 15, 2016
10.6	Form of Receivables Purchase Agreement, dated August 7, 2008, by and among the Triumph Group, Inc., as Initial Servicer, Triumph Receivables, LLC, as Seller, the various Purchasers and Purchase Agents from time to time party thereto and PNC National Association, as Administrative Agent.	8-K	001-12235	10.1	August 12, 2008
10.7	Third Amendment to Receivables Purchase Agreement, dated as of June 21, 2010, by and among Triumph Receivables LLC, Triumph Group, Inc., Market Street Funding LLC and PNC Bank, National Association	8-K	001-12235	10.1	June 25, 2010
10.8	Triumph Group, Inc. Executive Incentive Plan, effective September 28, 2010 *	10-Q	001-12235	10.1	November 5, 2010
10.9	Form of letter informing Triumph Group, Inc. executives they are eligible to participate in the Company's Long Term Incentive Plan *	10-K	001-12235	10.22	May 18, 2011
10.10	Form of letter informing Triumph Group, Inc. executives they have earned an award under the Company's Long Term Incentive Plan and the amount of the award *	10-K	001-12235	10.23	May 18, 2011
10.11	Sixth Amendment to Receivables Purchase Agreement, dated as of February 26, 2013, by and among Triumph Receivables LLC, Triumph Group, Inc., Market Street Funding LLC and PNC Bank, National Association	8-K	001-12235	10.1	March 1, 2013

Exhibit Number	Exhibit Description	Incorporated by Reference to Form	File No.	Exhibit(s)	Filing Date
10.12	Form of Third Amended and Restated Credit Agreement, dated as of November 19, 2013, by and among Triumph Group, Inc., and the other Borrowers party thereto and the Guarantors party thereto and the Banks party thereto and PNC Bank, National Association, as Administrative Agent, PNC Capital Markets LLC, J.P. Morgan Securities, LLC, RBC Capital Markets, RBS Citizens, N.A., and Santander Bank, N.A., as Joint Lead Arrangers and Joint Bookrunners, JPMorgan Chase Bank N.A., Royal Bank of Canada, Citizens Bank of Pennsylvania, and Santander Bank, N.A., as Syndication Agents, the Bank of Tokyo-Mitsubishi UFJ, Ltd, U.S. Bank National Association, TD Bank, N.A., and Manufacturers and Traders Trust Company, as Documentation Agents	8-K	001-12235	10.1	November 25, 2013
10.13	Form of Second Amended and Restated Guarantee and Collateral Agreement made by Triumph Group, Inc., and certain of its Subsidiaries in favor of PNC Bank, National Association, as Administrative Agent and as Collateral Agent for the other Secured Parties identified herein, dated as of November 19, 2013	8-K	001-12235	10.2	November 25, 2013
10.14	Triumph Group, Inc. 2013 Equity and Cash Incentive Plan, as amended and restated as of June 7, 2017*	8-K	001-12235	99.1	June 12, 2017
10.15	Form of letter regarding eligibility to participate in the Triumph Group, Inc. Restricted Stock Plan*	10-K	001-12235	10.24	May 19, 2014
10.16	Tenth Amendment to Receivables Purchase Agreement dated as of November 25, 2014	8-K	001-12235	10.1	November 26, 2014
10.17	Third Amendment to Third Amended and Restated Credit Agreement, dated as of February 3, 2015, by and among Triumph Group, Inc. and the other Borrowers party thereto and the Guarantors party thereto and the Banks party thereto and PNC Bank, National Association, as Administrative Agent	10-Q	001-12235	10.1	February 9, 2015
10.18	The First Amendment of the Triumph Group, Inc. Supplemental Executive Retirement Plan, effective as of May 1, 2015 *	8-K	001-12235	10.1	May 7, 2015
10.19	First Amendment to Triumph Group, Inc. 2013 Employee Stock Purchase Plan *	10-Q	001-12235	10.1	August 4, 2015
10.20	Employment Agreement between Triumph Group, Inc. and Daniel J. Crowley, dated as of April 1, 2016*	8-K	001-12235	10.1	April 7, 2016
10.21	Form of Sixth Amendment to Third Amended and Restated Credit Agreement, dated May 3, 2016	8-K	001-12235	10.1	May 4, 2016
10.22	Employment letter between Triumph Group, Inc. and James F. McCabe dated July 26, 2016 *	8-K	001-12235	10.1	July 27, 2016
10.23	Form of Seventh Amendment to Third Amended and Restated Credit Agreement, dated October 21, 2016	10-Q	001-12235	10.1	November 9, 2016
10.24	Triumph Group, Inc. Directors' Deferred Compensation Plan, effective January 1, 2017	8-K	001-12235	10.2	November 15, 2016

Exhibit Number	Exhibit Description	Incorporated by Reference to Form	File No.	Exhibit(s)	Filing Date
10.25	Eighth Amendment to the Third Amended and Restated Credit Agreement, dated May 1, 2017	8-K	001-12235	10.1	May 10, 2017
10.26	Form of the 2016 Directors' Equity Compensation Plan, as amended	10-K/A	001-12235	10.34	May 26, 2017
10.27	Form of Restricted Stock Unit Agreement under the 2016 Directors' Equity Compensation Plan, as amended	10-K/A	001-12235	10.35	May 26, 2017
10.28	Triumph Group, Inc. Directors' Deferred Compensation Plan, effective January 1, 2017	8-K	001-12235	10.2	November 15, 2016
10.29	Twentieth Amendment to Receivables Purchase Agreement dated as of November 3, 2017	8-K	001-12235	10.1	November 7, 2017
10.30	Ninth Amendment to the Third Amended and Restated Credit Agreement, dated July 31, 2017	10-Q	001-12235	10.1	November 8, 2017
10.31	Employment Letter between Triumph Group, Inc. and Peter Wick dated January 20, 2018 *	10-Q	001-12235	10.1	February 7, 2018
10.32	Triumph Group, Inc. 2018 Equity Incentive Plan, effective May 29, 2018*	8-K	001-12235	10.1	June 4, 2018
10.32.1	Amendment to Triumph Group, Inc. 2018 Equity Incentive Plan, effective February 19, 2018*	#	#	#	#
10.32.2	Form of Long-Term Incentive Award Letter under the 2018 Equity Incentive Plan*	#	#	#	#
10.33	Triumph Group, Inc. 2018 Executive Cash Incentive Compensation Plan, effective April 1, 2018*	8-K	001-12235	10.2	June 4, 2018
10.33.1	Form of Short-Term Cash Incentive Award Letter under the 2018 Executive Cash Incentive Compensation Plan*	#	#	#	#
10.34	Tenth Amendment to the Third Amended and Restated Credit Agreement, dated July 19, 2018	8-K	001-12235	10.1	July 20, 2018
10.35	Separation Agreement Triumph Group, Inc. and John B. Wright, dated January 7, 2019*	8-K/A	001-12235	10.1	January 25, 2019
10.36	Separation Agreement Triumph Group, Inc. and Michael Abram, dated January 7, 2019*	8-K/A	001-12235	10.2	January 25, 2019
10.37	Separation Agreement between Triumph Group, Inc. and Thomas Holzthum, dated February 15, 2019*	8-K/A	001-12235	10.1	February 22, 2019
10.38	Employment Letter between Triumph Group, Inc. and Lance Turner, dated September 5, 2017*	#	#	#	#
10.39	Employment Letter between Triumph Group, Inc. and Daniel Ostrosky, dated March 25, 2015, with Addendum dated April 10, 2015*	#	#	#	#
10.40	Triumph Group, Inc. Executive General Severance Plan, effective February 19, 2019*	#	#	#	#
10.41	Triumph Group, Inc. Executive Change in Control Severance Plan, effective February 19, 2019*	#	#	#	#
21.1	Subsidiaries of Triumph Group, Inc.	#	#	#	#
23.1	Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm	#	#	#	#
31.1	Principal Executive Officer Certification Required by Rule 13a-14(a) or Rule 15d-14(a) under the Securities Exchange Act of 1934, as amended.	#	#	#	#

		Incorporated by Reference to			
Exhibit Number	**Exhibit Description**	**Form**	**File No.**	**Exhibit(s)**	**Filing Date**
31.2	Principal Financial Officer Certification Required by Rule 13a-14(a) or Rule 15d-14(a) under the Securities Exchange Act of 1934, as amended.	#	#	#	#
32.1	Principal Executive Officer Certification Required by Rule 13a-14(b) or Rule 15d-14(b) under the Securities Exchange Act of 1934, as amended, and 18 U.S.C. Section 1350.	##	##	##	##
32.2	Principal Financial Officer Certification Required by Rule 13a-14(b) or Rule 15d-14(b) under the Securities Exchange Act of 1934, as amended, and 18 U.S.C. Section 1350.	##	##	##	##
101	The following financial information from Triumph Group, Inc.'s Annual Report on Form 10-K for the fiscal year ended March 31, 2019 formatted in XBRL: (i) Consolidated Balance Sheets as of March 31, 2019 and 2018; (ii) Consolidated Statements of Operations for the fiscal years ended March 31, 2019, 2018 and 2017; (iii) Consolidated Statements of Stockholders' (Deficit) Equity for the fiscal years ended March 31, 2019, 2018 and 2017; (iv) Consolidated Statements of Cash Flows for the fiscal years ended March 31, 2019, 2018 and 2017; (v) Consolidated Statements of Comprehensive Loss for the fiscal years ended March 31, 2019, 2018 and 2017; and (vi) Notes to the Consolidated Financial Statements.	#	#	#	#

____

In accordance with Item 601(b)(4)(iii)(A) of Regulations S-K, copies of specific instruments defining the rights of holders of long-term debt of the Company or its subsidiaries are not filed herewith. Pursuant to this regulation, we hereby agree to furnish a copy of any such instrument to the SEC upon request

* Indicates management contract or compensatory plan or arrangement

Filed herewith

Furnished herewith

Item 16. Form 10-K Summary

The Registrant has elected not to include a summary.

Table of Contents

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, the Registrant has duly caused this report to be signed by the undersigned, thereunto duly authorized.

		TRIUMPH GROUP, INC.
		/s/ Daniel J. Crowley
Dated: May 23, 2019	By:	Daniel J. Crowley *President, Chief Executive Officer and Director* *(Principal Executive Officer)*

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

/s/ Daniel J. Crowley Daniel J. Crowley	President, Chief Executive Officer and Director (Principal Executive Officer)	May 23, 2019
/s/ James F. McCabe, Jr. James F. McCabe, Jr.	Senior Vice President and Chief Financial Officer (Principal Financial Officer)	May 23, 2019
/s/ Thomas A. Quigley III Thomas A. Quigley III	Vice President and Controller (Principal Accounting Officer)	May 23, 2019
/s/ Ralph E. Eberhart Ralph E. Eberhart	Chairman and Director	May 23, 2019
/s/ Paul Bourgon Paul Bourgon	Director	May 23, 2019
/s/ Daniel P. Garton Daniel P. Garton	Director	May 23, 2019
/s/ Dawne S. Hickton Dawne S. Hickton	Director	May 23, 2019
/s/ Larry O. Spencer Larry O. Spencer	Director	May 23, 2019
/s/ William L. Mansfield William L. Mansfield	Director	May 23, 2019
/s/ Adam J. Palmer Adam J. Palmer	Director	May 23, 2019
/s/ Joseph M. Silvestri Joseph M. Silvestri	Director	May 23, 2019

(Back To Top)

Section 2: EX-4.8 (EXHIBIT 4.8 - DESCRIPTION OF SECURITIES)

Exhibit 4.8

DESCRIPTION OF SECURITIES

The following is a brief description of the common stock, par value $0.001 per share, of Triumph Group, Inc. (the “Company”) which is registered pursuant to Section 12 of the Securities Exchange Act of 1934, as amended. The following description of the common stock does not purport to be complete and is subject to and qualified in its entirety by reference to our amended and restated certificate of incorporation, as amended and our amended and restated by-laws. Copies of our amended and restated certificate of incorporation, the amendment of our amended and restated certificate of incorporation and our amended and restated by-laws have been filed with the Securities and Exchange Commission as Exhibits 3.1, 3.1.1 and 3.2, respectively, to our Form 10-K. All of our outstanding shares of common stock are fully paid and non-assessable. Our common stock is listed on the New York Stock Exchange under the symbol “TGI.”

Common Stock

Except as otherwise required by applicable law, all shares of the common stock are identical in all respects and entitle the holders thereof to the same rights and privileges, subject to the same qualifications, limitations and restrictions. The holders of the common stock have one vote for each share thereof.

As and when dividends are declared or paid thereon, whether in cash, property or securities of the Company, the holders of the common stock shall be entitled to participate in such dividends ratably on a per share basis, provided that if dividends are declared which are payable in shares of common capital stock, dividends shall be declared which are payable at the same rate on each class of common capital stock and the dividends payable to holders of common stock shall be payable in shares of that class of common capital stock. The right of the holders of the common stock to receive dividends is subject to the provisions of the preferred stock.

Subject to the provisions of the preferred stock, the holders of the common stock shall be entitled to participate ratably on a per share basis in all distributions to holders in any liquidation, dissolution or winding up of the Company.

Limitations on Rights of Holders of Common Stock - Preferred Stock

The rights of holders of common stock may be materially limited or qualified by the rights of holders of preferred stock that we may issue in the future. Set forth below is a description of the Company’s authority to issue preferred stock and the possible terms of that stock.

The Board of Directors is authorized, subject to limitations prescribed by law and the provisions of our amended and restated certificate of incorporation, to provide for the issuance of the shares of preferred stock in series, and, by filing a statement pursuant to the applicable law of the State of Delaware, to establish from time to time the number of shares to be included in each such series, and to fix the designations, powers, preferences and rights of the shares of each such series and the qualifications, limitations or restrictions thereof; provided however, that any shares of preferred stock may only be issued by the Company as consideration for the stock or assets of another corporation or in connection with a merger of the Company with or into another corporation or of another corporation with or into the Company.

The authority of the Board of Directors with respect to each series shall include, but not be limited to, determination of the following:

a) the number of shares constituting that series and the distinctive designation of that series;

b) the dividend rate on the shares of that series, whether dividends shall be cumulative, and, if so, from which date or dates, and the relative rights of priority, if any, of payment of dividends on shares of that series;

c) whether that series shall have voting rights, in addition to the voting rights provided by law, and, if so, the terms of such voting rights;

d) whether that series shall have conversion privileges, and, if so, the terms and conditions of such conversion, including provision for adjustment of the conversion rate in such events as the Board of Directors shall determine;

e) whether or not the shares of that series shall be redeemable, and, if so, the terms and conditions of such redemption, including the date or dates upon or after which they shall be redeemable, and the amount per share payable in case of redemption, which may vary under different conditions and at different redemption dates;

f) whether that series shall have a sinking fund for the redemption or purchase of shares of that series, and, if so, the terms and amount of such sinking fund;

g) the rights of the shares of that series in the event of a voluntary or involuntary liquidation, dissolution or winding up of the Company, and the relative rights of priority, if any, of payment of shares of that series; and

h) any other relative rights, preferences and limitations of that series.

Dividends on outstanding shares of preferred stock shall be paid or declared and set apart for payment before any dividends shall be paid or declared and set apart for payment on the common stock with respect to the same dividend period.

If upon any voluntary or involuntary liquidation, dissolution or winding up of the Company, the assets for distribution to holders of shares of preferred stock of all series shall be insufficient to pay such holders the full preferential amount to which they are entitled, then such assets shall be distributed ratably among the shares of all series of preferred stock in accordance with the respective preferential amounts (including unpaid cumulative dividends, if any) payable with respect thereto.

Anti-Takeover Provisions

Our amended and restated by-laws contain certain provisions that may be deemed to have an anti-takeover effect and may delay, deter or prevent a tender offer or takeover attempt that a stockholder might consider in its best interest.

Our amended and restated by-laws provide that special meetings of the stockholders, for any purpose or purposes may be called by the Chairman or the President and shall be called by the Chairman or the President or Secretary at the request in writing of a majority of the Board of Directors, or at the request in writing in compliance with the by-laws of stockholders of record owning at least 25% in amount of the entire capital stock of the Company issued and outstanding and entitled to vote.

Our amended and restated by-laws establish an advance notice procedure for the nomination, other than by or at the direction of our board of directors, of candidates for election as directors as well as for other stockholder proposals to be considered at annual meetings or special meetings of stockholders. In general, notice of intent to nominate a director or raise business at such meetings must be received by us not less than 90 nor more than 120 days prior the first anniversary of the preceding year’s annual meeting (in the case of an annual meeting) or prior to the date of the special meeting (in the case of a special meeting). The notice must contain certain specified information concerning the person to be nominated or the matters to be brought before the meeting and concerning the stockholder submitting the proposal.

(Back To Top)

Section 3: EX-10.38 (EXHIBIT 10.38 - EMPLOYMENT LETTER - LANCE TURNER)

Triumph Group, Inc.

September 5, 2017

Lance Turner
350 West Ash Street, Unite 1208
San Diego, CA 92101

Dear Lance:

Triumph Group, Inc. ("TGI") is pleased to offer you the position of Senior Vice President – Human Resources reporting directly to the Chief Executive Officer of TGI. The starting salary offered for this position is $300,000 per year, paid at such times as other senior corporate executive officers are paid (currently bi-weekly), and is subject to deductions for taxes and other withholdings as required by law or the policies of TGI. Your compensation package will also include the following:

Short-Term Incentive:	You will be eligible to participate in Triumph's annual bonus program for executives in effect from time to time, with a target bonus of 60% of base salary and with a maximum potential overachievement bonus opportunity of 120%. This bonus opportunity will begin with our 2018 fiscal year which runs from April 1, 2017 through March 31, 2018 ("FY'18"). For FY'18, you will be guaranteed 75% of your target annual cash bonus (or $135,000); the balance of the target annual bonus opportunity will be subject to achievement and payment in accordance with the otherwise applicable performance criteria for FY'18 bonuses for senior corporate executive officers. The actual amount of your annual bonus each year will be determined by the Compensation and Management Development Committee (the "Committee") of the Board of Directors of TGI on the basis of the achievement of pre-established performance goals relating to corporate and individual performance.
Signing Bonus:	You will be provided with a one-time signing bonus of $130,000, payable within 30 days of your date of hire. If, during the first 12 months of your employment, you voluntarily resign, or your employment is terminated by TGI for cause, you agree to repay TGI the full amount of the signing bonus.
Annual Long-Term Incentive:	Subject to the approval of the Committee, you will be eligible to participate in Triumph's long-term equity incentive program at a level commensurate with your position, but with an equity grant value on the date of grant equal to not less than 75% of base salary. For FY'18, the award will be made in November 2017. Your participation in FY'18 will be pro-rated to your date of hire (by 6 months of the planned 3-year term). The annual long-term incentive for FY'18 is comprised as follows: (a) 40% of the value in RSU's vesting ratably over three years, and (b) 60% of the value in PSU's with ultimate value depending on TGI's performance against each of the

	relative and absolute TSR performance targets established by the Committee for FY'18. PSU's will cliff vest at the end of the three-year performance period, which runs through FY'20. The value of PSUs can reach 200% of original grant value if maximum performance against target is achieved. RSUs are time-based and cannot exceed the grant value. The actual amount of your annual long-term incentive awards and performance metrics each year will be determined by the Committee.
Make-Whole Award:	To offset your loss of awarded but unvested equity at your current employer, decremented by the TGI long-term incentive awards available to you during the same period, you will be granted an award of $210,000 in RSU's which will vest in one-third increments on the first, second and third anniversaries of your date of hire. The number of RSU's will be calculated based on TGI's share price as of the date of grant by the Committee at its November meeting.
Employee Benefits:	You will be eligible to participate in TGI's employee benefit plans generally applicable to TGI senior corporate executive officers. See attached information.
Relocation:	You will be provided with a relocation package in support of your relocation to the greater Philadelphia area. The total maximum relocation benefit is $250,000, subject to adjustment based on substantiated need as approved by the CEO. If, during the first 12 months of your employment, you voluntarily resign or your employment is terminated by TGI for cause, you agree to repay TGI the full amount of the relocation allowance.
Start Date:	Your start date will be not later than September 25, 2017 as previously agreed.
Conditions:	The offer of employment set forth in this letter agreement is subject to the following conditions: • Your acceptance of this offer by September ___, 2017 • Satisfactory reference discussions • Satisfactory background check • Satisfactory drug screening
Termination by TGI Without Cause:	Upon termination of your employment by TGI without Cause (as defined below), you will be entitled to receive, subject to your execution of a general release of claims in favor of TGI and its affiliates in a form reasonably satisfactory to TGI and such release becoming irrevocable in accordance with its terms prior to the 60th day following your termination date (the "Release Date"), and subject to Section d(i)(A) of Annex B hereto, the following:

- a cash severance benefit equal to 12 months' base salary, payable in substantially equal installments (in accordance with TGI's payroll practices as in effect upon such termination of employment) over the one-year period following your termination of employment; provided that all severance payments that would otherwise be paid during the period between your termination of employment and the Release Date shall be accumulated and paid on the first regular payroll date following the Release Date;

- if you elect continued medical and dental coverage under COBRA, then until the earlier of (a) the end of the 12-month period following your termination of employment and (b) the time that you become eligible to receive medical and dental benefits under another employer-provided plan, TGI shall reimburse you for the full cost of the premiums associated with such coverage, with each reimbursement paid on or prior to the 10th day of the month to which the applicable premium relates; provided that all such reimbursements that would otherwise be paid during the period between your termination of employment and the Release Date shall be accumulated and paid within 10 days following the Release Date.

For purposes of this letter agreement, "Cause" means (i) your commission of, or indictment for or otherwise being formally charged with, a felony or crime of moral turpitude; (ii) your commission of a material act of dishonesty involving the TGI or any of its affiliates that materially and demonstrably harms the TGI; (iii) your material breach of your obligations under this letter agreement or any other agreement entered into between the you and TGI or any of its affiliates; (iv) your willful and repeated failure to perform substantially your duties with TGI or any affiliate of TGI (other than any such failure resulting from incapacity due to physical or mental illness), after a written demand for substantial performance is delivered to you by TGI that specifically identifies the manner in which TGI believes that you have not substantially performed your duties and your failure to cure such failure within 10 days; (v) your material breach of TGI policies or procedures; (vi) your other misconduct or negligence that causes material harm to TGI or its affiliates or their business reputation, including due to any adverse publicity, as determined by TGI in its sole discretion; or (vii) your failure, as determined by TGI in its sole discretion, to successfully complete any of the offer conditions described above under "Conditions", to the extent that you are permitted to commence employment without successful completion of such conditions prior to you start date.

Better Net After-Tax Cutback

Your compensation arrangements with TGI are subject to a better net after-tax cutback provision in respect of the excise tax imposed under

Sections 280G and 4999 of the Internal Revenue Code of 1986, as amended (the "Code"), as set forth on Annex A to this letter agreement.

Restrictive Covenants:	You hereby agree to be bound by the restrictive covenants set forth on Annex B to this letter agreement.
Section 409A:	It is intended that payments and benefits made or provided under this letter agreement shall not result in penalty taxes or accelerated taxation pursuant to Section 409A of the Code ("Section 409A"), and this letter agreement shall be interpreted and administered in accordance with such intent. Each payment of compensation under this letter agreement shall be treated as a separate payment of compensation for purposes of Section 409A. All reimbursements and in-kind benefits provided under this letter agreement that are subject to Section 409A shall be made in accordance with the requirements of Section 409A, including, where applicable, the requirement that (a) any reimbursement is for expenses incurred during your lifetime (or during a shorter period of time specified in this letter agreement); (b) the amount of expenses eligible for reimbursement, or in-kind benefits provided, during a calendar year may not affect the expenses eligible for reimbursement, or in-kind benefits to be provided, in any other calendar year; (c) the reimbursement of an eligible expense shall be made no later than the last day of the calendar year following the year in which the expense is incurred; and (d) the right to reimbursement or in-kind benefits is not subject to liquidation or exchange for another benefit. Notwithstanding anything to the contrary in this letter agreement, if you are considered a "specified employee" for purposes of Section 409A, any payment on account of your separation from service that constitutes nonqualified deferred compensation within the meaning of Section 409A and that is otherwise due to you under this letter agreement during the six-month period immediately following your separation from service (as determined in accordance with Section 409A) shall be accumulated and paid to you on the first business day of the seventh month following your separation from service (the "Delayed Payment Date"). If you die during the postponement period, the amounts and entitlements delayed on account of Section 409A shall be paid to the personal representative of your estate on the first to occur of the Delayed Payment Date or 30 days after the date of your death.

As a TGI employee, you will be expected to adhere to TGI's Code of Business Conduct, current policies, procedures and practices as well as any that may be implemented in the future.

This offer is contingent upon your satisfactory completion of the conditions described above under "Conditions". While we hope we will be able to meet each other's mutual needs, TGI is an employer-at-will. This means that your employment with TGI is not for any set term and may be

terminated by either you or TGI at any time. The at-will term of your employment can be modified only in writing signed by you and the Chief Executive Officer of TGI.

Please contact us if you have any questions about the information provided in this letter or if you require further information.

I look forward to having you join us soon!

Sincerely,

Daniel J. Crowley
President and Chief Executive Officer

Agreed and accepted:

Lance Turner 9/5/17
Date

Annex A

Better Net After-Tax Cutback

In the event that any payments or benefits received or to be received by you pursuant to this letter agreement or otherwise (a) constitute "parachute payments" within the meaning of Section 280G of the Code, as determined by the accounting firm that audited TGI prior to the relevant "change in ownership or control" within the meaning of Section 280G of the Code or another nationally known accounting or employee benefits consulting firm selected by TGI prior to such change in ownership or control (the "Accounting Firm") and (b) but for the provisions of this Annex A, would, in the judgment of the Accounting Firm, be subject to the excise tax imposed by Section 4999 of the Code by reason of Section 280G of the Code, then your benefits under this letter agreement shall be payable either: (i) in full, or (ii) as to such lesser amount which would result in no portion of such payments or benefits being subject to the excise tax under Section 4999 of the Code, as determined by the Accounting Firm, whichever of the foregoing amounts, taking into account the applicable federal, state and local income and employment taxes and the excise tax imposed by Section 4999 of the Code, results in the receipt by you, on an after-tax basis, of the greatest amount of payments and benefits under this letter agreement, as determined by the Accounting Firm, notwithstanding that all or some portion of such payments and benefits may be taxable under Section 4999 of the Code. In the event that a lesser amount is paid under clause (b)(ii) above, then the elements of your payments hereunder shall be reduced in such order (1) as TGI determines, in its sole discretion, has the least economic detriment to you and (2) which does not result in the imposition of any tax penalties under Section 409A on you. To the extent the economic impact of reducing payments from one or more elements is equivalent, and subject to clause (2) of the preceding sentence, the reduction may be made pro rata by TGI in its sole discretion.

Annex B

Restrictive Covenants

(a) Disclosure of Confidential Information. You shall not at any time during your employment with TGI or thereafter, except as properly required in the course of your employment, use, publish, disclose or authorize anyone else to use, publish or disclose any Confidential Information belonging or relating to TGI or any of its affiliates. Confidential Information includes, but is not limited to, models, drawings, blueprints, memoranda and other materials, documents or records of a proprietary nature; information relating to research, manufacturing processes, bills of material, finance, accounting, sales, personnel management and operations; and information particularly relating to customer lists, price lists, customer service requirements, costs of providing service and equipment, pricing and equipment maintenance costs.

(b) Patents, Copyrights and Trade Secrets. You will disclose, and hereby assign, to TGI any and all material of a proprietary nature, particularly including, but not limited to, material subject to protection as trade secrets or as patentable or copyrightable ideas which you may conceive, invent, or discover during the course of your employment with TGI which relate to the business of TGI, or were developed using TGI's resources (collectively, the "Inventions"), and you shall execute and deliver all papers, including applications for patents and do such other acts (entirely at TGI's expense) as may be necessary for TGI to obtain and maintain proprietary rights in any and all countries and to vest title to such Inventions in TGI.

(c) Noncompetition and Nonsolicitation. While you are employed by TGI and its affiliates and for the one-year period following the termination of such employment for any reason (together, the "Restricted Period"), you shall not, in any jurisdiction in which TGI or any of its affiliates is doing business, directly or indirectly, own, manage, operate, control, consult with, be employed by, participate in the ownership, management, operation or control of, or otherwise render services to or engage in, any business engaged in by TGI and its affiliates; provided, that your ownership of securities constituting 2% or less of any publicly traded class of securities of a public company shall not violate this paragraph. During the Restricted Period, you shall not solicit for business or accept the business of, any person or entity who is, or was at any time within the previous 12 months, a customer or client of the business conducted by TGI or its affiliates (or potential customer or client with whom TGI or its affiliates had initiated contact). During the Restricted Period, you shall not, directly or indirectly, employ, solicit for employment, or otherwise contract for or hire, the services of any individual who is then an employee of TGI and its affiliates or who was an employee of TGI and its affiliates within the previous 12 months. Further, during the Restricted Period, you shall not take any action that could reasonably be expected to have the effect of inducing any individual who is then an employee, representative, officer or director of TGI or any of its affiliates, or who was an employee, representative, officer or director of TGI and its affiliates within the previous 12 months, to cease his or her relationship with TGI or any of its affiliates for any reason.

(d) Acknowledgements and Remedies.

(i) The parties hereto agree that the provisions of clauses (a), (b) and (c) of this Annex B (the "Covenants") have been specifically negotiated by sophisticated commercial parties and agree that all such provisions are reasonable under the circumstances of the activities contemplated by this letter agreement. You acknowledge and agree that the Covenants are reasonable in light of all of the

circumstances, are sufficiently limited to protect the legitimate interests of TGI and its affiliates, impose no undue hardship on you, and are not injurious to the public. The parties hereto further agree that your services are of a personal, special and unique character and cannot be replaced by TGI, and that the violation by you of any of the Covenants would cause TGI irreparable harm, which could not be adequately compensated by money damages, and that if TGI elects to prevent you from breaching such provisions by obtaining an injunction against you, there is a reasonable probability of TGI's eventual success on the merits. Accordingly, you consent and agree that if you commit any such breach or threaten to commit any breach, in addition to any other remedies as may be available to TGI for such breach, including the recovery of money damages, TGI shall be entitled (without the necessity of showing economic loss or other actual damage) to (A) cease payment of the severance payments and benefits described in this letter agreement under "Termination by TGI Without Cause" and/or to recoup from you the portion of such severance payments and benefits already paid and (B) temporary and permanent injunctive relief from a court of competent jurisdiction, without posting any bond or other security and without the necessity of proof of actual damage. Furthermore, if TGI institutes any action or proceeding to enforce any of the provisions of this Annex B, to the extent permitted by applicable law, you hereby waive the claim or defense that TGI has an adequate remedy at law, and you shall not assert in any such action or proceeding the defense that any such remedy exists at law.

(ii) Prior to execution of this letter agreement, you were advised by TGI of your right to seek independent advice from an attorney of your own selection regarding this letter agreement. You acknowledge that you have entered into this letter agreement knowingly and voluntarily and with full knowledge and understanding of the provisions of this letter agreement after being given the opportunity to consult with counsel. You further represent that, in entering into this letter agreement, you are not relying on any statements or representations made by any of TGI's directors, officers, employees or agents that are not expressly set forth herein, and that you are relying only upon your own judgment and any advice provided by your attorney.

(iii) In light of the acknowledgements contained in this clause (d), you agree not to challenge or contest the reasonableness, validity or enforceability of any limitations and obligations contained in this letter agreement. In the event that the Covenants shall be determined by any court of competent jurisdiction to be unenforceable by reason of their extending for too great a period of time or over too great a geographical area or by reason of their being too extensive in any other respect, they shall be interpreted to extend only over the maximum period of time for which they may be enforceable and/or over the maximum geographical area as to which they may be enforceable and/or to the maximum extent in all other respects as to which they may be enforceable, all as determined by such court.

(Back To Top)

Section 4: EX-10.39 (EXHIBIT 10.39 - EMPLOYMENT LETTER - DANIEL OSTROSKY)

Triumph Group, Inc.®

March 25, 2015

Daniel Ostrosky
464 Latimer Lane
Fort Mill, SC 29715

Dear Dan:

Triumph is pleased to offer you the position of Vice President, Supply Chain reporting directly to Jeff Frisby. The starting salary offered for this position is $350,000 per year, currently paid biweekly, and is subject to deductions for taxes and other withholdings as required by law or the policies of Triumph Group, Inc. Your compensation package will also include the following:

Sign-on Bonus:	$100,000, subject to normal deductions, payable within the first 30 days after your start date. If you voluntarily leave the company within your first two-years, you agree to pay back a pro-rata portion of this bonus.
Bonus Opportunity:	Target bonus of 60% of base salary with the opportunity to earn a maximum of 120%. Actual amount is based on company performance. This bonus opportunity will begin with our Fiscal 2016 year which runs from April 1, 2015 through March 31, 2016; we will guarantee a minimum bonus of $100,000 for Fiscal 2016.
Sign-on Stock Grant:	You will receive a grant of 6,000 shares of non-performance based restricted stock that will vest over three years (1/3, 1/3, 1/3) subject to the approval at the April 24, 2015 meeting of the Board of Directors.
Long-Term Equity Program:	You will be eligible for a target annual award of 60% of base salary with the opportunity to earn a maximum of 120%, subject to the approval at the April 24, 2015 meeting of the Board of Directors. This is a performance-based plan that requires the company achieve a three-year RONA goal for the shares to be earned.
401K:	Triumph matches 100% on the first 2% and 50% on the next 4%. The plan is administered by the Vanguard Group.
Benefits:	You will be eligible for our comprehensive benefits program, which among other things includes participation in the medical, dental, life and accident insurance programs.
Vacation:	Vacation time to be taken at your discretion.
Relocation:	Reimbursement for relocation expenses up to $75,000, subject to approval.

As a Triumph employee, you will be expected to adhere to Triumph's Code of Business Conduct, current policies, procedures and practices as well as any that may be implemented in the future.

This offer is contingent upon your satisfactory completion of a background investigation and drug screen. While we hope we will be able to meet each other's mutual needs, Triumph is an employer-at-will. This means that your employment with the company is not for any set term and may be modified or terminated by either you or the company at any time. The at-will term of your employment can be modified only in writing signed by you and the division president.

We would like your starting date for the position is to be on or before April 20, 2014. Please let me know the date you are able to start.

Please contact me if you have any questions about the information provided in this letter or require further information. I look forward to you joining Triumph!

Sincerely,

Robin DeRogatis
Vice President, Human Resources

Agreed and accepted:

Dan Ostrosky 3/27/15
Date

cc. J. Frisby

Triumph Group, Inc.

April 10, 2015

Daniel Ostrosky
464 Latimer Lane
Fort Mill, SC 29715

Dear Dan:

This is an addendum to your offer letter dated March 25, 2015. Although neither Triumph nor its U.S. subsidiaries enter into employment agreements with its management employees, Triumph Group, Inc. will enter into a mutually agreeable Severance Payment Agreement with you for the limited purpose of providing you, in the event of a termination without cause, with payment of one year's base salary at the rate in effect on the date of termination, payable at such intervals (no less than biweekely) as those which Triumph Group, Inc. pays its senior management employees, subject to required withholding.

Sincerely,

Robin DeRogatis
Vice President, Human Resources

Agreed and accepted:

Dan Ostrosky

April 11, 2015
Date

(Back To Top)

Section 5: EX-10.40 (EXHIBIT 10.40)

Triumph Group, Inc.

Executive General Severance Plan

(Effective February 19, 2019)

Table of Contents

TRIUMPH GROUP, INC.
EXECUTIVE GENERAL SEVERANCE PLAN

Article 1. Establishment and Term of the Plan

1.1 Establishment of the Plan. Triumph Group, Inc. (the "Company") hereby adopts this plan known as the "Triumph Group, Inc. Executive General Severance Plan" (the "Plan"). The Plan provides Severance Benefits (as defined below) to designated executive employees of the Company or its Subsidiaries or Affiliates (each an "Executive" and collectively the "Executives") upon certain terminations of employment from the Employer (as defined below).

The Plan is not intended to be an "employee pension benefit plan" or "pension plan" within the meaning of Section 3(2) of ERISA. Rather, the Plan is intended to be a "welfare benefit plan" within the meaning of Section 3(1) of ERISA and to meet the descriptive requirements of a plan constituting a "severance pay plan" within the meaning of regulations published by the Secretary of Labor at 29 CFR § 2510.3-2(b). In the event that the Plan does not meet the requirements of a "severance pay plan" as described above, then the Plan is intended to be "a plan which is unfunded and maintained by an employer primarily for the purpose of providing deferred compensation for a select group of management or highly compensated employees" within the meaning of Sections 201(2), 301(a)(3) and 401(a)(1) of ERISA. No employee contributions are required or permitted.

1.2 Initial Term. This Plan commenced on February 19, 2019 (the "Effective Date") and shall continue for a period of three (3) years (the "Initial Term").

1.3 Successive Periods. The term of this Plan shall automatically be extended for one (1) additional year at the end of the Initial Term, and then again after each successive one (1) year period thereafter (each such one (1) year period following the Initial Term is referred to as a "Successive Period"). However, the Plan Administrator may terminate this Plan at the end of the Initial Term, or at the end of any Successive Period thereafter, by giving the Executives written notice of intent to terminate the Plan, delivered at least six (6) months prior to the end of such Initial Term or Successive Period (such date, the "Notice Deadline"). If such notice is properly delivered by the Company, this Plan shall automatically expire at the end of the Initial Term or Successive Period then in progress.

Article 2. Definitions

Whenever used in this Plan, the following terms shall have the meanings set forth below and, when the meaning is intended, the initial letter of the word is capitalized.

(a) "Affiliate" means any entity that is, directly or indirectly, controlled by, under common control with or controlling the Company or any entity in which the Company has a significant ownership interest as determined by the Committee.

(b) "Band 5 Executives" means those employees of an Employer designated as Band 5 in the Employer's human resources information system.

(c) "Band 6 Executives" means those employees of an Employer designated as an Executive Vice President and each such other employee designated as Band 6 in the Employer's human resources information system.

(d) "Base Salary" means the Executive's annual rate of salary, whether or not deferred, at the Effective Date of Termination.

(e) "Beneficiary" means the persons or entities designated or deemed designated by the Executive pursuant to Section 10.7.

(f) "Board" means the Board of Directors of the Company.

(g) "Cause" has the meaning set forth in the applicable Executive's employment or similar agreement with the Employer or, if no such agreement is in effect, means (i) the failure by the Executive (other than any such failure resulting from (A) the Executive's incapacity due to physical or mental illness or (B) any such actual or anticipated failure after the issuance of a Notice of Termination by the Executive for Good Reason) to perform substantially the duties and responsibilities of the Executive's position with the Employer; provided, however, that a termination of employment shall not be deemed to be for Cause under this clause (i) unless (I) the Employer has delivered to the Executive written notice specifically identifying the manner in which the Executive has not substantially performed such duties or responsibilities and states an intent to terminate the Executive's employment for Cause within ninety (90) days of the latest such underlying action (or failure to act), (II) the Executive fails to cure such Cause event or events within thirty (30) days after his or her receipt of such written notice and (III) the Employer delivers to the Executive a notice of termination of employment for Cause within thirty (30) days after the expiration of the 30-day cure period; (ii) the conviction of the Executive by a court of competent jurisdiction or a plea of nolo contendere for felony criminal conduct or a crime involving moral turpitude; or (iii) the engaging by the Executive in fraud or dishonesty which is injurious to the Company or its reputation, monetarily or otherwise. It is expressly understood that the Executive's attention to matters not directly related to the business of the Employer shall not provide a basis for termination for Cause so long as the Board has approved the Executive's engagement in such activities.

(h) "CEO" means the Chief Executive Officer of the Company.

(i) "Change-in-Control Severance Plan" means the Company's Executive Change in Control Severance Plan, effective as of February 19, 2019, as may be amended and restated from time to time.

(j) "Code" means the United States Internal Revenue Code of 1986, as amended, and any successors thereto, and the regulations thereunder.

(k) "Company" means Triumph Group, Inc., a Delaware corporation, or any successor thereto as provided in Section 7.1. The term "Company" shall include a subsidiary or affiliate of Triumph Group, Inc., including a Subsidiary or Affiliate of

Triumph Group, Inc. by merger, consolidation or liquidation or purchase of assets or stock or similar transaction.

(l) "Delay Period" shall have the meaning set forth in Section 3.3(b).

(m) "Disability" means that the Executive is unable to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment that can be expected to result in death or can be expected to last for a continuous period of not less than six (6) months. Whether an Executive has a Disability shall be determined by the Plan Administrator. The Plan Administrator may rely on any determination that an Executive is disabled for purposes of benefits under any long-term disability plan maintained by the Employer in which an Executive participates.

(n) "Effective Date" has the meaning set forth in Section 1.2.

(o) "Effective Date of Termination" means the date on which a Qualifying Termination occurs, as defined hereunder, which triggers the payment of Severance Benefits hereunder.

(p) "Employer" means the Company or any Subsidiary or Affiliate, as applicable.

(q) "ERISA" means the Employee Retirement Income Security Act of 1974, as amended, and the regulations thereunder.

(r) "Exchange Act" means the Securities Exchange Act of 1934, as amended.

(s) "Executive" has the meaning set forth in Section 1.1.

(t) "Good Reason" means the Executive's resignation if, without the Executive's consent there is a relocation of the Executive's principal place of employment to anywhere other than within 35 miles of the principal office where the Executive is then-located; provided, however, that the Executive's termination of employment shall not be deemed to be for Good Reason unless (i) the Executive has delivered to the Employer written notice of intent to terminate for Good Reason within ninety (90) days of such occurrence, (ii) the Employer fails to cure such Good Reason event within thirty (30) days after its receipt of such written notice and (iii) the Executive delivers to the Employer a notice of termination of employment for Good Reason within thirty (30) days after the expiration of the 30-day cure period.

(u) "Initial Term" has the meaning set forth in Section 1.2.

(v) "Notice of Termination" means a written notice which shall indicate the specific termination provision in this Plan relied upon, and shall set forth in reasonable detail the facts and circumstances claimed to provide a basis for termination of the Executive's employment under the provision so indicated.

(w) "Plan" shall have the meaning set forth in Section 1.1.

(x) "Plan Administrator" means the Triumph Group, Inc. Administrative Committee as delegated by the Board to administer the terms of this Plan. In the event any member of the Administrative Committee is entitled to Severance Benefits under this Plan, or makes a claim for benefits under this Plan, the remaining members of the Administrative Committee shall act of the Plan Administrator for purposes of administering the terms of the Plan with respect to such Executive. The Plan Administrator may delegate all or any portions of its authority under the Plan to any other Person(s).

(y) "Proceeding" has the meaning set forth in Section 5.2(a).

(z) "Qualifying Termination" means:

(i) a termination of the Executive's employment for Good Reason pursuant to a Notice of Termination delivered to the Employer by the Executive; or

(ii) a termination of the Executive's employment by the Employer for reasons other than Cause, death, or Disability pursuant to a Notice of Termination delivered to the Executive by the Employer.

(aa) "Release Effective Date" shall have the meaning set forth in Section 3.1(c).

(bb) "Severance Benefits" means the Severance Benefits as provided in Article 3.

(cc) "Severance Period" has the meaning set forth in Section 3.4.

(dd) "Specified Employee" means any Executive described in Code Section 409A(a)(2)(B)(i).

(ee) "Subsidiary" means any company (other than the Company) in an unbroken chain of companies beginning with the Company, provided each company in the unbroken chain (other than the Company) owns, at the time of determination, stock possessing 50% or more of the total combined voting power of all classes of stock in one of the other companies in such chain.

(ff) "Successive Period" has the meaning set forth in Section 1.3.

Article 3. Severance Benefits

3.1 Right to Severance Benefits.

(a) **Severance Benefits**. The Executive shall be entitled to receive from the Company Severance Benefits, as described in Section 3.2 and summarized on Exhibit A attached hereto, if the Executive is the CEO, a Band 6 Executive or a Band 5 Executive and a Qualifying Termination of the Executive's employment has occurred.

(b) **No Severance Benefits**. The Executive shall not be entitled to receive Severance Benefits if the Executive's employment with the Employer ends for reasons other than a Qualifying Termination.

(c) **General Release**. As a condition to receiving Severance Benefits, the Executive shall be obligated to execute a separation and release agreement in favor of the Company, its current and former Subsidiaries, Affiliates and stockholders, and the current and former directors, officers, employees, and agents of the Company and such Subsidiaries and Affiliates in a form satisfactory to the Company, and any revocation period for such release must have expired, in each case within sixty (60) days of the date of termination. The date upon which the executed release is no longer subject to revocation shall be referred to herein as the "Release Effective Date". Any payments under Section 3.2 shall commence only after the Release Effective Date, and in the manner provided in Section 3.3 and Section 3.6.

(d) **No Duplication of Severance Benefits**. Notwithstanding anything to the contrary in this Plan, an Executive who receives Severance Benefits under this Plan shall not be entitled to receive severance benefits under any other plan or agreement of the Company or any of its Subsidiaries or Affiliates (excluding the Change-in-Control Severance Plan). If an Executive becomes entitled to Severance Benefits under this Plan while receiving severance benefits under any other plan or agreement of the Company or any of its Subsidiaries or Affiliates, then the severance benefits under such other plan or agreement will cease and the Severance Benefits due to the Executive under this Plan will be reduced by such other severance benefits previously paid to the Executive.

3.2 Description of Severance Benefits. In the event the Executive becomes entitled to receive Severance Benefits as provided in Section 3.1, the Company shall provide the Executive with the following:

(a) an amount equal to the Executive's unpaid Base Salary and unreimbursed business expenses, which amounts shall be paid promptly after the Effective Date of Termination whether or not the Executive executes a release required by Section 3.1(c), and, subject to Section 3.1(d), vested amounts owed to the Executive under any other plan or agreement of the Company, which will be payable in accordance with the terms of such plan or agreement;

(b) an amount equal to:

(i) for the CEO, two (2) times the sum of the following: (A) the CEO's Base Salary and (B) the CEO's target bonus opportunity in the fiscal year in which a Qualifying Termination occurs;

(ii) for Band 6 Executives, one (1) times the sum of the following: (A) the Executive's Base Salary and (B) the Executive's target bonus opportunity in the fiscal year in which a Qualifying Termination occurs; and

(iii) for Band 5 Executives, seventy-five one-hundredths (0.75) of the Executive's Base Salary;

(c) an amount equal to the Executive's annual target bonus opportunity in the fiscal year in which a Qualifying Termination occurs, pro-rated for the portion of the fiscal year elapsing prior to the Qualifying Termination, less any bonus paid to the Executive with respect to the same fiscal year under the Company's Executive Cash Incentive Compensation Plan, effective April 1, 2018, or any successor plan;

(d) acceleration and vesting, or lapse of forfeiture restrictions, as applicable, of all unvested equity or equity-based awards or equity or equity-based awards subject to forfeiture restrictions made to the Executive, whether annual awards, special, one-time or inducement awards:

(i) for the CEO to the extent such awards were scheduled to vest in the eighteen (18) months immediately following the CEO's Effective Date of Termination;

(ii) for Band 6 Executives to the extent such awards were scheduled to vest in the twelve (12) months immediately following the Effective Date of Termination; and

(iii) for Band 5 Executives, to the extent such awards were scheduled to vest in the six (6) months immediately following the Effective Date of Termination;

provided, however, for all Executives, any performance-based awards shall vest pro-rated at target based on the service completed during the applicable performance period;

(e) payment on the Executive's behalf of all of the Executive's cost to participate in COBRA medical and dental continuation coverage for:

(i) for the CEO, eighteen (18) months following the CEO's Effective Date of Termination;

(ii) for Band 6 Executives, twelve (12) months following the Executive's Effective Date of Termination; and

(iii) for Band 5 Executives, six (6) months following the Executive's Effective Date of Termination;

provided that notwithstanding the above, if such payments would result in discrimination under any tax law, then the Company shall pay such monthly premiums as additional taxable compensation to the Executive, and these medical benefits shall be discontinued prior to the end of the stated continuation period in the event the Executive is eligible to receive substantially similar benefits coverage (disregarding the cost of such coverage) from a subsequent employer, as

determined solely by the Plan Administrator in good faith. For purposes of enforcing this offset provision, the Executive shall have a duty to keep the Company informed as to the terms and conditions of any subsequent employment and the corresponding benefits earned from such employment, and shall provide, or cause to be provided, to the Company in writing correct, complete, and timely information concerning the same; and

(f) outplacement services through an outplacement services provider contracted with the Company or any Subsidiary from time to time, commencing on the Release Effective Date and lasting through the period of time specified in Section 3.2(e), as applicable to the Executive.

3.3 Coordination with Release and Delay Required by Code Section 409A.

(a) To the maximum extent possible, all amounts payable hereunder are intended to be exempt from the requirements of Code Section 409A and this Plan shall be construed and administered in accordance with such intention. To the extent any continuing benefit (or reimbursement thereof) to be provided is not "deferred compensation" for purposes of Code Section 409A, then such benefit shall commence or be made immediately after the Release Effective Date (if applicable). To the extent any continuing benefit (or reimbursement thereof) to be provided is "deferred compensation" for purposes of Code Section 409A, then to the extent necessary to prevent the imposition of taxes or penalties under Code Section 409A such benefits shall be reimbursed or commence upon the earliest later date as may be required in order to comply with the requirements of Code Section 409A. The delayed benefits shall in any event expire at the time such benefits would have expired had the benefits commenced immediately upon Executive's termination of employment.

(b) Notwithstanding any other payment schedule provided herein to the contrary, if the Executive is deemed on the date of termination to be a Specified Employee, then, once the release required by Section 3.1(c) is executed and delivered and no longer subject to revocation, any payment that is considered deferred compensation under Code Section 409A payable on account of a "separation from service" shall be made on the date which is the earlier of (A) the expiration of the six (6)-month period measured from the date of such "separation from service" of the Executive, and (B) the date of the Executive's death (the "Delay Period") to the extent required under Code Section 409A. Upon the expiration of the Delay Period, all payments delayed pursuant to this Section 3.3(b) (whether they would have otherwise been payable in a single sum or in installments in the absence of such delay) shall be paid to the Executive in a lump sum, and any remaining payments due under this Plan shall be paid or provided in accordance with the normal payment dates specified for them herein.

3.4 Retirement Plans. The provisions of any applicable qualified and/or non-qualified defined contribution or defined benefit plan maintained by the Company or the Employer pursuant to which an Executive is eligible to participate, shall control with respect to

any recognition of service during any period in which the Executive is receiving Severance Benefits (the "Severance Period") and the eligibility for benefits before, during and after the Severance Period.

3.5 Deductions from Severance Benefits. The Plan Administrator reserves the right to make deductions in accordance with applicable law for any monies owed to the Company or an Employer by the Executive or the value of Company property that the Executive has retained in Executive's possession, *e.g.*, if an Executive (a) retained a company laptop or other property, or (b) used Executive's corporate card for unauthorized personal purchases. To the extent applicable, any such deduction from Severance Benefits shall be made in compliance with Code Section 409A. To the maximum extent allowed by applicable law, through execution of a separation and release agreement required by Section 3.1(c) (which is a pre-condition to receipt of severance benefits hereunder), an Executive shall consent to, and otherwise authorize, such deductions in writing.

3.6 Timing and Method of Payment. Subject to Section 10.3:

(a) **Severance Benefits**. The Severance Benefits set forth in Section 3.2(b) shall be paid periodically, in prorated installments on a bi-weekly basis in accordance with the Company's or Employer's normal payroll cycle, less withholding for all applicable Federal, state and local taxes and other applicable withholdings and deductions, over the Executive's Severance Period; provided, however, that the first installment (including any retroactive installments) shall begin no later than sixty (60) days after the Executive's Termination Date. The Severance Benefits set forth in Section 3.2(c) and Section 3.2(d) shall be paid in a lump sum, less withholding for all applicable Federal, state and local taxes and other applicable withholdings and deductions, no later than sixty (60) days after the Executive's Termination Date (provided that, with respect to Section 3.2(d), to the extent necessary to prevent the imposition of taxes or penalties under Code Section 409A, such Severance Benefits shall be paid on the date(s) the awards would have been paid absent the Qualifying Termination). Severance Benefits set forth in Section 3.2(e) and Section 3.2(f) shall be paid in accordance with the Company's standard policies and practices. Except with respect to Section 3.2(a), the Severance Benefits are subject to the Executive's execution of a Release and, if applicable, the expiration of any revocation period for such Release within such 60-day period.

(b) **General Rules**. In the event of an Executive's death after Executive becomes entitled to Severance Benefits under the Plan, but prior to full payment of all Severance Benefits due to such Executive, any remaining Severance Benefits due to the Executive under Section 3.2 shall be paid to the Executive's estate in a lump sum payment within ninety (90) days following the Executive's death (provided that the Company or applicable Company Subsidiary has received notification of such death no later than sixty (60) days following such death). Interest will not be credited on any unpaid Severance Benefit due to an Executive. Payment(s) shall be made by direct deposit or by mailing to the last address

provided by the Executive to the Company or Employer or such other reasonable method as determined by the Plan Administrator.

Article 4. Sale of Business Unit

An Executive shall not be deemed to have terminated employment hereunder merely because the Company sells the division, subsidiary or other business unit by which the Executive is employed if the purchaser assumes the Plan with respect to such Executive.

Article 5. Covenants and Agreements

5.1 Covenants. This Plan shall have no effect on the validity or enforceability by the Company or its Subsidiaries or Affiliates of any and all confidentiality, assignment of inventions, non-solicitation, non-competition, non-disparagement and cooperation covenants of the Executive made under any other plan, agreement or other instruments between the Executive and the Company or one of its Subsidiaries or Affiliates. Any such covenants shall remain in full force and effect for the time period(s) set forth in such other plan, agreement or instrument, or if no time period is so set forth, perpetually.

5.2 Assistance with Claims.

(a) Each Executive agrees, that, during and after the Executive's employment by the Company or Employer, the Executive shall assist the Company, on a reasonable basis, in the defense of any claims or potential claims that may be made or threatened to be made against it in any action, suit, or proceeding, whether civil, criminal, administrative, or investigative ("Proceeding") and shall assist the Company in the prosecution of any claims that may be made by the Company in any Proceeding, to the extent that such claims may relate to the Executive's services.

(b) Each Executive agrees, unless precluded by law, to promptly inform the Company if the Executive is asked to participate (or otherwise become involved) in any Proceeding involving such claims or potential claims.

(c) Each Executive also agrees, unless precluded by law, to promptly inform the Company if the Executive is asked to assist in any investigation (whether governmental or private) of the Company or its Subsidiaries (or its actions), regardless of whether a lawsuit has then been filed against the Company or its Subsidiaries with respect to such investigation.

Article 6. Legal Fees and Notice

6.1 Payment of Legal Fees. In the event of a dispute arising under the Plan, each party shall bear their own costs such as the costs of litigation and attorneys' fees.

6.2 Notice. Any notices, requests, demands, or other communications provided for by this Plan shall be sufficient if in writing and if sent by registered or certified mail to the

Executive at the last address Executive has filed in writing with the Company or Employer or, in the case of the Company, at the address set forth in Section 8.1.

Article 7. Successors and Assignment

7.1 Successors to the Company. The Company shall require any successor (whether direct or indirect, by purchase, merger, reorganization, consolidation, acquisition of property or stock, liquidation, or otherwise) of all or a significant portion of the assets of the Company by agreement to expressly assume and agree to perform under this Plan in the same manner and to the same extent that the Company would be required to perform if no such succession had taken place. The terms of this Plan shall be binding upon any successor in accordance with the operation of law and such successor shall be deemed the "Company" or the "Employer" for purposes of this Plan.

7.2 Assignment by the Executive. This Plan shall inure to the benefit of and be enforceable by each Executive's personal or legal representatives, executors, administrators, successors, heirs, distributees, devisees, and legatees. If an Executive dies while any amount would still be payable to Executive hereunder had Executive continued to live, all such amounts, unless otherwise provided herein, shall be paid in accordance with the terms of this Plan to the Executive's Beneficiary. If an Executive has not named a Beneficiary, then such amounts shall be paid to the Executive in accordance with the Company's regular payroll practices or to the Executive's estate, as applicable.

Article 8. Plan Administration

8.1 Plan Administrator. The Plan Administrator shall be the "administrator" within the meaning of Section 3(16) of ERISA and shall have all the responsibilities and duties contained therein.

The Plan Administrator can be contacted at the following address:

c/o Triumph Group, Inc.
899 Cassatt Road, Suite 210
Berwyn, PA 19312
Attn: Senior Vice President, Human Resources

8.2 Records, Reporting and Disclosure. The Plan Administrator shall keep a copy of all records relating to the payment of Severance Benefits to Executives and former Executives and all other records necessary for the proper operation of the Plan. All Plan records shall be made available to the Company and to each Executive for examination during business hours except that an Executive shall examine only such records as pertain exclusively to the examining Executive and to the Plan. The Plan Administrator shall prepare and shall file as required by law or regulation all reports, forms, documents and other items required by ERISA, the Code, and every other relevant statute, each as amended, and all regulations thereunder (except that the Company, as payor of the Severance Benefits, shall prepare and distribute to the proper recipients all forms relating to withholding of income or wage taxes, Social Security taxes, and other amounts that may be similarly reportable).

8.3 Discretion. Any decisions, actions or interpretations to be made under the Plan by the Plan Administrator shall be made in its sole and absolute discretion, subject to the terms of the Plan and applicable law, and need not be uniformly applied and such decisions, actions or interpretations shall be final, binding and conclusive upon all parties, with respect to denied claims for Severance Benefits. Not in limitation, but in amplification of the foregoing and of the authority conferred upon the Plan Administrator, the Company specifically intends that the Plan Administrator and its duly authorized delegates have the greatest permissible discretion to construe the terms of the Plan and to determine all questions concerning eligibility, participation, and benefits. The decisions by the Plan Administrator or any delegates shall be conclusive and binding, and any interpretation, determination, or other action by them is intended to be subject to the most deferential standard of review. Such standard of review is not to be affected by any real or alleged conflict of interest on the part of the Plan Administrator or its delegates. In addition to the duties and powers described hereunder and elsewhere in this Plan, the Plan Administrator or its delegate is specifically given the discretionary authority and such powers as are necessary for the proper administration of the Plan, including, but not limited to, the following: (i) to resolve ambiguities or inconsistencies; (ii) to supply omissions and the like; (iii) to make determinations, grants, or denials of the amount, manner, and time of payment of any Severance Benefits under the terms of the Plan; (iv) to authorize its agents or delegates to execute or deliver any instrument or make payments on the Plan Administrator's behalf or with respect to the Plan; (v) to select and retain counsel, service providers and vendors, employ agents, and provide for such clerical, accounting, actuarial, legal, consulting and/or claims processing services as it deems necessary or desirable to assist the Plan Administrator in the administration of the Plan; (vi) to prepare and distribute, in such manner as the Plan Administrator determines to be appropriate, summary plan descriptions and other information explaining the Plan; (vii) to furnish the Company, upon request, such annual reports with respect to the administration of the Plan as the Plan Administrator deems reasonable and appropriate; (viii) to receive, review and keep on file, as the Plan Administrator deems necessary or appropriate, reports of Plan payments and reports of disbursements for expenses; and (ix) in general to decide and/or settle questions and disputes, and all such authorizations, interpretations, determinations, decisions and settlements shall be final and binding for purposes of the Plan.

Article 9. Claims

If an Executive believes that Executive is entitled to severance benefits under the Plan which are not being paid, the Executive may submit a written claim for payment to the Plan Administrator. The Executive must make an initial claim within sixty (60) days of termination of employment in order to be eligible for benefits. Any claim for benefits must be in writing, addressed to the Plan Administrator and must be sufficient to notify the Plan Administrator of the benefit being claimed. If the claim is denied, the Plan Administrator shall, within a reasonable period of time, provide the Executive with a written notice of denial. The notice will include the specific reasons for denial, the provisions of the Plan on which the denial is based, and the procedure for a review of the denied claim. Where appropriate, it will also include a description of any additional material or information necessary to complete or perfect the claim and an explanation of why that material or information is necessary. The Executive may request in writing a review of a claim denied by the Plan Administrator and may review pertinent documents and submit issues and comments in writing to the Plan Administrator. The Plan Administrator shall provide the Executive with a written decision upon such request for review

of a denied claim. The decision of the Plan Administrator upon such review shall be final; provided, however, the Executive shall have the right to pursue adjudication of a claim in a court of competent jurisdiction once this appeal process is complete.

Article 10. Miscellaneous

10.1 Indemnification. To the maximum extent permitted by law, all employees, officers, directors, agents and representatives of the Company shall be indemnified by the Company and held harmless against any claims and the expenses of defending against such claims, resulting from any action or conduct relating to the administration of the Plan, whether as a member of the Committee or otherwise, except to the extent that such claims arise from gross negligence, willful neglect, or willful misconduct.

10.2 Employment Status. Except as may be provided under any other agreement between the Executive and the Company or Employer, the employment of any Executive by the Company or Employer is "at will" and may be terminated by either the Executive or the Company or Employer at any time, subject to applicable law.

10.3 Code Section 409A. Notwithstanding anything herein to the contrary, if and only to the extent necessary to prevent the imposition of taxes or penalties under Code Section 409A:

(a) All expenses or other reimbursements or in-kind benefits under this Plan shall be paid or provided on or prior to the last day of the taxable year following the taxable year in which such expenses or in-kind benefits were incurred by the Executive, and no such reimbursement or in-kind benefits in any taxable year shall in any way affect the reimbursement or in-kind benefits in any other taxable year or subject to exchange for cash or other taxable amount.

(b) The Executive's right to receive any installment payment pursuant to this Plan shall be treated as a right to receive a series of separate and distinct payments.

(c) Whenever a payment under this Plan specifies a payment period with reference to a number of days (e.g., "payment shall be made within thirty (30) days following the date of termination"), the actual date of payment within the specified period shall be within the sole discretion of the Company.

(d) A Qualifying Termination shall not be deemed to have occurred for purposes of any provision of this Plan providing for the payment of any amounts or benefits upon or following a Qualifying Termination unless such termination is also a "separation from service" within the meaning of Code Section 409A and, for purposes of any such provision of this Plan, references to a "Qualifying Termination," "termination of employment" or like terms shall mean "separation from service."

(e) No payment will be subject to offset unless otherwise permitted by Code Section 409A.

(f) Notwithstanding any provisions in this Plan to the contrary, whenever a payment under this Plan may be made upon the Release Effective Date, and the period in which the Executive could execute the release (along with its accompanying revocation period) crosses calendar years, no payments shall be made until the latter calendar year.

10.4 Entire Plan. This Plan supersedes any prior agreements or understandings, oral or written, between the parties hereto, with respect to the subject matter hereof, and constitutes the entire agreement of the parties with respect thereto. Without limiting the generality of the foregoing sentence, this Plan completely supersedes any and all severance benefits under any prior employment agreements entered into by and between the Company or Employer and the Executive, and all amendments thereto, in their entirety. Notwithstanding the foregoing, if the Executive has entered into any agreements or commitments with the Company with regard to Confidential Information, noncompetition, nonsolicitation, or nondisparagement, such agreements or commitments will remain valid and will be read in harmony with this Plan to provide maximum protection to the Company.

10.5 Severability. In the event that any provision or portion of this Plan shall be determined to be invalid or unenforceable for any reason, the remaining provisions of this Plan shall be unaffected thereby and shall remain in full force and effect.

10.6 Tax Withholding. The Company or Employer may withhold from any benefits payable under this Plan all Federal, state, city, or other taxes as may be required pursuant to any law or governmental regulation or ruling.

10.7 Beneficiaries. The Executive may designate one (1) or more persons or entities as the primary and/or contingent beneficiaries of any amounts to be received under this Plan. Such designation must be in the form of a signed writing acceptable to the Board or the Board's designee. The Executive may make or change such designation at any time.

10.8 Payment Obligation Absolute. Except as provided in Section 3.5, the Company's obligation to make the payments provided for herein shall be absolute and unconditional, and shall not be affected by any circumstances, including, without limitation, any offset, counterclaim, recoupment, defense, or other right which the Company may have against the Executive or anyone else. The Executive shall not be obligated to seek other employment in mitigation of the amounts payable or arrangements made under any provision of this Plan, and, except as otherwise set forth in Section 3.2(e), the obtaining of any such other employment shall in no event effect any reduction of the Company's obligations to make the payments and arrangements required to be made under this Plan.

10.9 Contractual Rights to Benefits. This Plan establishes and vests in the Executives a contractual right to the benefits to which Executive is entitled hereunder. However, nothing herein contained shall require or be deemed to require, or prohibit or be deemed to prohibit, the Company to segregate, earmark, or otherwise set aside any funds or other assets, in trust or otherwise, to provide for any payments to be made or required hereunder.

10.10 Modification. The Plan may be amended or terminated by the Board in any manner and at any time, provided that the termination of the Plan shall be subject to the provisions of Section 1.3.

10.11 Gender and Number. Except where otherwise indicated by the context, any masculine term used herein also shall include the feminine; the plural shall include the singular and the singular shall include the plural.

10.12 Controlling Law. This Plan shall be construed and enforced according to the laws of the Commonwealth of Pennsylvania (without reference to principles or provisions governing conflicts of laws) to the extent not preempted or superseded by Federal laws of the United States. Any provision of this Plan that is determined by a court to be in conflict with any applicable Federal or State laws shall be deemed amended by this paragraph to conform to the minimum requirements of such laws, except to the extent they are preempted by ERISA.

IN WITNESS WHEREOF, the Company has executed this Plan effective as of the Effective Date.

TRIUMPH GROUP, INC.

____

Name: Daniel J. Crowley
Title: President and Chief Executive Officer

Exhibit A
Benefits Summary

This summary describes the payments and benefits offered to participants in the Triumph Group, Inc. Executive General Severance Plan (the "Plan") upon a termination of employment without "Cause" or a resignation of employment for "Good Reason" (each term as defined in the Plan) and subject to each participant's execution and non-revocation of a general release and waiver.

This description is intended only as a summary and is qualified in its entirety by reference to the full text of the Plan. In the event of any conflict between this summary and the Plan, the Plan shall control.

	CEO	**Band 6 Executives**	**Band 5 Executives**
Salary/Bonus Severance			
Base Salary	2.0x	1.0x	0.75x
Target Bonus	2.0x	1.0x	N/A
Current Year Bonus	Prorated @ target	Prorated @ target	Prorated @ target
Equity			
Time-Based and Cash LTI	18 months' accelerated vesting	12 months' accelerated vesting	6 months' accelerated vesting
Performance-Based	Prorated acceleration @ target	Prorated acceleration @ target	Prorated acceleration @ target
Other			
Subsidized Benefits	18 months	12 months	6 months
Outplacement	18 months	12 months	6 months

(Back To Top)

Section 6: EX-10.41 (EXHIBIT 10.41 - EXECUTIVE CHANGE IN CONTROL SEVERANCE PLAN)

Triumph Group, Inc.

Executive Change in Control Severance Plan

(Effective February 19, 2019)

Table of Contents

TRIUMPH GROUP, INC.
EXECUTIVE CHANGE IN CONTROL SEVERANCE PLAN

Article 1. Establishment and Term of the Plan

1.1 Establishment of the Plan. Triumph Group, Inc. (the "Company") hereby adopts this plan known as the "Triumph Group, Inc. Executive Change in Control Severance Plan" (the "Plan"). The Plan provides Severance Benefits (as defined below) to designated executive employees of the Company or its Subsidiaries or Affiliates (each an "Executive" and collectively the "Executives") upon certain terminations of employment from the Employer (as defined below) in connection with a Change in Control of the Company.

The Company considers the establishment and maintenance of a sound and vital management to be essential to protecting and enhancing the best interests of the Company and its stockholders. In this connection, the Company recognizes that, as is the case with many publicly held corporations, the possibility of a Change in Control may arise and that such possibility, and the uncertainty and questions which it may raise among management, may result in the departure or distraction of management personnel to the detriment of the Company and its stockholders.

Accordingly, the Board has determined that appropriate steps should be taken to reinforce and encourage the continued attention and dedication of members of the Company's management to their assigned duties without distraction in circumstances arising from the possibility of a Change in Control of the Company.

The Plan is not intended to be an "employee pension benefit plan" or "pension plan" within the meaning of Section 3(2) of ERISA. Rather, the Plan is intended to be a "welfare benefit plan" within the meaning of Section 3(1) of ERISA and to meet the descriptive requirements of a plan constituting a "severance pay plan" within the meaning of regulations published by the Secretary of Labor at 29 CFR § 2510.3-2(b). In the event that the Plan does not meet the requirements of a "severance pay plan" as described above, then the Plan is intended to be "a plan which is unfunded and maintained by an employer primarily for the purpose of providing deferred compensation for a select group of management or highly compensated employees" within the meaning of Sections 201(2), 301(a)(3) and 401(a)(1) of ERISA. No employee contributions are required or permitted.

1.2 Initial Term. This Plan commenced on February 19, 2019 (the "Effective Date") and shall continue for a period of three (3) years (the "Initial Term").

1.3 Successive Periods. The term of this Plan shall automatically be extended for one (1) additional year at the end of the Initial Term, and then again after each successive one (1) year period thereafter (each such one (1) year period following the Initial Term is referred to as a "Successive Period"). However, the Plan Administrator may terminate this Plan at the end of the Initial Term, or at the end of any Successive Period thereafter, by giving the Executives written notice of intent to terminate the Plan, delivered at least six (6) months prior to the end of such Initial Term or Successive Period (such date, the "Notice Deadline"); provided however that the Company may not give such notice at any time when the Company is a party to an agreement which, if consummated, would result in a Change in Control. If such notice is properly delivered

by the Company, this Plan shall automatically expire at the end of the Initial Term or Successive Period then in progress.

1.4 Change in Control Renewal. Notwithstanding the provisions of Section 1.3, in the event that a Change in Control of the Company occurs during the Initial Term or any Successive Period, upon the effective date of such Change in Control, the term of this Plan shall automatically and irrevocably be renewed for a period of two (2) years from the effective date of such Change in Control. This Plan shall thereafter automatically terminate following such two (2) year Change in Control renewal period; provided that such termination shall not affect or diminish the rights of Executives who become entitled to benefits or payments under this Plan prior to such termination.

Article 2. Definitions

Whenever used in this Plan, the following terms shall have the meanings set forth below and, when the meaning is intended, the initial letter of the word is capitalized.

(a) "Accountants" has the meaning set forth in Article 6.

(b) "Affiliate" means any entity that is, directly or indirectly, controlled by, under common control with or controlling the Company or any entity in which the Company has a significant ownership interest as determined by the Committee.

(c) "Band 5 Executives" means the Band 5 Executives who may be set forth on Exhibit A to this Plan from time to time. For purposes of this definition, if an Executive is included on Exhibit A immediately prior to the Change in Control Period, such Executive shall be eligible for Severance Benefits.

(d) "Band 6 Executives" means those employees of an Employer designated as an Executive Vice President and each such other employee designated as Band 6 in the Employer's human resources information system, in each case immediately prior to the Change in Control Period.

(e) "Base Salary" means the greater of the Executive's annual rate of salary, whether or not deferred, at: (i) the Effective Date of Termination or (ii) at the date of the Change in Control.

(f) "Beneficiary" means the persons or entities designated or deemed designated by the Executive pursuant to Section 10.7.

(g) "Board" means the Board of Directors of the Company.

(h) "Cause" has the meaning set forth in the applicable Executive's employment or similar agreement with the Employer or, if no such agreement is in effect, means (i) the willful and continued failure by the Executive (other than any such failure resulting from (A) the Executive's incapacity due to physical or mental illness or (B) any such actual or anticipated failure after the issuance of a Notice of Termination by the Executive for Good Reason) to perform substantially the

duties and responsibilities of the Executive's position with the Employer; provided, however, that a termination of employment shall not be deemed to be for Cause under this clause (i) unless (I) the Employer has delivered to the Executive written notice specifically identifying the manner in which the Executive has not substantially performed such duties or responsibilities and states an intent to terminate the Executive's employment for Cause within ninety (90) days of the latest such underlying action (or failure to act), (II) the Executive fails to cure such Cause event or events within thirty (30) days after his or her receipt of such written notice and (III) the Employer delivers to the Executive a notice of termination of employment for Cause within thirty (30) days after the expiration of the 30-day cure period; (ii) the conviction of the Executive by a court of competent jurisdiction or a plea of nolo contendere for felony criminal conduct or a crime involving moral turpitude; or (iii) the willful engaging by the Executive in fraud or dishonesty which is injurious to the Company or its reputation, monetarily or otherwise. No act, or failure to act, on the Executive's part shall be deemed "willful" unless committed or omitted by the Executive in bad faith and without reasonable belief that the Executive's act or failure to act was in, or not opposed to, the best interest of the Company. It is also expressly understood that the Executive's attention to matters not directly related to the business of the Employer shall not provide a basis for termination for Cause so long as the Board has approved the Executive's engagement in such activities.

(i) "<u>CEO</u>" means the Chief Executive Officer of the Company.

(j) "<u>Change in Control</u>" means any of the following:

(i) Any individual, entity or group (within the meaning of Section 13(d)(3) or 14(d)(2) of the Exchange Act) (a "<u>Person</u>") becomes the beneficial owner (within the meaning of Rule 13d-3 promulgated under the Exchange Act) of 50% or more of either (A) the then-outstanding shares of common stock of the Company (the "<u>Outstanding Company Common Stock</u>") or (B) the combined voting power of the then-outstanding voting securities of the Company entitled to vote generally in the election of directors (the "<u>Outstanding Company Voting Securities</u>"); provided, however, that, for purposes of this definition, the following acquisitions shall not constitute a Change in Control: (1) any acquisition directly from the Company, (2) any acquisition by the Company, (3) any acquisition by any employee benefit plan (or related trust) sponsored or maintained by the Company or any affiliated entity or (iv) any acquisition pursuant to a transaction that complies with (iii)(A), (iii)(B) and (iii)(C) of this definition;

(ii) Individuals who, as of the date hereof, constitute the Board (the "<u>Incumbent Board</u>") cease for any reason to constitute at least a majority of the Board; provided, however, that any individual becoming a director subsequent to the date hereof whose election, or nomination for election by the Company's stockholders, was approved by a vote of at least a majority of the directors then comprising the Incumbent Board shall be

considered as though such individual was a member of the Incumbent Board, but excluding, for this purpose, any such individual whose initial assumption of office occurs in connection with or as a result of an actual or threatened election contest with respect to the election or removal of directors or other actual or threatened solicitation of proxies or consents by or on behalf of a Person other than the Board;

(iii) Consummation of a reorganization, merger, statutory share exchange or consolidation or similar transaction involving the Company or any of its subsidiaries, a sale or other disposition of all or substantially all of the assets of the Company, or the acquisition of assets or stock of another entity by the Company or any of its subsidiaries (each, a "Business Combination"), in each case unless, following such Business Combination, (A) all or substantially all of the individuals and entities that were the beneficial owners of the Outstanding Company Common Stock and the Outstanding Company Voting Securities immediately prior to such Business Combination beneficially own, directly or indirectly, more than 50% of the then-outstanding shares of common stock (or, for a non-corporate entity, equivalent securities) and the combined voting power of the then-outstanding voting securities entitled to vote generally in the election of directors (or, for a non-corporate entity, equivalent governing body, as the case may be), of the entity resulting from such Business Combination (including, without limitation, an entity that, as a result of such transaction, owns the Company or all or substantially all of the Company's assets either directly or through one or more subsidiaries) in substantially the same proportions as their ownership immediately prior to such Business Combination of the Outstanding Company Common Stock and the Outstanding Company Voting Securities, as the case may be, (B) no Person (excluding any corporation resulting from such Business Combination or any employee benefit plan (or related trust) of the Company or such corporation resulting from such Business Combination) beneficially owns, directly or indirectly, 50% or more of, respectively, the then-outstanding shares of common stock of the corporation resulting from such Business Combination or the combined voting power of the then-outstanding voting securities of such corporation, except to the extent that such ownership existed prior to the Business Combination, and (C) at least a majority of the members of the board of directors (or, for a non-corporate entity, equivalent governing body) of the entity resulting from such Business Combination were members of the Incumbent Board at the time of the execution of the initial agreement or of the action of the Board of Directors providing for such Business Combination; or

(iv) Approval by the stockholders of the Company of a complete liquidation or dissolution of the Company.

(k) "Change in Control Period" means the time period that begins six (6) months immediately prior to, and continues until the elapse of twenty-four (24) months immediately following a Change in Control of the Company.

(l) "Code" means the United States Internal Revenue Code of 1986, as amended, and any successors thereto, and the regulations thereunder.

(m) "Company" means Triumph Group, Inc., a Delaware corporation, or any successor thereto as provided in Section 8.1. The term "Company" shall include a subsidiary or affiliate of Triumph Group, Inc., including a Subsidiary or Affiliate of Triumph Group, Inc. by merger, consolidation or liquidation or purchase of assets or stock or similar transaction.

(n) "Delay Period" shall have the meaning set forth in Section 3.3(b).

(o) "Disability" means that the Executive is unable to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment that can be expected to result in death or can be expected to last for a continuous period of not less than six (6) months. Whether an Executive has a Disability shall be determined by the Plan Administrator. The Plan Administrator may rely on any determination that an Executive is disabled for purposes of benefits under any long-term disability plan maintained by the Employer in which an Executive participates.

(p) "Effective Date" has the meaning set forth in Section 1.2.

(q) "Effective Date of Termination" means the date on which a Qualifying Termination occurs, as defined hereunder, which triggers the payment of Severance Benefits hereunder.

(r) "Employer" means the Company or any Subsidiary or Affiliate, as applicable.

(s) "ERISA" means the Employee Retirement Income Security Act of 1974, as amended, and the regulations thereunder.

(t) "Exchange Act" means the Securities Exchange Act of 1934, as amended.

(u) "Executive" has the meaning set forth in Section 1.1.

(v) "General Severance Plan" means the Company's Executive General Severance Plan, effective as of February 19, 2019, as may be amended and restated from time to time.

(w) "Good Reason" for termination by the Executive of the Executive's employment means the occurrence (without the Executive's express written consent) after any Change in Control, of any one of the following acts by the Company or the Employer, or failures by the Company or the Employer to act, unless such act or

failure to act is corrected prior to the Date of Termination specified in the Notice of Termination given in respect thereof:

(i) a significant adverse change or diminution in the Executive's authority, duties, responsibilities or reporting requirements as in effect immediately prior to the Change in Control Period or the assignment to the Executive of any duties or responsibilities which are inconsistent with such role or position(s) (including status, offices, titles, public company status and reporting requirements), or any removal of the Executive from, or any failure to reappoint or reelect the Executive to, such position(s);

(ii) a reduction of more than ten percent (10%) in the Executive's total annual target compensation (as compared to the Executive's total annual target compensation immediately prior to the Change in Control), other than pursuant to an across-the-board reduction in total annual target compensation which applies to all similarly situated executives of the Company and any acquirer (and defining total annual target compensation for purposes of this definition as base salary and target annual cash incentive compensation (and not including equity or equity-based compensation));

(iii) a material reduction in the aggregate level of employee benefits offered to the Executive under any pension, life insurance, medical, health, accident and disability plans, or any retirement plan for which the Executive is eligible at the time of the Change in Control, compared with the aggregate level of employee benefits offered to the Executive under such plans immediately prior to the Change in Control; or

(iv) the Company or the Employer requiring the Executive to be based at an office that is greater than 35 miles from where the Executive's office is located immediately prior to the Change in Control except for required travel on the Employer's business to an extent substantially consistent with the business travel obligations which the Executive undertook on behalf of the Employer prior to the Change in Control;

provided, however, that the Executive's termination of employment shall not be deemed to be for Good Reason unless (A) the Executive has delivered to the Employer written notice describing the occurrence of one or more Good Reason events within ninety (90) days of such occurrence, (B) the Employer fails to cure such Good Reason event or events within thirty (30) days after its receipt of such written notice and (C) the Executive delivers to the Employer a notice of termination of employment for Good Reason within thirty (30) days after the expiration of the 30-day cure period.

(x) "<u>Highest Annual Bonus</u>" means the higher of (i) an Executive's average annual bonus earned in each of the last three completed annual performance periods; and

(ii) the current target bonus opportunity in the fiscal year in which a Qualifying Termination occurs.

(y) "Initial Term" has the meaning set forth in Section 1.2.

(z) "Notice of Termination" means a written notice which shall indicate the specific termination provision in this Plan relied upon, and shall set forth in reasonable detail the facts and circumstances claimed to provide a basis for termination of the Executive's employment under the provision so indicated.

(aa) "Parachute Payment Ratio" shall have the meaning set forth in Article 6.

(bb) "Plan" shall have the meaning set forth in Section 1.1.

(cc) "Plan Administrator" means the Triumph Group, Inc. Administrative Committee as delegated by the Board to administer the terms of this Plan. In the event any member of the Administrative Committee is entitled to Severance Benefits under this Plan, or makes a claim for benefits under this Plan, the remaining members of the Administrative Committee shall act of the Plan Administrator for purposes of administering the terms of the Plan with respect to such Executive. The Plan Administrator may delegate all or any portions of its authority under the Plan to any other Person(s).

(dd) "Proceeding" has the meaning set forth in Section 5.2(a).

(ee) "Qualified Plan" means, with respect to each Executive, the defined contribution plan that is intended to qualify under Section 401(a) of the Code in which the Executive is entitled to participate immediately prior to a Qualifying Termination.

(ff) "Qualifying Termination" means, once a Change in Control actually occurs, if such event occurs within the Change in Control Period:

(i) a termination of the Executive's employment by the Employer other than a termination for Cause, death, or Disability that is, in any case, effected by a Notice of Termination delivered to the Executive by the Employer; or

(ii) a termination of the Executive's employment for Good Reason pursuant to a Notice of Termination delivered to the Employer by the Executive.

(gg) "Release Effective Date" shall have the meaning set forth in Section 3.1(c).

(hh) "Severance Benefits" means the Severance Benefits as provided in Article 3.

(ii) "Severance Period" has the meaning set forth in Section 3.4.

(jj) "Specified Employee" means any Executive described in Code Section 409A(a)(2)(B)(i).

(kk) "Subsidiary" means any company (other than the Company) in an unbroken chain of companies beginning with the Company, provided each company in the unbroken chain (other than the Company) owns, at the time of determination, stock possessing 50% or more of the total combined voting power of all classes of stock in one of the other companies in such chain.

(ll) "Successive Period" has the meaning set forth in Section 1.3.

(mm) "Total Payments" has the meaning set forth in Article 6.

Article 3. Severance Benefits

3.1 Right to Severance Benefits.

(a) **Severance Benefits**. The Executive shall be entitled to receive from the Company Severance Benefits, as described in Section 3.2 and summarized on Exhibit B attached hereto, if the Executive is the CEO, a Band 6 Executive or a Band 5 Executive and a Qualifying Termination of the Executive's employment has occurred within the Change in Control Period.

(b) **No Severance Benefits**. The Executive shall not be entitled to receive Severance Benefits if the Executive's employment with the Employer ends for reasons other than a Qualifying Termination.

(c) **General Release**. As a condition to receiving Severance Benefits (other than under Section 3.2(a)), the Executive shall be obligated to execute a separation and release agreement in favor of the Company, its current and former Subsidiaries, Affiliates and stockholders, and the current and former directors, officers, employees, and agents of the Company and such Subsidiaries and Affiliates substantially in the form attached to this Plan as Exhibit C, and any revocation period for such release must have expired, in each case within sixty (60) days of the date of termination. The date upon which the executed release is no longer subject to revocation shall be referred to herein as the "Release Effective Date". Any payments under Section 3.2 shall commence only after the Release Effective Date, and in the manner provided in Section 3.3 and Section 3.7.

(d) **No Duplication of Severance Benefits**. Notwithstanding anything to the contrary in this Plan, an Executive who receives Severance Benefits under this Plan shall not be entitled to receive severance benefits under the General Severance Plan or any other plan or agreement of the Company or any of its Subsidiaries or Affiliates. If an Executive becomes entitled to Severance Benefits under this Plan while receiving severance benefits under the General Severance Plan or any other plan or agreement of the Company or any of its Subsidiaries or Affiliates, then the severance benefits under such other plan or agreement will cease and the Severance Benefits due to the Executive under this Plan will be reduced by such other severance benefits previously paid to the Executive.

3.2 Description of Severance Benefits. In the event the Executive becomes entitled to receive Severance Benefits as provided in Section 3.1, the Company shall provide the Executive with the following:

(a) an amount equal to the Executive's unpaid Base Salary and unreimbursed business expenses, which amounts shall be paid promptly after the Effective Date of Termination whether or not the Executive executes a release required by Section 3.1(c), and, subject to Section 3.1(d), vested amounts owed to the Executive under any other plan or agreement of the Company, which will be payable in accordance with the terms of such plan or agreement;

(b) an amount equal to:

(i) two (2) for the CEO;

(ii) one and one-half (1.5) for Band 6 Executives; and

(iii) one (1) for Band 5 Executives;

times the sum of the following: (A) the Executive's Base Salary and (B) the Executive's Highest Annual Bonus;

(c) an amount equal to the Executive's annual target bonus opportunity in the fiscal year in which a Qualifying Termination occurs, pro-rated for the portion of the fiscal year elapsing prior to the Qualifying Termination, less any bonus paid to the Executive with respect to the same fiscal year in connection with the occurrence of a Change in Control under the Company's Executive Cash Incentive Compensation Plan, effective April 1, 2018, or any successor plan;

(d) an amount equal to:

(i) $50,000 for the CEO;

(ii) $20,000 for Band 6 Executives; and

(iii) $5,000 for Band 5 Executives

as a stipend with which the Executive may procure outplacement services;

(e) acceleration and vesting, or lapse of forfeiture restrictions, as applicable, of all unvested equity or equity-based awards or equity or equity-based awards subject to forfeiture restrictions, whether annual awards, special, one-time or inducement awards, made to the Executive prior to the Effective Date of Termination, with any performance-based awards vesting based upon an assumed achievement of all relevant performance goals at target performance goal achievement as of the Effective Date of Termination;

(f) payment on the Executive's behalf of all of the Executive's cost to participate in COBRA medical and dental continuation coverage for:

(i) twenty-four (24) months following the CEO's Effective Date of Termination for the CEO;

(ii) eighteen (18) months following the Executive's Effective Date of Termination for Band 6 Executives; and

(iii) twelve (12) months following the Executive's Effective Date of Termination for Band 5 Executives;

provided that notwithstanding the above, if such payments would result in discrimination under any tax law, then the Company shall pay such monthly premiums as additional taxable compensation to the Executive. For purposes of enforcing this offset provision, the Executive shall have a duty to keep the Company informed as to the terms and conditions of any subsequent employment and the corresponding benefits earned from such employment, and shall provide, or cause to be provided, to the Company in writing correct, complete, and timely information concerning the same; and

(g) an amount equal to the total amount through the Severance Period that the Executive would have received under the Qualified Plan as a company match if the Executive had participated in such plan (applying the maximum statutory contribution limits in effect on the Executive's Effective Date of Termination).

3.3 Coordination with Release and Delay Required by Code Section 409A.

(a) To the maximum extent possible, all amounts payable hereunder are intended to be exempt from the requirements of Code Section 409A and this Plan shall be construed and administered in accordance with such intention. To the extent any continuing benefit (or reimbursement thereof) to be provided is not "deferred compensation" for purposes of Code Section 409A, then such benefit shall commence or be made immediately after the Release Effective Date (if applicable). To the extent any continuing benefit (or reimbursement thereof) to be provided is "deferred compensation" for purposes of Code Section 409A, then to the extent necessary to prevent the imposition of taxes or penalties under Code Section 409A such benefits shall be reimbursed or commence upon the earliest later date as may be required in order to comply with the requirements of Code Section 409A. The delayed benefits shall in any event expire at the time such benefits would have expired had the benefits commenced immediately upon Executive's termination of employment.

(b) Notwithstanding any other payment schedule provided herein to the contrary, if the Executive is deemed on the date of termination to be a Specified Employee, then, once the release required by Section 3.1(c) is executed and delivered and no longer subject to revocation, any payment that is considered deferred compensation under Code Section 409A payable on account of a "separation from

service" shall be made on the date which is the earlier of (A) the expiration of the six (6)-month period measured from the date of such "separation from service" of the Executive, and (B) the date of the Executive's death (the "Delay Period") to the extent required under Code Section 409A. Upon the expiration of the Delay Period, all payments delayed pursuant to this Section 3.3(b) (whether they would have otherwise been payable in a single sum or in installments in the absence of such delay) shall be paid to the Executive in a lump sum, and any remaining payments due under this Plan shall be paid or provided in accordance with the normal payment dates specified for them herein.

3.4 Retirement Plans. The provisions of any applicable qualified and/or non-qualified defined contribution or defined benefit plan maintained by the Company or the Employer pursuant to which an Executive is eligible to participate, shall control with respect to any recognition of service during any period in which the Executive is receiving Severance Benefits (the "Severance Period") and the eligibility for benefits before, during and after the Severance Period.

3.5 Deductions from Severance Benefits. The Plan Administrator reserves the right to make deductions in accordance with applicable law for any monies owed to the Company or an Employer by the Executive or the value of Company property that the Executive has retained in Executive's possession, *e.g.*, if an Executive (a) retained a company laptop or other property, or (b) used Executive's corporate card for unauthorized personal purchases; provided that no such deductions shall be made with respect to terminations occurring on, or during the two year period following, a Change in Control. To the extent applicable, any such deduction from Severance Benefits shall be made in compliance with Code Section 409A. To the maximum extent allowed by applicable law, through execution of a release required by Section 3.1(c) (which is a pre-condition to receipt of severance benefits hereunder), an Executive shall consent to, and otherwise authorize, such deductions in writing.

3.6 No Demotion. For the avoidance of doubt, the Band of each Executive immediately prior to the commencement of the Change in Control Period shall determine the Severance Benefits to be paid hereunder on a Qualifying Termination, and no demotion of the Executive during the Change in Control Period shall impact such Severance Benefits; provided, however, if the Executive is promoted to a higher Band during the Change in Control Period and has a Qualifying Termination after such promotion, the Severance Benefits shall be paid at such promoted Band.

3.7 Timing and Method of Payment. Subject to Section 10.3:

(a) **Severance Benefits**. Subject to Article 6, the Severance Benefits set forth in Section 3.2(b), 3.2(c), 3.2(d), 3.2(e) and 3.2(g) shall be paid in a lump sum, less withholding for all applicable Federal, state and local taxes and other applicable withholdings and deductions, no later than sixty (60) days after the Executive's Termination Date (provided that, with respect to Section 3.2(e), to the extent necessary to prevent the imposition of taxes or penalties under Code Section 409A, such Severance Benefits shall be paid on the date(s) the awards would have been paid absent the Qualifying Termination), subject to the Executive's

execution of a Release and, if applicable, the expiration of any revocation period for such Release within such 60-day period. Severance Benefits set forth in Section 3.2(f) shall be paid in accordance with the Company's standard policies and practices, subject to the Executive's execution of a Release and, if applicable, the expiration of any revocation period for such Release within such 60-day period.

(b) **General Rules**. Interest will not be credited on any unpaid Severance Benefit due to an Executive. Payment(s) shall be made by direct deposit or by mailing to the last address provided by the Executive to the Company or Employer or such other reasonable method as determined by the Plan Administrator.

Article 4. Sale of Business Unit

An Executive shall not be deemed to have terminated employment hereunder merely because the Company sells the division, subsidiary or other business unit by which the Executive is employed if the purchaser assumes the Plan with respect to such Executive.

Article 5. Covenants and Agreements

5.1 Covenants. This Plan shall have no effect on the validity or enforceability by the Company or its Subsidiaries or Affiliates of any and all confidentiality, assignment of inventions, non-solicitation, non-competition, non-disparagement and cooperation covenants of the Executive made under any other plan, agreement or other instruments between the Executive and the Company or one of its Subsidiaries or Affiliates. Any such covenants shall remain in full force and effect for the time period(s) set forth in such other plan, agreement or instrument, or if no time period is so set forth, perpetually.

5.2 Assistance with Claims.

(a) Each Executive agrees, that, during and after the Executive's employment by the Company or Employer, the Executive shall assist the Company, on a reasonable basis, in the defense of any claims or potential claims that may be made or threatened to be made against it in any action, suit, or proceeding, whether civil, criminal, administrative, or investigative ("Proceeding") and shall assist the Company in the prosecution of any claims that may be made by the Company in any Proceeding, to the extent that such claims may relate to the Executive's services.

(b) Each Executive agrees, unless precluded by law, to promptly inform the Company if the Executive is asked to participate (or otherwise become involved) in any Proceeding involving such claims or potential claims.

(c) Each Executive also agrees, unless precluded by law, to promptly inform the Company if the Executive is asked to assist in any investigation (whether governmental or private) of the Company or its Subsidiaries (or its actions), regardless of whether a lawsuit has then been filed against the Company or its Subsidiaries with respect to such investigation.

Article 6. Certain Change in Control Payments

Notwithstanding any provision of the Plan to the contrary, if any payments or benefits an Executive would receive from the Company or Employer under the Plan or otherwise in connection with the Change in Control (the "Total Payments") (a) constitute "parachute payments" within the meaning of Code Section 280G, and (b) but for this Article 6, would be subject to the excise tax imposed by Code Section 4999, then such Executive will be entitled to receive either (i) the full amount of the Total Payments or (ii) a portion of the Total Payments having a value equal to One Dollar ($1) less than three (3) times such individual's "base amount" (as such term is defined in Code Section 280G(b)(3)(A)), whichever of (i) and (ii), after taking into account applicable Federal, state, local income and employment taxes and the excise tax imposed by Code Section 4999, results in the receipt by such employee on an after-tax basis, of the greatest portion of the Total Payments. Any determination required under this Article 6 shall be made in writing by the Company's independent certified public accountants appointed prior to any change in ownership (as defined under Code Section 280G(b)(2)) or tax counsel selected by such accountants (the "Accountants"), whose determination shall be conclusive and binding for all purposes upon the applicable Executive and the Company. For purposes of making the calculations required by this Article 6, the Accountants may make reasonable assumptions and approximations concerning applicable taxes and may rely on reasonable, good-faith interpretations concerning the application of Code Sections 280G and 4999. If there is a reduction pursuant to this Article 6 of the Total Payments to be delivered to the applicable Executive, the payment reduction contemplated by the preceding sentence shall be implemented by determining the Parachute Payment Ratio (as defined below) for each "parachute payment" and then reducing the "parachute payments" in order beginning with the "parachute payment" with the highest Parachute Payment Ratio. For "parachute payments" with the same Parachute Payment Ratio, such "parachute payments" shall be reduced based on the time of payment of such "parachute payments," with amounts having later payment dates being reduced first. For "parachute payments" with the same Parachute Payment Ratio and the same time of payment, such "parachute payments" shall be reduced on a pro rata basis (but not below zero) prior to reducing "parachute payments" with a lower Parachute Payment Ratio. For purposes hereof, the term "Parachute Payment Ratio" shall mean a fraction the numerator of which is the value of the applicable "parachute payment" for purposes of Code Section 280G and the denominator of which is the actual present value of such payment.

Article 7. Legal Fees and Notice

7.1 Payment of Legal Fees. In the event of a dispute arising under the Plan following a Change in Control, the Company shall reimburse an Executive for costs of litigation or other disputes including, without limitation, reasonable attorneys' fees incurred by the Executive in reasonably asserting any claims or defenses under this Plan. With respect to other disputes, each party shall bear their own costs.

7.2 Notice. Any notices, requests, demands, or other communications provided for by this Plan shall be sufficient if in writing and if sent by registered or certified mail to the Executive at the last address Executive has filed in writing with the Company or Employer or, in the case of the Company, at the address set forth in Section 9.1.

Article 8. Successors and Assignment

8.1 Successors to the Company. The Company shall require any successor (whether direct or indirect, by purchase, merger, reorganization, consolidation, acquisition of property or stock, liquidation, or otherwise) of all or a significant portion of the assets of the Company by agreement to expressly assume and agree to perform under this Plan in the same manner and to the same extent that the Company would be required to perform if no such succession had taken place. The terms of this Plan shall be binding upon any successor in accordance with the operation of law and such successor shall be deemed the "Company" or the "Employer" for purposes of this Plan.

8.2 Assignment by the Executive. This Plan shall inure to the benefit of and be enforceable by each Executive's personal or legal representatives, executors, administrators, successors, heirs, distributees, devisees, and legatees. If an Executive dies while any amount would still be payable to Executive hereunder had Executive continued to live, all such amounts, unless otherwise provided herein, shall be paid in accordance with the terms of this Plan to the Executive's Beneficiary. If an Executive has not named a Beneficiary, then such amounts shall be paid to the Executive in accordance with the Company's regular payroll practices or to the Executive's estate, as applicable.

Article 9. Plan Administration

9.1 Plan Administrator. The Plan Administrator shall be the "administrator" within the meaning of Section 3(16) of ERISA and shall have all the responsibilities and duties contained therein.

The Plan Administrator can be contacted at the following address:

c/o Triumph Group, Inc.
899 Cassatt Road, Suite 210
Berwyn, PA 19312
Attn: Senior Vice President, Human Resources

9.2 Records, Reporting and Disclosure. The Plan Administrator shall keep a copy of all records relating to the payment of Severance Benefits to Executives and former Executives and all other records necessary for the proper operation of the Plan. All Plan records shall be made available to the Company and to each Executive for examination during business hours except that an Executive shall examine only such records as pertain exclusively to the examining Executive and to the Plan. The Plan Administrator shall prepare and shall file as required by law or regulation all reports, forms, documents and other items required by ERISA, the Code, and every other relevant statute, each as amended, and all regulations thereunder (except that the Company, as payor of the Severance Benefits, shall prepare and distribute to the proper recipients all forms relating to withholding of income or wage taxes, Social Security taxes, and other amounts that may be similarly reportable).

9.3 Discretion. Any decisions, actions or interpretations to be made under the Plan by the Plan Administrator shall be made in its sole and absolute discretion, subject to the terms of the Plan and applicable law, and need not be uniformly applied and such decisions, actions or

interpretations shall be final, binding and conclusive upon all parties, with respect to denied claims for Severance Benefits. Not in limitation, but in amplification of the foregoing and of the authority conferred upon the Plan Administrator, the Company specifically intends that the Plan Administrator and its duly authorized delegates have the greatest permissible discretion to construe the terms of the Plan and to determine all questions concerning eligibility, participation, and benefits. The decisions by the Plan Administrator or any delegates shall be conclusive and binding, and any interpretation, determination, or other action by them is intended to be subject to the most deferential standard of review. Such standard of review is not to be affected by any real or alleged conflict of interest on the part of the Plan Administrator or its delegates. In addition to the duties and powers described hereunder and elsewhere in this Plan, the Plan Administrator or its delegate is specifically given the discretionary authority and such powers as are necessary for the proper administration of the Plan, including, but not limited to, the following: (i) to resolve ambiguities or inconsistencies; (ii) to supply omissions and the like; (iii) to make determinations, grants, or denials of the amount, manner, and time of payment of any Severance Benefits under the terms of the Plan; (iv) to authorize its agents or delegates to execute or deliver any instrument or make payments on the Plan Administrator's behalf or with respect to the Plan; (v) to select and retain counsel, service providers and vendors, employ agents, and provide for such clerical, accounting, actuarial, legal, consulting and/or claims processing services as it deems necessary or desirable to assist the Plan Administrator in the administration of the Plan; (vi) to prepare and distribute, in such manner as the Plan Administrator determines to be appropriate, summary plan descriptions and other information explaining the Plan; (vii) to furnish the Company, upon request, such annual reports with respect to the administration of the Plan as the Plan Administrator deems reasonable and appropriate; (viii) to receive, review and keep on file, as the Plan Administrator deems necessary or appropriate, reports of Plan payments and reports of disbursements for expenses; and (ix) in general to decide and/or settle questions and disputes, and all such authorizations, interpretations, determinations, decisions and settlements shall be final and binding for purposes of the Plan.

Notwithstanding any of the foregoing, if a dispute arises with respect to the payment of Severance Benefits after a Change in Control, the standard of review shall be de novo in any court proceeding.

Article 10. Miscellaneous

10.1 Indemnification. To the maximum extent permitted by law, all employees, officers, directors, agents and representatives of the Company shall be indemnified by the Company and held harmless against any claims and the expenses of defending against such claims, resulting from any action or conduct relating to the administration of the Plan, whether as a member of the Committee or otherwise, except to the extent that such claims arise from gross negligence, willful neglect, or willful misconduct.

10.2 Employment Status. Except as may be provided under any other agreement between the Executive and the Company or Employer, the employment of any Executive by the Company or Employer is "at will" and may be terminated by either the Executive or the Company or Employer at any time, subject to applicable law.

10.3 Code Section 409A. Notwithstanding anything herein to the contrary, if and only to the extent necessary to prevent the imposition of taxes or penalties under Code Section 409A:

(a) All expenses or other reimbursements or in-kind benefits under this Plan shall be paid or provided on or prior to the last day of the taxable year following the taxable year in which such expenses or in-kind benefits were incurred by the Executive, and no such reimbursement or in-kind benefits in any taxable year shall in any way affect the reimbursement or in-kind benefits in any other taxable year or subject to exchange for cash or other taxable amount.

(b) The Executive's right to receive any installment payment pursuant to this Plan shall be treated as a right to receive a series of separate and distinct payments.

(c) Whenever a payment under this Plan specifies a payment period with reference to a number of days (e.g., "payment shall be made within thirty (30) days following the date of termination"), the actual date of payment within the specified period shall be within the sole discretion of the Company.

(d) A Qualifying Termination shall not be deemed to have occurred for purposes of any provision of this Plan providing for the payment of any amounts or benefits upon or following a Qualifying Termination unless such termination is also a "separation from service" within the meaning of Code Section 409A and, for purposes of any such provision of this Plan, references to a "Qualifying Termination," "termination of employment" or like terms shall mean "separation from service."

(e) The Severance Benefits payable pursuant to Section 3.2(b), to the extent not in excess of the amount that an Executive would have received as severance benefits under any other plan or agreement of the Company or any of its Subsidiaries or Affiliates had such plan or arrangement been applicable, shall be paid at the time and in the manner provided by such plan or arrangement and the remainder shall be paid to the Executive in accordance with this Plan.

(f) A Change in Control shall not be deemed to have occurred for purposes of any provision of this Plan unless such Change in Control also constitutes a change in the ownership or effective control of the Company or a change in ownership of a substantial portion of the assets of the Company under Code Section 409A.

(g) No payment will be subject to offset unless otherwise permitted by Code Section 409A.

(h) Notwithstanding any provisions in this Plan to the contrary, whenever a payment under this Plan may be made upon the Release Effective Date, and the period in which the Executive could execute the release (along with its accompanying revocation period) crosses calendar years, no payments shall be made until the latter calendar year.

10.4 Entire Plan. This Plan supersedes any prior agreements or understandings, oral or written, between the parties hereto, with respect to the subject matter hereof, and constitutes the entire agreement of the parties with respect thereto. Without limiting the generality of the foregoing sentence, this Plan completely supersedes any and all severance benefits under any prior employment agreements entered into by and between the Company or Employer and the Executive, and all amendments thereto, in their entirety. Notwithstanding the foregoing, if the Executive has entered into any agreements or commitments with the Company with regard to Confidential Information, noncompetition, nonsolicitation, or nondisparagement, such agreements or commitments will remain valid and will be read in harmony with this Plan to provide maximum protection to the Company.

10.5 Severability. In the event that any provision or portion of this Plan shall be determined to be invalid or unenforceable for any reason, the remaining provisions of this Plan shall be unaffected thereby and shall remain in full force and effect.

10.6 Tax Withholding. The Company or Employer may withhold from any benefits payable under this Plan all Federal, state, city, or other taxes as may be required pursuant to any law or governmental regulation or ruling.

10.7 Beneficiaries. The Executive may designate one (1) or more persons or entities as the primary and/or contingent beneficiaries of any amounts to be received under this Plan. Such designation must be in the form of a signed writing acceptable to the Board or the Board's designee. The Executive may make or change such designation at any time.

10.8 Payment Obligation Absolute. Except as provided in Section 3.5, the Company's obligation to make the payments provided for herein shall be absolute and unconditional, and shall not be affected by any circumstances, including, without limitation, any offset, counterclaim, recoupment, defense, or other right which the Company may have against the Executive or anyone else. The Executive shall not be obligated to seek other employment in mitigation of the amounts payable or arrangements made under any provision of this Plan, and the obtaining of any such other employment shall in no event effect any reduction of the Company's obligations to make the payments and arrangements required to be made under this Plan.

10.9 Contractual Rights to Benefits. This Plan establishes and vests in the Executives a contractual right to the benefits to which Executive is entitled hereunder. However, nothing herein contained shall require or be deemed to require, or prohibit or be deemed to prohibit, the Company to segregate, earmark, or otherwise set aside any funds or other assets, in trust or otherwise, to provide for any payments to be made or required hereunder.

10.10 Modification. The Plan may be amended or terminated by the Board in any manner and at any time, provided (a) that the termination of the Plan shall be subject to the provisions of Section 1.3 and Section 1.4 and (b) no termination or amendment of the Plan will be permitted during (i) any period when the Company is party to an Agreement which, if consummated, would result in a Change in Control or (ii) during the two year period immediately following a Change in Control, in either case to the extent such amendment adversely alters or impairs any rights or obligations of an Executive under the Plan.

10.11 Gender and Number. Except where otherwise indicated by the context, any masculine term used herein also shall include the feminine; the plural shall include the singular and the singular shall include the plural.

10.12 Controlling Law. This Plan shall be construed and enforced according to the laws of the Commonwealth of Pennsylvania (without reference to principles or provisions governing conflicts of laws) to the extent not preempted or superseded by Federal laws of the United States. Any provision of this Plan that is determined by a court to be in conflict with any applicable Federal or State laws shall be deemed amended by this paragraph to conform to the minimum requirements of such laws, except to the extent they are preempted by ERISA.

IN WITNESS WHEREOF, the Company has executed this Plan effective as of the Effective Date.

TRIUMPH GROUP, INC.

____

Name: Daniel J. Crowley
Title: President and Chief Executive Officer

Exhibit A
Band 5 Executives

(on file with the Company)

Exhibit B
Benefits Summary

This summary describes the payments and benefits offered to participants in the Triumph Group, Inc. Executive Change in Control Severance Plan (the "Plan") upon a termination of employment without "Cause" or a resignation of employment for "Good Reason" (each term as defined in the Plan) in each case within 6 months prior to or 24 months after a Change in Control (as defined in the Plan) and subject to each participant's execution and non-revocation of a general release and waiver.

This description is intended only as a summary and is qualified in its entirety by reference to the full text of the Plan. In the event of any conflict between this summary and the Plan, the Plan shall control.

	CEO	**Band 6 Executives**	**Band 5 Executives**
Salary/Bonus Severance			
Base Salary	2.0x	1.5x	1.0x
Highest Annual Bonus[1]	2.0x	1.5x	1.0x
Current Year Bonus	Prorated @ target	Prorated @ target	Prorated @ target
Equity			
Time-Based and Cash LTI	Full acceleration	Full acceleration	Full acceleration
Performance-Based	Full acceleration @ target	Full acceleration @ target	Full acceleration @ target
Other			
Benefits Continuation	24 months	18 months	12 months
Outplacement	$50,000 stipend	$20,000 stipend	$5,000 stipend
401(k) Plan	Payment equal to 2.0x maximum annual company 401(k) contribution match	Payment equal to 1.5x maximum annual company 401(k) contribution match	Payment equal to 1.0x maximum annual company 401(k) contribution match

[1] "Highest Annual Bonus" means the higher of (i) an Executive's average annual bonus earned in each of the last three completed annual performance periods; and (ii) the current target bonus opportunity in the fiscal year in which a Qualifying Termination occurs.

Exhibit C
Form of Release

(see attached)

Triumph Group

DATE, 2019

This Release of Claims (the "Release of Claims") is entered into by [_______] ("you") for and in consideration of the payments and benefits granted to you pursuant to the Executive Change in Control Severance Plan (the "Plan", and such benefits, the "Severance Benefits") with such payments and benefits to be made or conveyed to you as set forth therein.

1. Release You, for and on behalf of yourself and your executors, administrators, successors and assigns (collectively, "Releasors"), voluntarily, knowingly and willingly RELEASE, DISCHARGE AND HOLD HARMLESS FOREVER, Triumph Group Inc. (the "Company"), together with its past and present parents, subsidiaries and affiliates, together with each of their respective owners, investors, members, officers, directors, partners, employees, agents, representatives and attorneys, and each of their respective affiliates, estates, predecessors, successors and assigns (each a "Released Party" collectively, the "Released Parties") from any and all rights, claims, charges, actions, causes of action, complaints, sums of money, suits, debts, covenants, contracts, agreements, promises, obligations, damages, demands or liabilities of every kind whatsoever, in law or in equity, whether known or unknown, suspected or unsuspected (collectively, "Claims") which you or any other Releasor ever had, now has or may hereafter claim to have by reason of any matter, cause of thing whatsoever: (i) arising from the beginning of time through the date upon which you sign this Release of Claims, including, but not limited to, (A) any such Claims relating in any way to your employment relationship with the Company or with any of the other Released Parties, and (B) any such Claims arising under any federal, state or local statute or regulation, including, without limitation, Title VII of Civil Rights Act of 1964, as amended (Title VII), the Fair Labor Standards Act (FLSA), the Americans With Disabilities Act (ADA), the Employee Retirement Income Security Act (ERISA), the Equal Pay Act (EPA), the Rehabilitation Act of 1973, the Family and Medical Leave Act (FMLA), the National Labor Relations Act (NLRA), the Labor Management Relations Act (LMRA), the Worker Adjustment and Retraining Notification Act (WARN), the Age Discrimination in Employment Act (ADEA), the Older Workers Benefit Protection Act of 1990 (OWBPA), the Occupational and Safety Health Act (OSHA), the Genetic Information Nondiscrimination Act of 2008 (GINA), the Uniformed Services Employment and Re-employment Rights Act (USERRA); Executive Orders 11246 and 11141; the False Claims Act (including the qui tam provision thereof); the Consolidated Omnibus Budget Reconciliation Act of 1986 (COBRA); The Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank); the Electronic Communications Privacy Act of 1986 (including the Stored Communications Act); and/or any other federal, state or local statute, regulation or other common law that may be legally waived and released; (ii) relating to wrongful termination of employment; or (iii) arising under or relating to any policy, agreement, understanding or promise, written or oral, formal or informal, between the Company or any other Released Party and you.

2. Notwithstanding the foregoing, nothing contained in Section 1 shall in any way diminish or impair: (i) any rights you may have to payments under the Plan; (ii) any rights you may have to vested benefits under employee benefit plans; (iii) your rights as expressly set forth in this Release of Claims; or (iv) any Claims you may have that cannot be waived under applicable law.

3. Employee Acknowledgement You acknowledge and agree that the release of claims under the ADEA is subject to special waiver protections under 29 U.S.C. § 626(f). In accordance with that section, you specifically agree that you are knowingly and voluntarily releasing and waiving any rights or claims of discrimination under the ADEA. By signing this Release of Claims, you acknowledge and agree that:

(a). the Company has advised you, and hereby advises you, in writing, that you should consult with an attorney of your own choosing prior to signing this Release of Claims, and you have consulted with, or have had sufficient opportunity to consult with, an attorney of your own choosing regarding the terms of this Release of Claims;

(b). you have knowingly and voluntarily entered into this Release of Claims, and you are not relying upon any representation or statement made by the Company or any employee or other person on behalf of the Company with regard to the subject matter, meaning or effect of this Release of Claims and no statements made by the Company have in any way unduly coerced or influenced you to execute this Release of Claims;

(c). you have read this Release of Claims, it has been written in a manner that is easy to understand, and you fully understand its terms;

(d). except as provided in this Release of Claims, you have no right or claim, contractual or otherwise, to any or all of the payments or benefits described in Section 3.2 of the Plan;

(e). this Release of Claims does not reflect an admission by the Company of any liability or wrongdoing;

(f). pursuant to Section 3.5 of the Plan, you hereby authorize the Company to make deductions in accordance with applicable law for any monies owed to the Company or an Employer by you or for the value of Company property that you have retained in your possession;

(g). you have had at least [twenty-one (21)] OR [forty-five (45)] calendar days to consider the terms of this Release of Claims (including the release of claims set forth in Section 1) and whether or not you should sign it;

(h). you may execute this Release of Claims prior to the expiration of the twenty-one [(21) calendar day] OR [forty-five (45)] period (but in no event prior to the date your employment with the Company terminates for any reason (the "Separation Date")), provided that, if you execute this Release of Claims prior to the expiration of the [twenty-one (21)] OR [forty-five (45)] calendar day consideration period, you knowingly and voluntarily waive your right to consider this Release of Claims for the full [twenty-one (21)] OR [forty-five (45)] calendar days;

(i). you must sign and return this Release of Claims to the Human Resources Department within [twenty-one (21)] OR [forty-five (45)] calendar days after your receipt of this Release of Claims (but in no event prior to the Separation Date);

(j). changes made to this Release of Claims, whether material or immaterial, will not re-start the running of the [twenty-one (21)] OR [forty-five (45)] calendar day period; and

(k). once signed, you have the right to revoke your execution of this Release of Claims by delivering a notice of revocation in writing to the Human Resources Department by mail, personal delivery, or facsimile within seven (7) calendar days of your signing this Release of Claims, and this Release of Claims shall not become effective or enforceable until the eighth (8th) calendar day after it is signed by you and has not been revoked.

4. Restrictive Covenants; Remedies You acknowledge and agree that you have read and understood the restrictive covenant obligations and remedy provisions set forth in Exhibit D of the Plan (the "Restrictive Covenants"). You understand and agree that the Restrictive Covenants (a) are necessary and essential to protect the Company's confidential information and other legitimate business interests, including the goodwill and relationships the Company has developed with its customers and employees; (b) are reasonable in duration and scope; (c) do not unduly oppress or restrict your ability to earn a livelihood in your chosen profession; (d) are not an undue restraint on trade or a violation of any public interests that may be involved; and (e) are entered into in exchange for good and valuable consideration (including, without limitation, the Severance Benefits). By executing this Release of Claims, you agree to be bound by the Restrictive Covenants, which are hereby incorporated by reference as if fully set forth herein.

5. Reformation and Severability If any one or more of the provisions contained in this Release of Claims shall be held to be excessively broad as to duration, activity or subject, it is the desire of you and the Company that such provisions be construed by limiting and reducing them so as to be enforceable to the maximum extent allowed by applicable law and then fully enforced as so modified. In the event that any one or more of the provisions shall be held to be invalid, illegal or unenforceable, it is the desire of you and the Company that the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired thereby. Each provision, paragraph or subparagraph of this Release of Claims is severable from all others and constitutes a separate and distinct covenant.

6. No Waiver A failure of any of the Released Parties to insist on strict compliance with any provision of this Release of Claims shall not be deemed a waiver of such provision or any other provision hereof.

7. Entire Agreement This Release of Claims, including the Restrictive Covenants, contains the entire agreement between the Company and you relating to the matters contained herein and amends, supersedes and restates all prior agreements and understandings, oral or written, between the Company and you with respect to the subject matter hereof.

8. Governing Law This Agreement shall be construed, administered, and enforced according to the laws of the Commonwealth of Pennsylvania, without regard to choice of law principles, and except as preempted by federal law.

Triumph Group

Agreed to and accepted by the undersigned the ___ day of ________________, ______.

_____________________________ _______________________________

Employee Witness

Exhibit D
Restrictive Covenant Obligations

(see attached)

Triumph Group

Restrictive Covenant Obligations

1. Acknowledgment: For purposes of this Exhibit D (this "Exhibit"), the term "Company" shall include Triumph Group, Inc. and any of its subsidiaries. Executive acknowledges that Executive has had access to the Company's confidential information, customer information, customer and prospective customer relationships, employee relationships, vendor information/relationships, and other key business information and relationships that are integral to the Company's ability to achieve its business goals and remain competitive. In order to protect these legitimate business interests, and in consideration for the payments and benefits provided in this Plan, Executive agrees to the following restrictions.

2. Definitions:

(a). As used in this Exhibit, the term "Business" means the manufacturing, overhauling, repair, or sale of aerospace structures, systems, components, or accessories for commercial and military aircrafts; provided, however, that the term "Business" as defined herein is restricted to the manufacturing, overhauling, repair, or sale of aerospace structures, systems, components or accessories made available, or under development, by the Company to its customers at the time Executive executes this Exhibit.

(b). As used in this Exhibit, "Confidential Information" means any and all information, observations and data of any sort (whether or not embodied in a tangible or intangible form) relating in any way to the Company or any of its parents, subsidiaries or affiliates, that is not generally known to the public and that is disclosed or otherwise revealed to Executive, or discovered or otherwise obtained by Executive, or of which Executive became aware, directly or indirectly, at any time during the course of Executive's employment with, or service to, the Company. Confidential Information includes, but is not limited to, models, drawings, blueprints, memoranda, documents or records; information relating to research, manufacturing processes, bills of material, finance, accounting, sales, personnel management and operations; and information particularly relating to customer lists, price lists, customer service requirements, costs of providing service and equipment or pricing and equipment maintenance costs. Confidential Information does not include information that: (i) becomes available to the public through no wrongful action of Executive's or anyone acting on Executive's behalf; or (ii) is received from a third party without restriction and without breach of this Exhibit or any agreement which the third party may have with the Company.

(c). As used in this Exhibit, the term "Restrictive Period" means the twelve (12) month period after the Separation Date.

(d). As used in this Exhibit, the term "Restricted Geographic Area" means any state in which Executive performed services for the Company (including, without limitation, supervisory services), held supervisory or oversight responsibilities, or pertaining to which Executive received or otherwise hold Confidential Information.

3. Confidentiality: Executive acknowledges Executive's continuing obligations under any agreements Executive has signed regarding post-employment duties of confidentiality, protection of trade secrets, inventions assignment, and/or non-solicitation/non-competition as if such

obligations were fully set forth herein. Additionally, Executive agrees that Executive shall not at any time use, publish, disclose, or authorize anyone else to use, publish, or disclose any Confidential Information belonging or relating to the Company.

4. Non-Disparagement: Subject to Section 5 and Section 6, below, Executive agrees not to make, or induce anyone else to make, any false, disparaging or derogatory statements about the Company or any of the Released Parties, including, but not limited to, Triumph, its employees, its business practices, projects, clients, or services to any third party (whether orally or in writing).

5. Defend Trade Secrets Act: The Federal Defend Trade Secrets Act of 2016 provides immunity in certain circumstances to Company employees (defined as employees, contractors, and consultants) for limited disclosures of the Company's trade secrets. Specifically, a Company employee, may disclose trade secrets: (a) in confidence, either directly or indirectly, to a federal, state, or local government official, either directly or indirectly, or to such employee's attorney, in each case, solely for the purpose of reporting or investigating a suspected violation of law, or (b) in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal. Additionally, a Company employee who files a retaliation lawsuit for reporting a suspected violation of law may also use and disclose related trade secrets in the following manner: (x) the individual may disclose the trade secret to his/her attorney, and (y) the individual may use the information in a related court proceeding, as long as the individual files documents containing the trade secret under seal and does not otherwise disclose the trade secret except pursuant to court order.

6. Permitted Disclosures: Nothing in this Exhibit (including with respect to confidential information, and trade secrets) is intended to be or will be construed to prevent, impede, or interfere with Executive's right to respond accurately and fully to any question, inquiry, or request for information regarding Executive's employment with the Company when required by legal process by a federal, state or other legal authority, or from voluntarily initiating communications directly with, or responding to any inquiry from, or providing truthful testimony and information to, any federal, state, or other regulatory authority in the course of an investigation or proceeding authorized by law and carried out by such agency. Executive does not need the prior authorization of the Company to make any such reports or disclosures and Executive is not required to notify the Company that Executive has made such reports or disclosures.

7. Non-Competition: During the Restrictive Period Executive will not, anywhere in the Restricted Geographic Area, directly or indirectly participate in the ownership, management, operation, financing or control of, or be employed by, or consult for, or otherwise render services to (with or without compensation), any person, corporation, firm, or other entity that engages in, or is preparing to engage in, the Business; provided, however, that Executive may invest Executive's funds in securities of an entity which engages in the Business if the securities of such entity are listed for trading on a registered securities exchange or actively traded in an over-the-counter market and Executive's holdings represent less than one percent (1%) of the total number of outstanding shares or principal amount of the securities of such person.

8. Non-Solicitation of Customers: During the Restrictive Period, Executive will not, on behalf of any other Business, directly or indirectly, solicit business from, or perform services for, or for the benefit of, any customer or account of the Company (a) with which Executive had direct or indirect contact, or (b) about which Executive has or had knowledge of Confidential Information, in each case, during the twenty-four (24) months immediately preceding the date Executive's employment with the Company terminates for any reason (the "Separation Date").

9. Non-Inducement and Non-Hire: During the Restrictive Period, Executive will not, directly or indirectly, solicit, hire, engage, attempt to solicit or hire or engage, or participate in any attempt to solicit or hire or engage, any person who, during the twenty-four (24) months immediately preceding the Separation Date, is or was an officer, employee, or consultant of the Company.

10. Injunctive Relief: Executive acknowledges that the restrictions contained in this Exhibit are necessary to protect the legitimate business interests of the Company and that Executive's violation of any of the restrictions contained in this Exhibit would result in irreparable harm and injury to the Company, for which remedies at law will not be adequate. Accordingly, in the event of a breach or threatened breach by Executive of any of the provisions in this Exhibit, Executive agrees that the Company shall be entitled to seek, in addition to other available remedies, a temporary or permanent injunction or other equitable relief against such breach or threatened breach from any court of competent jurisdiction, without the necessity of showing any actual damages or that monetary damages would not afford an adequate remedy, and without the necessity of posting any bond or other security. Executive acknowledges and agrees that such injunctive relief shall be in addition to, and not in lieu of, any legal remedies, other equitable remedies, monetary damages or other available forms of relief.

11. Company Property: Executive acknowledges and agrees that, as of the Separation Date, Executive will return to the Company all Company property and equipment in Executive's possession or subject to Executive's control, including, without limitation, all keys, badges, manuals, credit cards, engineering stamps, Company or customer data or documents (whether in electronic or paper form and including all copies), notes, lists, correspondence, software, laptops, phones, pagers, parking passes and any other property belonging to the Company. Executive further agrees that Executive will permanently delete any and all Company property which cannot be returned to the Company in its entirety, including any Company property stored on a personal cloud storage service.

12. Notification: Executive agrees that in the event Executive is offered to enter into an employment relationship with a third party at any time during the Restrictive Period, Executive shall immediately notify the Company in writing and otherwise advise said other third party of the existence of this Exhibit and shall immediately provide said person or entity with a copy of this Exhibit.

(Back To Top)

Section 7: EX-10.32.1 (EXHIBIT 10.32.1 - AMENDMENT TO 2018 EQUITY INCENTIVE PLAN)

AMENDMENT

TO

TRIUMPH GROUP, INC.

2018 EQUITY INCENTIVE PLAN

This Amendment (this "Amendment") amends the Triumph Group, Inc. 2018 Equity Incentive Plan (the "2018 Plan"), effective February 19, 2019.

RECITALS

On February 19, 2019, the Compensation and Management Development Committee (the "Committee") of the Board of Directors of Triumph Group, Inc. (the "Corporation") approved amendments to the 2018 Plan. The purpose of this Amendment is to document such approved amendments. All capitalized terms used but not defined in this Amendment have the meanings set forth in the 2018 Plan.

1. Amendment to Section 3(a) of the 2018 Plan. Section 3(a) of the 2018 Plan is hereby deleted in its entirety and replaced with the following:

"**3. Shares Subject to the Plan.**

(a) *Aggregate Limits*. Subject to Section 15(a), the aggregate number of Shares subject to Awards granted under the Plan is 2,000,000 Shares. Any Shares subject to Awards that are cancelled, expire, are forfeited, or are the subject of Awards settled in cash without the issuance of any Shares shall be available for re-grant under the Plan. Notwithstanding anything to the contrary contained herein, Shares subject to an Award under the Plan shall not again be made available for issuance or delivery under the Plan if such Shares are (i) Shares tendered or withheld in payment of the Option exercise price, or (ii) Shares delivered to or withheld by the Company to satisfy any tax withholding obligation authorized by the Committee. Shares issued in payment of any Award may either be authorized and unissued Shares or treasury Shares. Any cash tendered to pay any exercise price or to meet tax withholding obligations will not be used by the Company to purchase additional Shares on the open market for use under this Plan."

2. Addition to Section 4(b) of the 2018 Plan. Section 4(b) of the 2018 Plan, detailing the powers of the Committee, is hereby amended to add the following as subsection (xv) and to renumber the existing subsection (xv) to subsection (xvi):

"(xv) to determine, in its discretion, whether to settle Awards in cash, in Shares, or in some combination; and"

3. No Other Amendments. Except as amended as set forth in this Amendment, the 2018 Plan remains in full force and effect.

4. Governing Law. This Amendment and all determinations made and actions taken pursuant hereto shall be governed by the substantive laws, but not the choice of law rules, of the State of Delaware.

(Back To Top)

Section 8: EX-10.32.2 (EXHIBIT 10.32.2 - FORM OF LONG-TERM EQUITY INCENTIVE AGREEMENT)

[DATE]

[Name]
[Address]
[Address]

RE: FY__ Long-Term Equity Incentive Award -
Restricted Stock Units ("RSUs") and Performance Share Units ("PSUs")

Dear [Participant]:

In line with our strategic goal to become a High Performance Organization, I am pleased to inform you that on ________ __, ____ the Compensation and Management Development Committee (the "Committee") of the Company's Board of Directors approved your long-term equity incentive award comprised of both RSUs and PSUs (the "LTI Award"), each awarded under the Triumph Group, Inc. 2018 Equity Incentive Plan, as amended from time to time (the "Plan"). All defined terms used in this award notice without definition have the meanings set forth in the Plan, a copy of which is provided with this award notice. I am also providing the prospectus related to the Plan.

This FY__ Award is based on the following compensation metrics:

FY__ Base Salary:
% Salary Eligible for LTI Award: __%($________)

The principal terms of these FY__ LTI Award are:

Grant Date:
Stock Price at Grant Date: $______
PSUs PSUs to acquire _______ shares at target
RSUs RSUs to acquire _______ shares
LTI Performance Period: _________________________

Performance Stock Units (PSUs):

Number of PSU's awarded at target on Grant Date: ___________

The shares underlying the PSUs will vest, if earned, after the end of the three-year performance period. Both LTI Performance Goals are based on ______________. The LTI Performance Goals approved by the Committee are as follows:

LTI Performance Goal	Weighting	Threshold	Target	Maximum

The 20-day period at the commencement of the performance period was the 20 trading days leading up to ______________ and the 20-day period for the conclusion of the performance period will be the 20 trading days leading up to _____________.

If performance is at Threshold, the number of shares to be issued is __% of Target, if performance is at Target, the number of shares to be issued is ___% of Target, and if performance is at or above Maximum, the number of shares to be issued is ___% of Target. For performance between the Threshold, Target and Maximum performance levels, the number of shares earned will be adjusted in a linear fashion. No payout will be made with respect to a performance goal if performance is below the Threshold level. Performance against each performance goal is evaluated separately. To the extent a specified performance goal is achieved at or above the Threshold level, you will receive the number of shares determined to have been earned, regardless of the results of performance against the other performance goal.

Except as otherwise provided in the Plan, you must provide services to the Company or a subsidiary through the end of the LTI Performance Period to acquire the shares, if any, underlying the PSUs earned. Within 90 days after the end of the LTI Performance Period, the Committee will determine the level at which the performance goals were achieved. Each PSU earned will be equal to one share of Common Stock. If earned, the shares will be issued to you under the Plan as soon as practicable after the determination date.

Restricted Stock Units (RSUs):

One-third of the shares underlying the RSUs will vest every year on the anniversary of the Grant Date for three years.

Total number of RSUs awarded:

Vesting Schedule:

Except as otherwise provided in the Plan, you must provide services to the Company through and on each vesting date to acquire the shares underlying the RSUs; however, no performance goal need be achieved to acquire these shares. Each RSU is equal to one share of Common Stock.

General

The Committee has approved the use of net settlement in the payment of any tax or other required withholdings upon vesting of both PSUs and RSUs. In addition to the specific terms mentioned above, this award is subject to the terms and conditions set forth in the Plan.

If you have any questions about this award, please contact __________ at _______________________________.

Thank you for your efforts and your contribution to the success of Triumph Group, Inc.

Sincerely,

Daniel J. Crowley
President and Chief Executive Officer

(Back To Top)

Section 9: EX-10.33.1 (EXHIBIT 10.33.1 - FORM OF SHORT-TERM CASH INCENTIVE AGREEMENT)

[DATE]

[Name]
[Address]
[Address]

RE: FY__ Short-Term Cash Incentive Award

Dear [Participant]:

I am pleased to inform you that on ______ __, ____, the Compensation and Management Development Committee (the “Committee”) of the Company’s Board of Directors approved your receipt of a short-term cash incentive award (the “FY__ Bonus”) awarded under the Triumph Group, Inc. 2018 Executive Cash Incentive Compensation Plan, as amended from time to time (the “Plan”). All defined terms used in this award notice without definition have the meanings set forth in the Plan, a copy of which is provided with this award notice.

These FY__ Awards are based on the following compensation metrics:

FY__ Base Salary: $________
% for FY__ Bonus ____ % ($________)

FY18 Bonus (Short-Term Cash Award):

STI Performance Goals - There are ______ performance goals: __________________ Your individual designated strategic goals will be communicated to you.

STI Performance Goal	Weighting	Threshold	Target	Maximum

If performance is at Threshold, the FY__ Bonus will be paid at 50% of target, if performance is at Target, the FY__ Bonus will be paid at 100% of target, and if performance is at or above Maximum, the FY__ Bonus will be paid at 200% of target. For performance between the Threshold, Target and Maximum performance levels, the FY__ Bonus earned will be adjusted in a linear fashion. No payout will be made with respect to a performance goal if performance is below the Threshold level. To the extent a specified performance goal is achieved at or above the Threshold level, you will receive the FY__ Bonus determined to be earned regardless of the results of performance against the other performance goals. Performance against each performance goal is evaluated separately.

You must provide services to the Company or a subsidiary through the end of FY__ in order to be paid the FY__ Bonus, if earned.

If you have any questions about this award, please contact ______________ at ____________________.

Thank you for your efforts and your contribution to the success of Triumph Group, Inc.

Sincerely,

Daniel J. Crowley
President and Chief Executive Officer

(Back To Top)

Section 10: EX-21.1 (EXHIBIT 21.1 - SUBSIDIARIES OF TRIUMPH GROUP, INC.)

Exhibit 21.1

Subsidiaries of Triumph Group, Inc.

HT Parts, L.L.C.
Nu-Tech Brands, Inc.
Placas Termodinamicas, S. de R.L. de C.V.
SBP Holdings Limited
The Mexmil Holding Company, LLC
The Triumph Group Operations, Inc.
Triumph Accessory Services - Grand Prairie, Inc.
Triumph Actuation Systems - Connecticut, LLC
Triumph Actuation Systems - Isle of Man, Ltd.
Triumph Actuation Systems - UK, Ltd.
Triumph Actuation Systems - Valencia, Inc.
Triumph Actuation Systems - Yakima, LLC
Triumph Actuation Systems, LLC
Triumph Aerospace Operations UK, Ltd.
Triumph Aerospace Systems Group - UK LTD
Triumph Aerospace Systems Group, LLC
Triumph Aerospace Operations Japan, GK
Triumph Aerostructures - Tulsa, LLC
Triumph Aerostructures Holdings, LLC
Triumph Aerostructures Real Estate Investment Co., LLC
Triumph Aerostructures Vought Aircraft Technical Services (Chengdu) Co., Ltd.
Triumph Aerostructures, LLC
Triumph Aftermarket Services Group, LLC
Triumph Airborne Structures, LLC
Triumph Aviation Services Asia, Ltd.
Triumph Aviations Inc.
Triumph Brands, Inc.
Triumph Composite Systems, Inc.
Triumph Controls (Europe) SAS
Triumph Controls - Germany GmbH
Triumph Controls - UK Ltd.
Triumph Controls France SAS
Triumph Controls, LLC
Triumph Engine Control Holdings, Inc.
Triumph Engine Control Systems, LLC
Triumph Engineered Solutions, Inc.
Triumph Engineering Services, Inc.
Triumph Fabrications - Orangeburg, Inc.
Triumph Gear Systems - Macomb, Inc.
Triumph Gear Systems - Toronto ULC
Triumph Gear Systems, Inc.
Triumph Group - Mexico Inmobiliaria, S. de R.L. de C.V.
Triumph Group - Mexico, S. de R.L. de C.V.
Triumph Group Acquisition Corp.
Triumph Group Acquisition Financing, LLC
Triumph Group Acquisition Holdings, Inc.
Triumph Group Charitable Foundation
Triumph Group Holdings - Mexico, LLC
Triumph Group Holdings - UK, Ltd.
Triumph Group Investment - Mexico, LLC
Triumph Group Luxembourg Finance S.a.r.l.
Triumph Group Luxembourg Holding S.a.r.l.
Triumph Instruments - Burbank, Inc.
Triumph Instruments, Inc.
Triumph Insulation Systems - Germany GmbH
Triumph Insulation Systems, LLC
Triumph Integrated Aircraft Interiors Inmobiliaria, S. de R.L. de C.V.

Exhibit 21.1

Triumph Integrated Aircraft Interiors, Inc.
Triumph Investment Holdings, Inc.
Triumph Metals Company
Triumph Precision Castings Co.
Triumph Real Estate - Mexico, LLC
Triumph Receivables, LLC
Triumph Structures (Thailand) Ltd.
Triumph Structures - Everett, Inc.
Triumph Structures - Kansas City, Inc.
Triumph Structures - Wichita, Inc.
Triumph Structures International, Ltd
Triumph Thermal Systems - Maryland, Inc.
Triumph Thermal Systems, LLC
Triumph Turbine Services, Inc.
VAC Industries, Inc.

(Back To Top)

Section 11: EX-23.1 (EXHIBIT 23.1 - CONSENT OF ERNST & YOUNG LLP)

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. 333-36957 and Form S-8 No. 333-50056) pertaining to the 1996 Stock Option Plan of Triumph Group, Inc.,

2) Registration Statements (Form S-8 No. 333-81665 and Form S-8 No. 333-134861) pertaining to the Amended and Restated Directors' Stock Incentive Plan of Triumph Group, Inc.,

3) Registration Statement (Form S-8 No. 333-125888) pertaining to the 2004 Stock Incentive Plan of Triumph Group, Inc.,

4) Registration Statement (Form S-8 No. 333-192537) pertaining to the 2013 Stock Purchase Plan of Triumph Group, Inc.,

5) Registration Statement (Form S-8 No. 333-192538) pertaining to the 2013 Equity and Cash Incentive Plan of Triumph Group, Inc.,

6) Registration Statement (Form S-8 No. 333-211676) pertaining to the Time-Based Restricted Stock Award Agreement of Triumph Group, Inc.,

7) Registration Statement (Form S-8 No. 333-219486) pertaining to the 2016 Directors' Equity Compensation Plan of Triumph Group, Inc., and

8) Registration Statement (Form S-8 No. 333-226640) pertaining to the 2018 Equity Incentive Plan

of our reports dated May 23, 2019, with respect to the consolidated financial statements and schedule of Triumph Group, Inc. and the effectiveness of internal control over financial reporting of Triumph Group, Inc. included in this Annual Report (Form 10-K) of Triumph Group, Inc. for the year ended March 31, 2019.

/s/ Ernst & Young LLP

Philadelphia, Pennsylvania
May 23, 2019

(Back To Top)

Section 12: EX-31.1 (EXHIBIT 31.1 - CERTIFICATION BY PRESIDENT AND CEO)

Exhibit 31.1

**CERTIFICATION PURSUANT TO RULE 13a-14(a) OR 15d-14(a) OF
THE SECURITIES AND EXCHANGE ACT OF 1934**

I, Daniel J. Crowley, certify that:

1. I have reviewed this Annual Report on Form 10-K of Triumph Group, Inc. (this "Report");

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 (or persons performing the equivalent functions):

   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.

Dated: May 23, 2019

/s/ Daniel J. Crowley

Daniel J. Crowley
President and Chief Executive Officer (Principal Executive Officer)

(Back To Top)

Section 13: EX-31.2 (EXHIBIT 31.2 - CERTIFICATION BY SENIOR VICE PRESIDENT AND CFO)

Exhibit 31.2

CERTIFICATION PURSUANT TO RULE 13a-14(a) OR 15d-14(a) OF THE SECURITIES AND EXCHANGE ACT OF 1934

I, James F. McCabe, Jr., certify that:

1. I have reviewed this Annual Report on Form 10-K of Triumph Group, Inc. (this "Report");

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 (or persons performing the equivalent functions):

   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.

Dated: May 23, 2019

/s/ James F. McCabe, Jr.

James F. McCabe, Jr.
Senior Vice President, Chief Financial Officer (Principal Financial Officer)

(Back To Top)

Section 14: EX-32.1 (EXHIBIT 32.1 - CERTIFICATION BY PRESIDENT AND CEO)

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 Triumph Group, Inc. (the "Company") for the year ended March 31, 2019 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Daniel J. Crowley, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, to the best of my knowledge, that:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

By: /s/ Daniel J. Crowley

Daniel J. Crowley
President and Chief Executive Officer
(Principal Executive Officer)
May 23, 2019

A signed original of this written statement required by Section 906 has been provided to Triumph Group, Inc. and will be retained by Triumph Group, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

(Back To Top)

Section 15: EX-32.2 (EXHIBIT 32.2 - CERTIFICATION BY SENIOR VICE PRESIDENT AND CFO)

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 Triumph Group, Inc. (the "Company") for the year ended March 31, 2019 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, James F. McCabe, Jr., Senior Vice President, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, to the best of my knowledge, that:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

By: /s/ James F. McCabe, Jr.

James F. McCabe, Jr.
Senior Vice President, Chief Financial Officer (Principal Financial Officer)
May 23, 2019

A signed original of this written statement required by Section 906 has been provided to Triumph Group, Inc. and will be retained by Triumph Group, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

(Back To Top)