UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K/A

(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.

Explanatory Note

This Form 10-K/A is being filed as an amendment (the "Amendment") to the Annual Report on Form 10-K filed by Triumph Group, Inc. (the "Company") with the Securities and Exchange Commission on May 23, 2019 (the "Original Filing"). This Amendment is being filed to update the table summarizing the Company’s net sales by end market by business segment which was inadvertently not updated on page 34 of the Original Filing, and to make certain other immaterial changes in “Management’s Discussion and Analysis of Financial Condition and Results of Operations.” No other changes are being made to the Original Filing.

PART II

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 $266.3 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	4,032	(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)	$ 196,590	$ 211,060	$ 398,253
Non-service defined benefit income (excluding settlements)	(66,137)	(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	Year Ended March 31, 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	$ (321,767)	$ (425,391)

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	$ (425,391)	$ (42,952)

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 EBITDAP 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	16.2%	16.6%	15.1%
Military	10.9	10.6	10.2
Business Jets	1.9	1.7	1.7
Regional	0.9	1.0	1.0
Non-aviation	0.8	0.8	1.0
Total Integrated Systems net sales	30.7%	30.7%	29.0%
Aerospace Structures			
Commercial aerospace	30.4%	33.9%	34.6%
Military	7.1	8.6	10.2
Business Jets	21.7	16.8	15.6
Regional	1.1	0.7	0.5
Non-aviation	0.8	0.7	0.4
Total Aerospace Structures net sales	61.1%	60.7%	61.3%
Product Support			
Commercial aerospace	6.3%	7.2%	7.5%
Military	1.3	0.9	1.5
Regional	0.5	0.5	0.7
Non-aviation	—	—	—
Total Product Support net sales	8.2%	8.6%	9.7%
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, 2019	Year Ended March 31, 2018	% Change	% of Total Sales 2019	% of Total Sales 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, 2019	Year Ended March 31, 2018	% Change	% of Segment Sales 2019	% of Segment Sales 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, 2019	Year Ended March 31, 2018	% Change	% of Segment Sales 2019	% of Segment Sales 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, 2018	Year Ended March 31, 2017	% Change	% of Total Sales 2018	% of Total Sales 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)%	(0.6)%
Total net sales	$ 3,198,951	$ 3,532,799	(9.4)%	100.0 %	100.0 %

	Year Ended March 31, 2018	Year Ended March 31, 2017	% Change	% of Segment Sales 2018	% of Segment Sales 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, 2018	Year Ended March 31, 2017	% Change	% of Segment Sales 2018	% of Segment Sales 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)%	4.2 %	8.8%

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	108,727	21,543	32,910	19,446	34,828
Purchase obligations	1,489,635	1,096,198	376,922	1,803	14,712
Total	$ 3,423,270	$ 1,199,731	$ 1,230,090	$ 410,411	$ 583,038

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(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, 2019	$ 2,234,734	$ 109,455
Plan assets at March 31, 2019	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 2020 - 2024	$ 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, operating loss, net loss and loss 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 decreased loss 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 loss, net loss and loss 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.

PART IV

Item 15. Exhibits, Financial Statement Schedules

Exhibit 31.1	Certification by President and Chief Executive Officer Pursuant to Rule 13a-14(a)/15d-14(a).
Exhibit 31.2	Certification by Senior Vice President and Chief Financial Officer Pursuant to Rule 13a-14(a)/15d-14(a).

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, the Registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Date: May 31, 2019

TRIUMPH GROUP, INC.

By: /s/ Thomas A. Quigley, III

Thomas A. Quigley, III

Vice President and Controller