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

Form 10-Q

☒ **Quarterly report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**

For the quarterly period ended June 27, 2020

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 Number 0-7087

ASTRONICS CORPORATION
(Exact name of registrant as specified in its charter)

New York **(State or other jurisdiction of incorporation or organization)**	**16-0959303** **(IRS Employer Identification Number)**
130 Commerce Way, East Aurora, New York **(Address of principal executive offices)**	**14052** **(Zip code)**

(716) 805-1599

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act: None

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

Title of each class	**Trading Symbol**	**Name of each exchange on which registered**
Common Stock, $.01 par value per share	ATRO	NASDAQ Stock Market

NOT APPLICABLE
(Former name, former address and former fiscal year, if changed since last report)

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, and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (Section 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, or a non-accelerated filer. See definition of “large accelerated filer”, an “accelerated filer”, a “non-accelerated filer” and a “smaller reporting company” in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer ☒	Accelerated filer ☐	Emerging growth company ☐
Non-accelerated filer ☐	Smaller Reporting 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 Exchange Act). Yes ☐ No ☒

As of July 27, 2020, 30,755,863 shares of common stock were outstanding consisting of23,586,404 shares of common stock ($.01 par value) and7,169,459 shares of Class B common stock ($.01 par value).

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Part I – Financial Information

Item 1. Financial Statements

ASTRONICS CORPORATION
Consolidated Condensed Balance Sheets
June 27, 2020 with Comparative Figures for December 31, 2019
(Unaudited)
(In thousands)

	June 27, 2020	December 31, 2019
Current Assets:		
Cash and Cash Equivalents	$ 46,639	$ 31,906
Accounts Receivable, Net of Allowance for Doubtful Accounts	102,659	147,998
Inventories	156,584	145,787
Prepaid Expenses and Other Current Assets	20,734	15,853
Assets Held for Sale	—	1,537
Total Current Assets	326,616	343,081
Property, Plant and Equipment, Net of Accumulated Depreciation	109,381	112,499
Operating Right-of-Use Assets	21,782	23,602
Other Assets	23,659	31,271
Intangible Assets, Net of Accumulated Amortization	118,648	127,293
Goodwill	58,440	144,970
Total Assets	$ 658,526	$ 782,716
Current Liabilities:		
Current Maturities of Long-term Debt	$ 224	$ 224
Accounts Payable	35,371	35,842
Current Operating Lease Liabilities	4,818	4,517
Accrued Expenses and Other Current Liabilities	44,965	48,697
Customer Advance Payments and Deferred Revenue	27,120	31,360
Total Current Liabilities	112,498	120,640
Long-term Debt	173,000	188,000
Long-term Operating Lease Liabilities	19,749	21,039
Other Liabilities	60,920	64,180
Total Liabilities	366,167	393,859
Shareholders’ Equity:		
Common Stock	346	345
Accumulated Other Comprehensive Loss	(16,692)	(15,628)
Other Shareholders’ Equity	308,705	404,140
Total Shareholders’ Equity	292,359	388,857
Total Liabilities and Shareholders’ Equity	$ 658,526	$ 782,716

See notes to consolidated condensed financial statements.

ASTRONICS CORPORATION
Consolidated Condensed Statements of Operations
Three and Six Months Ended June 27, 2020 With Comparative Figures for 2019
(Unaudited)
(In thousands, except per share data)

	Six Months Ended		Three Months Ended	
	June 27, 2020	June 29, 2019	June 27, 2020	June 29, 2019
Sales	$ 281,278	$ 397,272	$ 123,694	$ 189,098
Cost of Products Sold	218,726	304,832	96,861	148,735
Gross Profit	62,552	92,440	26,833	40,363
Selling, General and Administrative Expenses	61,771	58,986	32,904	29,790
Impairment Loss	87,016	—	12,608	—
(Loss) Income from Operations	(86,235)	33,454	(18,679)	10,573
Gain on Sale of Business	—	80,133	—	—
Other Expense, Net of Other Income	4,177	733	3,789	518
Interest Expense, Net of Interest Income	3,316	3,029	1,983	1,225
(Loss) Income Before Income Taxes	(93,728)	109,825	(24,451)	8,830
(Benefit from) Provision for Income Taxes	(3,186)	24,953	(872)	2,104
Net (Loss) Income	$ (90,542)	$ 84,872	$ (23,579)	$ 6,726
(Loss) Earnings Per Share:				
Basic	$ (2.94)	$ 2.60	$ (0.77)	$ 0.21
Diluted	$ (2.94)	$ 2.56	$ (0.77)	$ 0.20

See notes to consolidated condensed financial statements.

ASTRONICS CORPORATION

Consolidated Condensed Statements of Comprehensive (Loss) Income

Three and Six Months Ended June 27, 2020 With Comparative Figures for 2019

(Unaudited)

(In thousands)

	Six Months Ended		Three Months Ended	
	June 27, 2020	June 29, 2019	June 27, 2020	June 29, 2019
Net (Loss) Income	$ (90,542)	$ 84,872	$ (23,579)	$ 6,726
Other Comprehensive (Loss) Income:				
Foreign Currency Translation Adjustments	(1,494)	614	810	884
Retirement Liability Adjustment – Net of Tax	430	294	215	144
Total Other Comprehensive (Loss) Income	(1,064)	908	1,025	1,028
Comprehensive (Loss) Income	$ (91,606)	$ 85,780	$ (22,554)	$ 7,754

See notes to consolidated condensed financial statements.

ASTRONICS CORPORATION
Consolidated Condensed Statements of Cash Flows
Six Months Ended June 27, 2020 With Comparative Figures for 2019

(Unaudited, In thousands)	Six Months Ended	
Cash Flows from Operating Activities:	June 27, 2020	June 29, 2019
Net (Loss) Income	$ (90,542)	$ 84,872
Adjustments to Reconcile Net (Loss) Income to Cash Flows from Operating Activities, Excluding the Effects of Divestitures:		
Depreciation and Amortization	16,052	15,980
Provisions for Non-Cash Losses on Inventory and Receivables	3,297	4,429
Equity-based Compensation Expense	2,806	2,145
Deferred Tax Expense (Benefit)	1,190	(3,371)
Non-cash Severance Expense	4,669	377
Operating Lease Amortization Expense	2,236	1,978
Non-cash Litigation Provision	1,450	—
Gain on Sale of Business, Before Taxes	—	(80,133)
Equity Investment Other Than Temporary Impairment	3,493	—
Impairment Loss	87,016	—
Other	4,459	(1,715)
Cash Flows from Changes in Operating Assets and Liabilities:		
Accounts Receivable	43,417	5,266
Inventories	(12,778)	(11,276)
Accounts Payable	(446)	(7,685)
Accrued Expenses	(12,473)	(9,518)
Other Current Assets and Liabilities	(1,983)	(975)
Customer Advanced Payments and Deferred Revenue	(4,221)	(1,234)
Income Taxes	(3,667)	9,181
Operating Lease Liabilities	(2,222)	(1,785)
Supplemental Retirement and Other Liabilities	(204)	2,520
Cash Flows from Operating Activities	41,549	9,056
Cash Flows from Investing Activities:		
Proceeds on Sale of Business	—	103,793
Capital Expenditures	(3,905)	(6,917)
Proceeds on Sale of Assets	1,600	—
Cash Flows from Investing Activities	(2,305)	96,876
Cash Flows from Financing Activities:		
Proceeds from Long-term Debt	150,000	27,000
Payments for Long-term Debt	(165,000)	(132,053)
Purchase of Outstanding Shares for Treasury	(7,732)	—
Stock Options Activity	34	416
Finance Lease Principal Payments	(939)	(834)
Financing Fees	(360)	—
Cash Flows from Financing Activities	(23,997)	(105,471)
Effect of Exchange Rates on Cash	(514)	23
Increase in Cash and Cash Equivalents	14,733	484
Cash and Cash Equivalents at Beginning of Period	31,906	16,622
Cash and Cash Equivalents at End of Period	$ 46,639	$ 17,106

See notes to consolidated condensed financial statements.

ASTRONICS CORPORATION
Consolidated Condensed Statements of Shareholders' Equity
Three and Six Months Ended June 27, 2020 With Comparative Figures for 2019
(Unaudited)
(In thousands)

	Six Months Ended		Three Months Ended	
	June 27, 2020	June 29, 2019	June 27, 2020	June 29, 2019
Common Stock				
Beginning of Period	$ 269	$ 260	$ 271	$ 262
Net Exercise of Stock Options	—	1	—	1
Class B Stock Converted to Common Stock	5	3	3	1
End of Period	274	264	274	264
Convertible Class B Stock				
Beginning of Period	76	83	75	81
Net Exercise of Stock Options	1	—	—	—
Class B Stock Converted to Common Stock	(5)	(3)	(3)	(1)
End of Period	72	80	72	80
Additional Paid in Capital				
Beginning of Period	76,340	73,044	78,075	74,396
Net Exercise of Stock Options and Equity-based Compensation Expense	2,839	2,560	1,104	1,208
End of Period	79,179	75,604	79,179	75,604
Accumulated Comprehensive Loss				
Beginning of Period	(15,628)	(13,329)	(17,717)	(13,449)
Foreign Currency Translation Adjustments	(1,494)	614	810	884
Retirement Liability Adjustment – Net of Taxes	430	294	215	144
End of Period	(16,692)	(12,421)	(16,692)	(12,421)
Retained Earnings				
Beginning of Period	428,584	376,567	361,621	454,713
Net (Loss) Income	(90,542)	84,872	(23,579)	6,726
End of Period	338,042	461,439	338,042	461,439
Treasury Stock				
Beginning of Period	(100,784)	(50,000)	(108,516)	(50,000)
Purchase of Shares	(7,732)	—	—	—
End of Period	(108,516)	(50,000)	(108,516)	(50,000)
Total Shareholders' Equity	$ 292,359	$ 474,966	$ 292,359	$ 474,966

See notes to consolidated condensed financial statements.

ASTRONICS CORPORATION
Consolidated Condensed Statements of Shareholders' Equity, Continued
Three and Six Months Ended June 27, 2020 With Comparative Figures for 2019
(Unaudited)
(In thousands)

	Six Months Ended		Three Months Ended	
	June 27, 2020	June 29, 2019	June 27, 2020	June 29, 2019
Common Stock				
Beginning of Period	26,874	25,978	27,088	26,178
Net Issuance from Exercise of Stock Options	25	34	—	13
Class B Stock Converted to Common Stock	456	331	267	152
End of Period	27,355	26,343	27,355	26,343
Convertible Class B Stock				
Beginning of Period	7,650	8,290	7,476	8,146
Net Issuance from Exercise of Stock Options	15	48	—	13
Class B Stock Converted to Common Stock	(456)	(331)	(267)	(152)
End of Period	7,209	8,007	7,209	8,007
Treasury Stock				
Beginning of Period	3,526	1,675	3,808	1,675
Purchase of Shares	282	—	—	—
End of Period	3,808	1,675	3,808	1,675

See notes to consolidated condensed financial statements.

ASTRONICS CORPORATION
Notes to Consolidated Condensed Financial Statements
June 27, 2020
(Unaudited)

1) Basis of Presentation

The accompanying unaudited statements have been prepared in accordance with U.S. generally accepted accounting principles for interim financial information. Accordingly, they do not include all of the information and footnotes required by U.S. generally accepted accounting principles for complete financial statements. In the opinion of management, all adjustments, consisting of normal recurring accruals, considered necessary for a fair presentation have been included.

Operating Results

The results of operations for any interim period are not necessarily indicative of results for the full year. In addition, the COVID-19 pandemic has increased the volatility we experience in our financial results in recent periods and this could continue in future interim and annual periods. Operating results for the six months ended June 27, 2020 are not necessarily indicative of the results that may be expected for the year ending December 31, 2020.

The balance sheet at December 31, 2019 has been derived from the audited financial statements at that date, but does not include all of the information and footnotes required by U.S. generally accepted accounting principles ("GAAP") for complete financial statements.

For further information, refer to the financial statements and footnotes thereto included in Astronics Corporation's 2019 annual report on Form 10-K.

Description of the Business

Astronics Corporation ("Astronics" or the "Company") is a leading provider of advanced technologies to the global aerospace, defense and electronics industries. Our products and services include advanced, high-performance electrical power generation, distribution and motion systems, lighting and safety systems, avionics products, systems and certification, aircraft structures and automated test systems.

We have principal operations in the United States ("U.S."), Canada, France and England, as well as engineering offices in the Ukraine and India.

On February 13, 2019, the Company completed a divestiture of its semiconductor test business within the Test Systems segment. The business was not core to the future of the Test Systems segment. The total proceeds of the divestiture amounted to $103.8 million plus certain contingent purchase consideration ("earn-out") as described in Note 18. The Company recorded a pre-tax gain on the sale of $80.1 million in the first quarter of 2019. The Company recorded income tax expense relating to the gain of $19.7 million.

On July 1, 2019, the Company acquired all of the issued and outstanding capital stock of Freedom Communication Technologies, Inc. ("Freedom"). Freedom, located in Kilgore, Texas, is a leader in wireless communication testing, primarily for the civil land mobile radio market. Freedom is included in our Test Systems segment. The total consideration for the transaction was $21.8 million, net of $0.6 million in cash acquired.

On July 12, 2019, the Company sold intellectual property and certain assets associated with its Airfield Lighting product line for $1.0 million in cash. The Airfield Lighting product line, part of the Aerospace segment, was not core to the business and represented less than 1% of revenue. The Company recorded a pre-tax loss on the sale of approximately $1.3 million in the third quarter of 2019.

On October 4, 2019, the Company acquired the stock of the primary operating subsidiaries as well as certain other assets from mass transit and defense market test solution provider, Diagnosys Test Systems Limited, for $7.0 million in cash, plus earn-outs estimated at a fair value of $2.5 million. Diagnosys Inc. and its affiliates ("Diagnosys") is included in our Test Systems segment. Diagnosys is a developer and manufacturer of comprehensive automated test equipment providing test, support, and repair of high value electronics, electro-mechanical, pneumatic and printed circuit boards focused on the global mass transit and defense markets. The terms of the acquisition allow for a potential earn-out of up to an additional $13.0 million over the three years post-acquisition based on achievement of new order levels of over $72.0 million during that period. The acquired business has operations in Westford, Massachusetts as well as Ferndown, England, and an engineering center of excellence in Bangalore, India.

For additional information regarding these acquisitions and divestitures see Note 18.

Impact of the COVID-19 Pandemic

On March 11, 2020, the World Health Organization classified the COVID-19 outbreak as a pandemic. The COVID-19 pandemic has had a sudden and significant impact on the global economy, and particularly in the aerospace industry, resulting in the grounding of the majority of the global commercial transportation fleet and significant cost cutting and cash preservation actions by the global airlines. This in turn has resulted in a significant reduction in airlines spending for both new aircraft and on upgrading their existing fleet with the Company’s products. We expect this low level of investment by the airlines will continue at least into 2021, however, the ultimate impact of COVID-19 on our business results of operations, financial condition and cash flows is dependent on future developments, including the duration of the pandemic and the related length of its impact on the global economy and the aerospace industry, which are uncertain and cannot be predicted at this time.

In response to the global COVID-19 pandemic, we have implemented actions to maintain our financial health and liquidity, as discussed in detail in our Form 8-K’s filed on March 31, 2020, May 6, 2020 and July 31, 2020. In addition to these measures, we amended our revolving credit facility on May 4, 2020, as further described in Note 7. We are also monitoring the impacts of COVID-19 on the fair value of assets. Refer to Note 6 for a discussion of goodwill impairment charges. Should future changes in sales, earnings and cash flows differ significantly from our expectations, long-lived assets to be held and used and goodwill could become impaired in the future.

Trade Accounts Receivable and Contract Assets

The allowance for doubtful accounts is based on the Company’s assessment of the collectability of customer accounts. The Company regularly reviews the allowance by considering factors such as the age of the receivable balances, historical experience, credit quality, current economic conditions, and reasonable and supportable forecasts of future economic conditions that may affect a customer’s ability to pay. The allowance for doubtful accounts balance was $5.1 million and $3.6 million at June 27, 2020 and December 31, 2019, respectively. The Company‘s bad debt expense was $1.6 million in the three and six months ended June 27, 2020 and insignificant in the three and six months ended June 29, 2019. Total writeoffs charged against the allowance and total recoveries collected were insignificant in both the three month and six month ended June 27, 2020.

The Company's exposure to credit losses may increase if its customers are adversely affected by global economic recessions, disruption associated with the current COVID-19 pandemic, industry conditions, or other customer-specific factors. Although the Company has historically not experienced significant credit losses, it is possible that there could be a material adverse impact from potential adjustments of the carrying amount of trade receivables and contract assets as airlines and other aerospace company’s cash flows are impacted by the COVID-19 pandemic.

Cost of Products Sold, Engineering and Development, Interest, and Selling, General and Administrative Expenses

Cost of products sold includes the costs to manufacture products such as direct materials and labor and manufacturing overhead as well as all engineering and development costs. The Company is engaged in a variety of engineering and design activities as well as basic research and development activities directed to the substantial improvement or new application of the Company’s existing technologies. These costs are expensed when incurred and included in cost of products sold. Research and development, design and related engineering amounted to $22.4 million and $27.7 million for the three months ended and $48.6 million and $54.4 million for the six months ended June 27, 2020 and June 29, 2019, respectively. Selling, general and administrative expenses include costs primarily related to our sales and marketing departments and administrative departments. Interest expense is shown net of interest income. Interest income was insignificant for the three and six months ended June 27, 2020 and June 29, 2019.

Goodwill Impairment

The Company tests goodwill at the reporting unit level on an annual basis or more frequently if an event occurs or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying amount.

As a result of the qualitative factors related to the COVID-19 pandemic, as discussed above, we performed interim quantitative assessments for the reporting units which had goodwill as of March 28, 2020, and an additional quantitative assessment for our PECO reporting unit as of June 27, 2020. Based on our quantitative assessments, the Company recorded goodwill impairment charges associated with four Aerospace reporting units, totaling approximately $12.6 million and $86.3 million within the Impairment Loss line in the Consolidated Condensed Statement of Operations in the three and six months ended June 27, 2020, respectively.

For additional information regarding the quantitative test and the related goodwill impairment see Note 6.

Valuation of Long-Lived Assets

Long-lived assets are evaluated for recoverability whenever adverse effects or changes in circumstances indicate that the carrying value may not be recoverable. The recoverability test consists of comparing the undiscounted projected cash flows with the carrying amount. Should the carrying amount exceed undiscounted projected cash flows, an impairment loss would be recognized to the extent the carrying amount exceeds fair value. In conjunction with the deteriorating economic conditions associated with the COVID-19 pandemic, we recorded an impairment charge to right-of-use ("ROU") assets of approximately $0.7 million incurred in one reporting unit in the Aerospace segment within the Impairment Loss line in the Consolidated Condensed Statement of Operations in the six months ended June 27, 2020. No other long-lived asset impairments were warranted based on the quantitative analysis performed.

Financial Instruments

The Company determined there were indicators of impairment over one of its investments in the second quarter of 2020 as a result of declining revenues and cash flows of the investee as well as significant uncertainties over the investee's ability to raise additional capital or to finance its own activities. There were no observable price changes for this investment during 2020. We determined that the fair value of this investment was de minimus at June 27, 2020 and we recorded an impairment charge of $3.5 million recorded within Other Expense, Net of Other Income in the accompanying Consolidated Condensed Statement Operations.

Foreign Currency Translation

The aggregate foreign currency transaction gain or loss included in operations was insignificant for the three and six months ended June 27, 2020 and June 29, 2019.

Newly Adopted and Recent Accounting Pronouncements

Recent Accounting Pronouncements Adopted

Standard	**Description**	**Financial Statement Effect or Other Significant Matters**
ASU No. 2016-13 Financial Instruments - Credit Losses (Topic 326)	The standard replaces the incurred loss model with the current expected credit loss (CECL) model to estimate credit losses for financial assets measured at amortized cost and certain off-balance sheet credit exposures. The CECL model requires a Company to estimate credit losses expected over the life of the financial assets based on historical experience, current conditions and reasonable and supportable forecasts. The provisions of the standard are effective for fiscal years beginning after December 15, 2019 and interim periods within those fiscal years. Early adoption is permitted. The amendment requires a modified retrospective approach by recording a cumulative-effect adjustment to retained earnings as of the beginning of the period of adoption.	The Company adopted this guidance as of January 1, 2020. The standard changed the way entities recognize impairment of most financial assets. Short-term and long-term financial assets, as defined by the standard, are impacted by immediate recognition of estimated credit losses in the financial statements, reflecting the net amount expected to be collected. The adoption of this standard had an immaterial impact on our condensed consolidated financial statements. **Date of adoption:** Q1 2020
ASU No. 2018-13 Fair Value Measurement (Topic 820)	The standard removes the disclosure requirements for the amount of and reasons for transfers between Level 1 and Level 2 of the fair value hierarchy. The provisions of this ASU are effective for years beginning after December 15, 2019, with early adoption permitted.	This ASU did not have a significant impact on our consolidated financial statements, as it only includes changes to disclosure requirements. **Date of adoption:** Q1 2020

Recent Accounting Pronouncements Not Yet Adopted

Standard	Description	Financial Statement Effect or Other Significant Matters
ASU No. 2018-14 *Compensation—Retirement Benefits—Defined Benefit Plans—General (Subtopic 715-20)*	The standard includes updates to the disclosure requirements for defined benefit plans including several additions, deletions and modifications to the disclosure requirements. The provisions of this ASU are effective for years beginning after December 15, 2020, with early adoption permitted.	This ASU does not have a significant impact on our consolidated financial statements, as it only includes changes to disclosure requirements. **Planned date of adoption:** Q1 2021
ASU No. 2019-12 *Income Taxes (Topic 740), Simplifying the Accounting for Income Taxes*	The amendments in this update simplify the accounting for income taxes by removing certain exceptions to the general principles in Topic 740 and improve consistent application by clarifying and amending existing guidance. The amendments of this standard are effective for fiscal years beginning after December 15, 2020, including interim periods within those fiscal years. Early adoption is permitted, including adoption in any interim period for which financial statements have not been issued, with the amendments to be applied on a respective, modified retrospective or prospective basis, depending on the specific amendment.	The Company is currently evaluating the requirements of this standard. The standard is not expected to have a material impact on the Company's financial statements. **Planned date of adoption:** Q1 2021
ASU No. 2020-04 *Reference Rate Reform (Topic 848), Facilitation of the Effects of Reference Rate Reform on Financial Reporting*	The amendments in Update 2020-04 are elective and apply to all entities that have contracts, hedging relationships, and other transactions that reference LIBOR or another reference rate expected to be discontinued due to reference rate reform. The new guidance provides the following optional expedients: simplify accounting analyses under current U.S. GAAP for contract modifications, simplify the assessment of hedge effectiveness, allow hedging relationships affected by reference rate reform to continue and allow a one-time election to sell or transfer debt securities classified as held to maturity that reference a rate affected by reference rate reform.	The amendments are effective for all entities from the beginning of an interim period that includes the issuance date of the ASU. An entity may elect to apply the amendments prospectively through December 31, 2022. After 2021, it is unclear whether banks will continue to provide LIBOR submissions to the administrator of LIBOR, and no consensus currently exists as to what benchmark rate or rates may become accepted alternatives to LIBOR. The Company is currently evaluating the impact of adopting this guidance. **Planned date of adoption:** Before December 31, 2022

We consider the applicability and impact of all ASUs. ASUs not listed above were assessed and determined to be either not applicable, or had or are expected to have minimal impact on our financial statements and related disclosures.

2) Revenue

Revenue is recognized when, or as, the Company transfers control of promised products or services to a customer in an amount that reflects the consideration the Company expects to be entitled in exchange for transferring those products or services. Sales shown on the Company's Consolidated Condensed Statements of Operations are from contracts with customers.

Payment terms and conditions vary by contract, although terms generally include a requirement of payment within a range from 30 to 90 days after the performance obligation has been satisfied; or in certain cases, up-front deposits. In circumstances where the timing of revenue recognition differs from the timing of invoicing, the Company has determined that the Company's contracts generally do not include a significant financing component. Taxes collected from customers, which are subsequently remitted to governmental authorities, are excluded from sales.

The Company recognizes an asset for the incremental, material costs of obtaining a contract with a customer if the Company expects the benefit of those costs to be longer than one year and the costs are expected to be recovered. These incremental costs include, but are not limited to, sales commissions incurred to obtain a contract with a customer. As of June 27, 2020, the Company does not have material incremental costs on any open contracts with an original expected duration of greater than one year.

The Company recognizes an asset for certain, material costs to fulfill a contract if it is determined that the costs relate directly to a contract or an anticipated contract that can be specifically identified, generate or enhance resources that will be used in satisfying performance obligations in the future, and are expected to be recovered. Such costs are amortized on a systematic basis that is consistent with the transfer to the customer of the goods to which the asset relates. Start-up costs are expensed as incurred. Capitalized fulfillment costs are included in Inventories in the accompanying Consolidated Condensed Balance Sheets. Should future orders not materialize or it is determined the costs are no longer probable of recovery, the capitalized costs are written off. As of June 27, 2020, the Company does not have material capitalized fulfillment costs.

A performance obligation is a promise in a contract to transfer a distinct good or service to the customer, and is the unit of account. The majority of our contracts have a single performance obligation as the promise to transfer the individual goods or services is not separately identifiable from other promises in the contracts which are, therefore, not distinct. Thus, the contract's transaction price is the revenue recognized when or as that performance obligation is satisfied. Promised goods or services that are immaterial in the context of the contract are not separately assessed as performance obligations.

Some of our contracts have multiple performance obligations, most commonly due to the contract covering multiple phases of the product lifecycle (development, production, maintenance and support). For contracts with multiple performance obligations, the contract’s transaction price is allocated to each performance obligation using our best estimate of the standalone selling price of each distinct good or service in the contract. The primary method used to estimate standalone selling price is the expected cost plus margin approach, under which expected costs are forecast to satisfy a performance obligation and then an appropriate margin is added for that distinct good or service. Shipping and handling activities that occur after the customer has obtained control of the good are considered fulfillment activities, not performance obligations.

Some of our contracts offer price discounts or free units after a specified volume has been purchased. The Company evaluates these options to determine whether they provide a material right to the customer, representing a separate performance obligation. If the option provides a material right to the customer, revenue is allocated to these rights and recognized when those future goods or services are transferred, or when the option expires.

Contract modifications are routine in the performance of our contracts. Contracts are often modified to account for changes in contract specifications or requirements. In most instances, contract modifications are for goods or services that are distinct, and, therefore, are accounted for as new contracts. The effect of modifications has been reflected when identifying the satisfied and unsatisfied performance obligations, determining the transaction price and allocating the transaction price.

The majority of the Company’s revenue from contracts with customers is recognized at a point in time, when the customer obtains control of the promised product, which is generally upon delivery and acceptance by the customer. These contracts may provide credits or incentives, which may be accounted for as variable consideration. Variable consideration is estimated at the most likely amount to predict the consideration to which the Company will be entitled, and only to the extent it is probable that a subsequent change in estimate will not result in a significant revenue reversal when estimating the amount of revenue to recognize. Variable consideration is treated as a change to the sales transaction price and based on an assessment of all information (i.e., historical, current and forecasted) that is reasonably available to the Company, and estimated at contract inception and updated at the end of each reporting period as additional information becomes available. Most of our contracts do not contain rights to return product; where this right does exist, it is evaluated as possible variable consideration.

For contracts that are subject to the requirement to accrue anticipated losses, the company recognizes the entire anticipated loss in the period that the loss becomes probable.

For contracts with customers in which the Company promises to provide a product to the customer that has no alternative use to the Company and the Company has enforceable rights to payment for progress completed to date inclusive of profit, the Company satisfies the performance obligation and recognizes revenue over time, using costs incurred to date relative to total estimated costs at completion to measure progress toward satisfying our performance obligations. Incurred cost represents work performed, which corresponds with, and thereby best depicts, the transfer of control to the customer. Contract costs include labor, material and overhead.

The Company also recognizes revenue from service contracts (including service-type warranties) over time. The Company recognizes revenue over time during the term of the agreement as the customer is simultaneously receiving and consuming the benefits provided throughout the Company’s performance. The Company typically recognizes revenue on a straight-line basis throughout the contract period.

On June 27, 2020, we had $307.2 million of remaining performance obligations, which we refer to as total backlog. We expect to recognize approximately $178.3 million of our remaining performance obligations as revenue in 2020.

Costs in excess of billings includes unbilled amounts resulting from revenues under contracts with customers that are satisfied over time and when the cost-to-cost measurement method of revenue recognition is utilized and revenue recognized exceeds the amount billed to the customer, and right to payment is not just subject to the passage of time. Amounts may not exceed their net realizable value. Costs in excess of billings are classified as current assets, within Accounts Receivable, Net of Allowance for Doubtful Accounts on our Consolidated Condensed Balance Sheet.

Billings in excess of cost includes billings in excess of revenue recognized as well as other elements of deferred revenue, which includes advanced payments, up-front payments, and progress billing payments. Billings in excess of cost are reported in our Consolidated Condensed Balance Sheet, classified as current liabilities, within Customer Advance Payments and Deferred Revenue, and non-current liabilities, within Other Liabilities. To determine the revenue recognized in the period from the beginning balance of billings in excess of cost, the contract liability as of the beginning of the period is recognized as revenue on a contract-by-contract basis when the Company satisfies the performance obligation related to the individual contract. Once the beginning contract liability balance for an individual contract has been fully recognized as revenue, any additional payments received in the period are recognized as revenue once the related costs have been incurred.

We recognized $10.6 million and $7.8 million during the three months ended and $14.5 million and $13.2 million for the six months ended June 27, 2020 and June 29, 2019, respectively, in revenues that were included in the contract liability balance at the beginning of the period.

The Company's contract assets and contract liabilities consist primarily of costs and profits in excess of billings and billings in excess of cost and profits, respectively.The following table presents the beginning and ending balances of contract assets and contract liabilities during the six months ended June 27, 2020:

(In thousands)	Contract Assets	Contract Liabilities
Beginning Balance, January 1, 2020	$ 19,567	$ 38,758
Ending Balance, June 27, 2020	$ 18,525	$ 31,640

The following table presents our revenue disaggregated by Market Segments as follows:

	Six Months Ended		Three Months Ended	
(In thousands)	June 27, 2020	June 29, 2019	June 27, 2020	June 29, 2019
Aerospace Segment				
Commercial Transport	$ 170,323	$ 271,509	$ 67,548	$ 129,731
Military	32,165	40,498	14,052	19,545
Business Jet	30,548	37,123	15,542	17,286
Other	10,607	13,658	5,431	7,725
Aerospace Total	243,643	362,788	102,573	174,287
Test Systems Segment				
Semiconductor	2,822	5,596	1,188	2,242
Aerospace & Defense	34,813	28,888	19,933	12,569
Test Systems Total	37,635	34,484	21,121	14,811
Total	$ 281,278	$ 397,272	$ 123,694	$ 189,098

The following table presents our revenue disaggregated by Product Lines as follows:

	Six Months Ended		Three Months Ended	
(In thousands)	June 27, 2020	June 29, 2019	June 27, 2020	June 29, 2019
Aerospace Segment				
Electrical Power & Motion	$ 116,019	$ 176,579	$ 46,563	$ 84,042
Lighting & Safety	65,653	95,375	27,731	46,770
Avionics	41,277	59,543	19,134	25,682
Systems Certification	4,991	5,666	1,660	4,048
Structures	5,096	11,967	2,054	6,020
Other	10,607	13,658	5,431	7,725
Aerospace Total	243,643	362,788	102,573	174,287
Test Systems	37,635	34,484	21,121	14,811
Total	$ 281,278	$ 397,272	$ 123,694	$ 189,098

3) Inventories

Inventories consisted of the following:

(In thousands)	June 27, 2020	December 31, 2019
Finished Goods	$ 29,662	$ 33,434
Work in Progress	28,375	25,594
Raw Material	98,547	86,759
	$ 156,584	$ 145,787

The Company has evaluated the carrying value of existing inventories and believe they are properly reflected at their lower of carrying value or net realizable value. Future changes in demand or other market developments could result in future inventory charges. The Company is actively managing inventories and aligning them to meet known current and future demand.

4) Property, Plant and Equipment

Property, Plant and Equipment consisted of the following:

(In thousands)	June 27, 2020	December 31, 2019
Land	$ 9,802	$ 9,802
Buildings and Improvements	74,892	74,723
Machinery and Equipment	118,311	115,202
Construction in Progress	5,547	5,453
	208,552	205,180
Less Accumulated Depreciation	99,171	92,681
	$ 109,381	$ 112,499

Additionally, net Property, Plant and Equipment of $1.5 million are classified in Assets Held for Sale at December 31, 2019. Refer to Note 18.

5) Intangible Assets

The following table summarizes acquired intangible assets as follows:

		June 27, 2020		December 31, 2019	
(In thousands)	Weighted Average Life	Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
Patents	11 years	$ 2,146	$ 1,847	$ 2,146	$ 1,804
Non-compete Agreement	4 years	11,091	8,989	11,318	7,696
Trade Names	10 years	11,438	7,043	11,438	6,550
Completed and Unpatented Technology	9 years	48,200	23,450	48,201	21,196
Customer Relationships	15 years	142,439	55,337	142,212	50,776
Total Intangible Assets	12 years	$ 215,314	$ 96,666	$ 215,315	$ 88,022

All acquired intangible assets other than goodwill and one trade name are being amortized. Amortization expense for acquired intangibles is summarized as follows:

	Six Months Ended		Three Months Ended	
(In thousands)	June 27, 2020	June 29, 2019	June 27, 2020	June 29, 2019
Amortization Expense	$ 8,642	$ 8,352	$ 4,377	$ 4,128

Amortization expense for acquired intangible assets expected for 2020 and for each of the next five years is summarized as follows:

(In thousands)	
2020	$ 17,207
2021	$ 15,404
2022	$ 14,973
2023	$ 13,939
2024	$ 12,917
2025	$ 10,996

6) Goodwill

The following table summarizes the changes in the carrying amount of goodwill for the six months ended June 27, 2020:

(In thousands)	December 31, 2019	Impairment Charges	Foreign Currency Translation	June 27, 2020
Aerospace	$ 123,038	$ (86,312)	$ (218)	$ 36,508
Test Systems	21,932	—	—	21,932
	$ 144,970	$ (86,312)	$ (218)	$ 58,440

Goodwill Impairment Testing

The Company tests goodwill at the reporting unit level on an annual basis or more frequently if an event occurs or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying amount.

In the first quarter of 2020, the World Health Organization characterized COVID-19 a pandemic, and the President of the United States declared the COVID-19 outbreak a national emergency. The United States, France, Canada and many other countries have issued formal stay-at-home orders to combat the pandemic, which require residents to stay home and non-essential businesses to temporarily close.

Beginning in the first quarter of 2020, the pandemic negatively impacted the global economy and aerospace industry, resulting in an abrupt and significant decrease of airline passenger travel. In response, the global airlines grounded a significant portion of their fleet and have begun to defer or cancel aircraft scheduled for delivery this year. Additionally, airlines have announced plans to reduce capital and discretionary spending to conserve cash in the immediate future. In turn, aircraft manufacturers and tier one suppliers have experienced a disruption in production and demand as their customers defer delivery of new aircraft, resulting in slowed or halted production at facilities throughout the world. Commercial airlines and manufacturers are focusing on conserving cash to preserve liquidity, which will have a negative impact on airframe and aftermarket sales as compared with pre-pandemic forecasts.

Management considered these qualitative factors and the impact to each reporting unit’s revenue and earnings, and determined that it was more likely than not that the fair value of several reporting units was less than its carrying value. Therefore, we performed a quantitative test for all eight reporting units with goodwill as of March 28, 2020.

Quantitative testing requires a comparison of the fair value of each reporting unit to its carrying value. We use the discounted cash flow method to estimate the fair value of our reporting units. The discounted cash flow method incorporates various assumptions, the most significant being projected sales growth rates, operating margins and cash flows, the terminal growth rate and the weighted average cost of capital. If the carrying value of the reporting unit exceeds its fair value, goodwill is considered impaired and any loss must be measured. Accordingly, goodwill impairment is measured as the amount by which a reporting unit's carrying value exceeds its fair value, not to exceed the carrying value of goodwill.

We determined that the estimated fair value offour of the eight reporting units with goodwill significantly exceeded their respective carrying values and therefore, did not result in a goodwill impairment as of March 28, 2020.

For the remaining four reporting units with goodwill, we determined that the estimated fair value was less than their respective carrying values. We recognized full impairments of the goodwill of our Astronics Connectivity Systems and Certification (“ACSC”), PGA and Custom Control Concepts (“CCC”) reporting units, and a partial impairment of the goodwill of our PECO reporting unit as of March 28, 2020.

During the second quarter of 2020, further commercial aircraft order reductions, delays and cancellations at a major customer of our PECO reporting unit resulted in revisions to PECO’s forecast. We therefore performed a quantitative test for the PECO reporting unit as of June 27, 2020. As a result of this quantitative test, we determined that the estimated fair value was less than the respective carrying value as of June 27, 2020.

As a result, we recorded non-cash goodwill impairment charges in the Aerospace segment of approximately $12.6 million and $86.3 million within the Impairment Loss line of the Consolidated Condensed Statements of Operations in the three and six months ended June 27, 2020, respectively.

The goodwill remaining in our PECO reporting unit after the impairments is $20.2 million. For the PECO reporting unit, the Company performed sensitivity analyses, utilizing reasonably possible changes in the assumption for the discount rate and revenue growth rates to demonstrate the potential impacts to the estimated fair value. In isolation, a 100 basis point increase to the discount rate or a 100 basis point decrease to the normalized revenue growth rate, would result in incremental impairment charges of $7.6 million or $3.5 million, respectively.

There is greater risk of future impairments in the PECO reporting unit as any further deterioration in its performance compared to forecast, changes in order volumes or delivery schedules at its major customer, as well as any changes in economic forecasts and expected recovery in the aerospace industry, may require the Company to complete additional interim impairment tests in future quarters and could result in the reporting unit’s fair value again falling below carrying value in subsequent quarters. Further, if the composition of the reporting unit’s assets and liabilities were to change and result in an increase in the reporting unit’s carrying value, it could lead to additional impairment testing and further impairment losses.

7) Long-term Debt and Notes Payable

The Company's Fifth Amended and Restated Credit Agreement (the "Agreement") provided for a $500 million revolving credit line with the option to increase the line by up to $150 million. The maturity date of the loans under the Agreement is February 16, 2023. The maximum permitted leverage ratio of funded debt, net of cash to Adjusted EBITDA (as defined in the Agreement) was 3.75 to 1, increasing to 4.50 to 1 for up to four fiscal quarters following the closing of an acquisition permitted under the Agreement, subject to limitations. The Company paid interest on the unpaid principal amount of the facility at a rate equal to one-, three- or six-month LIBOR plus between 1.00% and 1.50% based upon the Company's leverage ratio. The Company also paid a commitment fee to the lenders in an amount equal to between 0.10% and 0.20% on the undrawn portion of the credit facility, based upon the Company's leverage ratio.

The COVID-19 pandemic has significantly impacted the global economy, and particularly the aerospace industry, resulting in reduced expectations of the Company's future operating results. As a result, the Company was projected to exceed its maximum permitted leverage ratio in the fourth quarter of 2020. Accordingly, on May 4, 2020, the Company executed an amendment to the Agreement (the "Amended Facility"), which reduced the revolving credit line from $500 million to $375 million. There remains the option to increase the line by up to $150 million. The Amended Facility suspends the application of the leverage ratio up through and including the second quarter of 2021 (the "suspension period"). The maximum net leverage ratio will be 6.00 to 1 for the third quarter of 2021, 5.50 to 1 for the fourth quarter of 2021, 4.50 to 1 for the first quarter of 2022, and return to 3.75 to 1 for each quarter thereafter.

At June 27, 2020, there was $173.0 million outstanding on the revolving credit facility and there remained $200.5 million available subject to the minimum liquidity covenant discussed below, net of outstanding letters of credit and bank guarantees. The credit facility allocates up to $20 million of the $375 million revolving credit line for the issuance of letters of credit, including certain existing letters of credit. At June 27, 2020, outstanding letters of credit and bank guarantees totaled $1.5 million.

Through the third quarter of 2021, the Amended Facility requires the Company to maintain minimum liquidity, defined as unrestricted cash plus the unused revolving credit commitments, of $180 million at all times, and a minimum interest coverage ratio of 1.75x on a quarterly basis, except for the first quarter of 2021, which is set at 1.50x. The Company was in compliance with its financial covenants at June 27, 2020. During the suspension period, the Company will pay interest on the unpaid principal amount of the Amended Facility at a rate equal to one-, three- or six-month LIBOR (which shall be at least 1.00%) plus 2.25%. The Company will also pay a commitment fee to the lenders in an amount equal to 0.35% on the undrawn portion of the Amended Facility. After the suspension period, the Company will pay interest on the unpaid principal amount of the Amended Facility at a rate equal to one-, three- or six-month LIBOR (which shall be at least 1.00%) plus between 1.00% to 2.25% based upon the Company's leverage ratio. The Company will also pay a commitment fee to the lenders in an amount equal to 0.10% to 0.35% on the undrawn portion of the Amended Facility, based upon the Company's leverage ratio. The Amended Facility provides for the payment of a consent fee of 15 basis points of the commitment for each consenting lender.

The Amended Facility also temporarily restricts certain activities, including acquisitions and share repurchases, and requires mandatory prepayments during the suspension period when the Company's cash balance exceeds $100 million. During the three months ended June 27, 2020, subsequent to the execution of the Amended Facility, the Company made prepayments approximating $160 million.

The Company's obligations under the Amended Facility are jointly and severally guaranteed by each domestic subsidiary of the Company other than non-material subsidiaries. The obligations are secured by a first priority lien on substantially all of the Company's and the guarantors' assets.

In the event of voluntary or involuntary bankruptcy of the Company or any subsidiary, all unpaid principal and other amounts owing under the Amended Facility automatically become due and payable. Other events of default, such as failure to make payments as they become due and breach of financial and other covenants, change of control, judgments over a certain amount, and cross default under other agreements give the agent the option to declare all such amounts immediately due and payable.

8) Product Warranties

In the ordinary course of business, the Company warrants its products against defects in design, materials and workmanship typically over periods ranging fromtwelve to sixty months. The Company determines warranty reserves needed by product line based on experience and current facts and circumstances. Activity in the warranty accrual is summarized as follows:

	Six Months Ended		Three Months Ended	
(In thousands)	June 27, 2020	June 29, 2019	June 27, 2020	June 29, 2019
Balance at Beginning of Period	$ 7,660	$ 5,027	$ 7,122	$ 4,829
Warranties Divested or Acquired	—	(123)	—	—
Warranties Issued	1,523	1,245	646	716
Warranties Settled	(1,308)	(1,180)	(617)	(592)
Reassessed Warranty Exposure	(910)	(163)	(186)	(147)
Balance at End of Period	$ 6,965	$ 4,806	$ 6,965	$ 4,806

9) Leases

The Company has operating and finance leases for leased office and manufacturing facilities and equipment leases. We have concluded that when an agreement grants us the right to substantially all of the economic benefits associated with an identified asset, and we are able to direct the use of that asset throughout the term of the agreement, we have a lease. We lease certain facilities and office equipment under finance leases, and we lease certain production facilities, office equipment and vehicles under operating leases. Some of our leases include options to extend or terminate the leases and these options have been included in the relevant lease term to the extent that they are reasonably certain to be exercised.

The weighted-average remaining term for the Company's operating and financing leases are approximately7 years and 2 years, respectively. The weighted-average discount rates for the Company's operating and financing leases are approximately 3.3% and 5.3%, respectively.

The following is a summary of the Company's ROU assets and liabilities:

(In thousands)	June 27, 2020	December 31, 2019
Operating Leases:		
Operating Right-of-Use Assets, Gross	$ 29,784	$ 28,788
Less Accumulated Right-of-Use Asset Impairment	1,710	1,019
Less Accumulated Amortization	6,292	4,167
Operating Right-of-Use Assets, Net	$ 21,782	$ 23,602
Short-term Operating Lease Liabilities	$ 4,818	$ 4,517
Long-term Operating Lease Liabilities	19,749	21,039
Operating Lease Liabilities	$ 24,567	$ 25,556
Finance Leases:		
Finance Right-of-Use Assets, Gross	$ 3,484	$ 3,484
Less Accumulated Amortization	1,529	1,020
Finance Right-of-Use Assets, Net — Included in Other Assets	$ 1,955	$ 2,464
Short-term Finance Lease Liabilities — Included inAccrued Expenses and Other Current Liabilities	$ 2,001	$ 1,922
Long-term Finance Lease Liabilities — Included inOther Liabilities	1,798	2,815
Finance Lease Liabilities	$ 3,799	$ 4,737

The following is a summary of the Company's total lease costs:

	Six Months Ended		Three Months Ended	
(In thousands)	June 27, 2020	June 29, 2019	June 27, 2020	June 29, 2019
Finance Lease Cost:				
Amortization of Right-of-Use Assets	$ 510	$ 510	$ 255	$ 255
Interest on Lease Liabilities	120	167	57	81
Total Finance Lease Cost	630	677	312	336
Operating Lease Cost	2,643	2,406	1,195	1,201
Right-of-Use Asset Impairment	691	—	—	—
Variable Lease Cost	633	679	361	309
Short-term Lease Cost (excluding month-to-month)	114	85	47	38
Less Sublease and Rental (Income) Expense	(737)	(517)	(406)	(305)
Total Operating Lease Cost	3,344	2,653	1,197	1,243
Total Net Lease Cost	$ 3,974	$ 3,330	$ 1,509	$ 1,579

The following is a summary of the Company's maturity of lease liabilities:

(In thousands)	Operating Leases	Finance Leases
2020	$ 2,690	$ 1,073
2021	5,579	2,181
2022	5,427	743
2023	4,060	—
2024	2,995	—
Thereafter	6,293	—
Total Lease Payments	27,044	3,997
Less: Interest	2,477	198
Total Lease Liability	$ 24,567	$ 3,799

10) Income Taxes

The effective tax rates were approximately 3.4% and 22.7% for the six months ended and 3.6% and 23.8% for the three months ended June 27, 2020 and June 29, 2019, respectively. The 2020 tax rate was impacted by permanently non-deductible goodwill impairments totaling $60.8 million and a Federal valuation allowance recorded during the six months ended June 27, 2020 of approximately $7.5 million.

On March 27, 2020, the Coronavirus Aid, Relief, and Economic Security Act ("CARES Act") was enacted in response to the economic uncertainty resulting from the COVID-19 pandemic. The CARES Act includes many measures to assist companies, including temporary changes to income and non-income based laws, some of which were enacted as part of the Tax Cuts and Jobs Act of 2017 ("TCJA"). Some of the key changes include eliminating the 80% of taxable income limitation by allowing corporate entities to fully utilize net operating losses ("NOL") to offset taxable income in 2018, 2019 and 2020, allowing NOLs originating in 2018, 2019 and 2020 to be carried back five years and retroactively clarifying the immediate recovery of qualified improvement property costs rather than over a 39-year recovery period. During the six months ended June 27, 2020, the Company recorded a $0.5 million benefit relating to the NOL carryback provisions and the technical correction for qualified improvement property provided for in the CARES Act. The Company will continue to monitor additional guidance issued and assess the impact that various provisions will have on its business.

As a result of the COVID-19 pandemic and its adverse effects on the global economy and aerospace industry that began to take shape in the first quarter of fiscal 2020, the Company is now forecasting to generate a taxable loss in 2020 which can be carried back under the CARES Act to recover previously paid income taxes. After consideration of deferred tax liabilities that reverse in 2021 and beyond, the Company must rely on future taxable income in 2021 and beyond for purposes of asserting that the Company's remaining U.S. Federal deferred tax assets are realizable on a more-likely-than-not basis as required under ASC 740. Losses in recent periods and projected losses, combined with the significant uncertainty brought about by the COVID-19 pandemic, is collectively considered significant negative evidence under ASC 740 when assessing whether an entity can use projected income as a basis for concluding that deferred tax assets are realizable on a more-likely-than-not basis. Accordingly, during the six months ended June 27, 2020, the Company determined that a portion of its deferred tax assets are not expected to be realizable in the future. As a result, the Company recorded a partial valuation allowance of approximately $7.5 million during the six months ended June 27, 2020 against its U.S. Federal deferred tax assets.

11) Earnings Per Share

Basic and diluted weighted-average shares outstanding are as follows:

	Six Months Ended		Three Months Ended	
(In thousands)	June 27, 2020	June 29, 2019	June 27, 2020	June 29, 2019
Weighted Average Shares - Basic	30,784	32,640	30,756	32,665
Net Effect of Dilutive Stock Options	—	553	—	510
Weighted Average Shares - Diluted	30,784	33,193	30,756	33,175

Stock options with exercise prices greater than the average market price of the underlying common shares are excluded from the computation of diluted earnings per share because they are out-of-the-money and the effect of their inclusion would be anti-dilutive. The number of common shares covered by out-of-the-money stock options was approximately 872,000 shares as of June 27, 2020 and 18,000 shares as of June 29, 2019. Further, due to our net loss in the six month period ended June 27, 2020, the assumed exercise of stock compensation had an antidilutive effect and therefore was excluded from the computation of diluted loss per share.

12) Shareholders' Equity

Share Buyback Program

The Company's Board of Directors from time to time authorizes the repurchase of common stock, which allows the Company to purchase shares of its common stock in accordance with applicable securities laws on the open market or through privately negotiated transactions. Most recently, on September 17, 2019, the Company's Board of Directors authorized a repurchase of up to $50 million. Approximately 282,000 shares were repurchased in the first quarter of 2020 at a cost of $7.7 million before the 10b5-1 plan associated with the share repurchase program was terminated on February 3, 2020.

Comprehensive (Loss) Income and Accumulated Other Comprehensive Loss

The components of accumulated other comprehensive loss are as follows:

(In thousands)	June 27, 2020	December 31, 2019
Foreign Currency Translation Adjustments	$ (8,536)	$ (7,042)
Retirement Liability Adjustment – Before Tax	(10,323)	(10,868)
Tax Benefit of Retirement Liability Adjustment	2,167	2,282
Retirement Liability Adjustment – After Tax	(8,156)	(8,586)
Accumulated Other Comprehensive Loss	$ (16,692)	$ (15,628)

The components of other comprehensive (loss) income are as follows:

	Six Months Ended		Three Months Ended	
(In thousands)	June 27, 2020	June 29, 2019	June 27, 2020	June 29, 2019
Foreign Currency Translation Adjustments	$ (1,494)	$ 614	$ 810	$ 884
Retirement Liability Adjustments:				
Reclassifications to General and Administrative Expense:				
Amortization of Prior Service Cost	201	201	100	100
Amortization of Net Actuarial Losses	344	171	173	86
Tax Benefit	(115)	(78)	(58)	(42)
Retirement Liability Adjustment	430	294	215	144
Other Comprehensive (Loss) Income	$ (1,064)	$ 908	$ 1,025	$ 1,028

13) Supplemental Retirement Plan and Related Post Retirement Benefits

The Company has two non-qualified supplemental retirement defined benefit plans ("SERP" and "SERP II") for certain executive officers.The following table sets forth information regarding the net periodic pension cost for the plans.

	Six Months Ended		Three Months Ended	
(In thousands)	June 27, 2020	June 29, 2019	June 27, 2020	June 29, 2019
Service Cost	$ 111	$ 91	$ 56	$ 46
Interest Cost	418	458	209	229
Amortization of Prior Service Cost	193	193	96	96
Amortization of Net Actuarial Losses	324	150	162	75
Net Periodic Cost	$ 1,046	$ 892	$ 523	$ 446

Participants in the SERP are entitled to paid medical, dental and long-term care insurance benefits upon retirement under the plan. The following table sets forth information regarding the net periodic cost recognized for those benefits:

	Six Months Ended		Three Months Ended	
(In thousands)	June 27, 2020	June 29, 2019	June 27, 2020	June 29, 2019
Service Cost	$ 7	$ 7	$ 3	$ 4
Interest Cost	17	23	8	11
Amortization of Prior Service Cost	8	8	4	4
Amortization of Net Actuarial Losses	20	21	11	11
Net Periodic Cost	$ 52	$ 59	$ 26	$ 30

The service cost component of net periodic benefit costs above is recorded in Selling, General and Administrative Expenses within the Consolidated Condensed Statements of Operations, while the remaining components are recorded to Other Expense, Net of Other Income.

14) Sales to Major Customers

The Company has a significant concentration of business with two major customers, each in excess of 10% of consolidated sales. The loss of either of these customers would significantly, negatively impact our sales and earnings.

Sales to these two customers represented 14% and 9% of consolidated sales for the six months ended and 11% and 8% for the three months ended June 27, 2020. Sales to these customers were primarily in the Aerospace segment. Accounts receivable from these customers at June 27, 2020 was approximately $19.6 million. Sales to these two customers represented 13% and 14% of consolidated sales for the six months ended and 14% and 13% for the three months ended June 29, 2019.

15) Legal Proceedings

On December 29, 2010, Lufthansa Technik AG ("Lufthansa") filed a Statement of Claim in the Regional State Court of Mannheim, Germany. Lufthansa's claim asserted that a subsidiary of the Company, AES, sold, marketed, and brought into use in Germany a power supply system that infringes upon a German patent held by Lufthansa. Lufthansa sought an order requiring AES to stop selling and marketing the allegedly infringing power supply system, a recall of allegedly infringing products sold to commercial customers in Germany since November 26, 2003, and compensation for damages related to direct sales of the allegedly infringing power supply system in Germany (referred to as "direct sales"). The claim did not specify an estimate of damages and a related damages claim is being pursued by Lufthansa in separate court proceedings in an action filed in July 2017, as further discussed below.

In February 2015, the Regional State Court of Mannheim, Germany rendered its decision that the patent was infringed. The judgment did not require AES to recall products that are already installed in aircraft or had been sold to other end users. On July 15, 2015, Lufthansa advised AES of their intention to enforce the accounting provisions of the decision, which required AES to provide certain financial information regarding direct sales of the infringing product in Germany to enable Lufthansa to make an estimate of requested damages.

The Company appealed to the Higher Regional Court of Karlsruhe. On November 15, 2016, the Higher Regional Court of Karlsruhe issued its ruling and upheld the lower court's decision. The Company submitted a petition to grant AES leave for appeal to the German Federal Supreme Court. On April 18, 2018, the German Federal Supreme Court granted Astronics' petition in part, namely with respect to the part concerning the amount of damages. On January 8, 2019, the German Federal Supreme Court held the hearing on the appeal. By judgment of March 26, 2019, the German Federal Supreme Court dismissed AES's appeal. With this decision, the above-mentioned proceedings are complete.

In July 2017, Lufthansa filed an action in the Regional State Court of Mannheim for payment of damages caused by the court's decision that AES infringed the patent, specifically related to direct sales of the product into Germany (associated with the original December 2010 action discussed above). In this action, which was served to AES on April 11, 2018, Lufthansa claimed payment of approximately $6.2 million plus interest. An oral hearing was held on September 13, 2019. A first instance decision in this matter was handed down on December 6, 2019. According to this ruling, Lufthansa was awarded damages in the amount of approximately $3.2 million plus interest. Prior to 2019, the Company had accrued $1.0 million related to this matter. As a result of the judgment on direct sales into Germany, the Company reflected an incremental reserve of $3.5 million in its December 31, 2019 financial statements related to this matter. Payment of the first instance judgment was made during the three months ended June 27, 2020 of approximately $4.7 million, inclusive of interest. AES has appealed this decision and the appeal is currently pending before the Higher Regional Court of Karlsruhe. If the first instance judgment is later reversed on appeal, the Company could reclaim any amounts that were previously paid to Lufthansa as far as the payments exceed the amount awarded by the appellate court, but there can be no assurances that we will be successful on such appeal.

On December 29, 2017, Lufthansa filed another infringement action against AES in the Regional State Court of Mannheim claiming that sales by AES to its international customers have infringed Lufthansa's patent if AES's customers later shipped the products to Germany (referred to as "indirect sales"). This action, therefore, addresses sales other than those covered by the action filed on December 29, 2010, discussed above. In this action, served on April 11, 2018, Lufthansa sought an order obliging AES to provide information and accounting and a finding that AES owes damages for the attacked indirect sales. Moreover, Lufthansa sought accounting and a finding that the sale of individual components of the EmPower system – either directly to Germany or to international customers if these customers later shipped these products to Germany – constitutes an indirect patent infringement of Lufthansa's patent in Germany. In addition, Lufthansa sought an order obliging AES to confirm by an affidavit that the accounting provided in September 2015 was accurate and a finding that AES is also liable for damages for the sale of modified products if the modification of the products was not communicated to all subsequent buyers of the products. No amount of claimed damages has been specified by Lufthansa.

An oral hearing in this matter was held on September 13, 2019, as part of the oral hearing for the direct sales damages claim discussed above. A first instance decision in this matter was handed down on December 6, 2019. According to this judgment, Lufthansa's claims were granted in part. The court granted Lufthansa's claims for a finding that indirect sales (as defined above) by AES to international customers constitute a patent infringement under the conditions specified in the judgment and that the sale of components of the EmPower system to Germany constitutes an indirect patent infringement. Moreover, the Court granted Lufthansa's request for an affidavit confirming that the accounting provided in September 2015 was accurate. The Court rejected Lufthansa's request for a finding that AES is also liable for damages for the sale of modified products as inadmissible. This is relevant, as it provides that once AES modified the system to remove the infringing feature, any subsequent outlets are deemed not to be infringing outlets for purposes of calculating damages. AES and Lufthansa both appealed this decision and the appeal is currently pending before the Higher Regional Court of Karlsruhe. In its appeal, Lufthansa extended its action by requesting an additional finding that AES shall be held liable for all damages that Lufthansa incurred due to an alleged incorrect accounting of its past sales. No amount was quantified in Lufthansa's additional motion. The appeal is not likely to be settled in 2020.

If the decision is confirmed on appeal, AES would be responsible for payment of damages for indirect sales of patent-infringing EmPower in-seat power supply systems in the period from December 29, 2007 to May 22, 2018. AES modified the outlet units at the end of 2014 and substantially all of the modified outlet units sold from 2015 do not infringe the patent of Lufthansa. Since only sales of systems comprising patent-infringing outlet units trigger damages claims, the period for which AES is liable for damages in connection with indirect sales substantially finished at the end of 2014.

After the accounting, Lufthansa is expected to enforce its claim for damages in separate court proceedings. These proceedings would probably be tried before the Mannheim Court again, which makes it probable that the Mannheim court will determine the damages for the indirect sales on the basis of the same principles as in the direct sales proceedings (unless the latter ruling of the Mannheim court is reversed on appeal). Based on the information available currently, we estimate that the resulting damages would be approximately $11.6 million plus approximately $4.5 million of accrued interest at the end of 2019, for a total of approximately $16.1 million at December 31, 2019. Interest will accrue at a rate of 5% above the European Central Bank rate until final payment to Lufthansa. Inclusive of accrued interest, the reserve for the indirect claim is approximately $16.4 million at June 27, 2020.

Based upon the determination of the damages in the direct sales claim discussed above, in the June 27, 2020 consolidated financial statements, we have reflected a total accrual (inclusive of interest through June 27, 2020) of $16.4 million related to the indirect sales claim as management’s best estimate of the total exposure related to these matters that is probable and that can be reasonably estimated at this time. Interest accrued for the six months ended June 27, 2020 was approximately $0.3 million and is recorded within Selling, General and Administrative Expense in the Company’s Consolidated Statement of Operations. In connection with the indirect sales claims, we currently believe it is unlikely that the appeals process will be completed and the damages and related interest will be paid before July 3, 2021. Therefore the liability related to this matter, totaling $16.4 million, is classified within Other Liabilities (non-current) in the Consolidated Balance Sheet at June 27, 2020.

In December 2017, Lufthansa filed patent infringement cases in the United Kingdom (“UK”) and in France against AES. The Lufthansa patent expired in May 2018. In those cases, Lufthansa accuses AES of having manufactured, used, sold and offered for sale a power supply system, and offered and supplied parts for a power supply system that infringed upon a Lufthansa patent in those respective countries. In the French matter, there will be a hearing on the validity of the patent on October 8, 2020. In the UK matter, a trial took place in June 2020 to address the issues of infringement and validity of the patent. Judgment on those issues was rendered on June 22, 2020. The court held the UK patent valid and 3 out of 4 asserted claims infringed. Although the court has found the patent valid and some claims infringed, Lufthansa has yet to set out its case for monetary relief, which would need to be determined at a separate trial and would require extensive data gathering and analysis which has not yet commenced. Additionally, AES intends to seek permission to appeal the first instance UK findings. For this reason, while exposure in the UK matter is reasonably possible and such exposure could be material to the consolidated financial statements, it is not yet estimable, and thus, no liability has been recorded with respect to this matter at June 27, 2020.

Separate from any such damages Lufthansa may seek in connection with the UK infringement decision discussed above, as a result of the first instance judgement in their favor, Lufthansa will be entitled to reimbursement from AES of a proportion of its legal expenditures in the UK case. An interim reimbursement to Lufthansa will likely be payable in August 2020. Accordingly, we have recorded a liability of approximately $1.5 million in our consolidated balance sheet, within Accrued Expenses and Other Current Liabilities, as of June 27, 2020. The associated expense has been recorded in the Consolidated Condensed Statement of Operations in the three- and six-month periods ended June 27, 2020 within Selling, General & Administrative Expenses. If the first instance decision is reversed on appeal, AES would be entitled to seek the return of such amounts from Lufthansa, as well as reimbursement of AES’s legal fees.

Each of the German, France and UK claims are separate and distinct. Validity and infringement of the Lufthansa patent in each country is a matter for the courts in each of these countries, whose laws differ from each other. In addition, the principles of calculating damages in each jurisdiction differ substantially. Therefore, the Company has assessed each matter separately and cannot apply the same calculation methodology as in the German direct and indirect matters. However, it is reasonably possible that additional damages and interest could be incurred if the court in France was to rule in favor of Lufthansa, or if any appeal in the UK matter is unsuccessful, but at this time we cannot reasonably estimate the range of loss. As loss exposure is not estimable at this time, the Company has not recorded any liability with respect to either of the matters as of June 27, 2020, except for the legal fee reimbursement in the UK case discussed above.

On November 26, 2014, Lufthansa filed a complaint in the United States District for the Western District of Washington. Lufthansa’s complaint in that action alleges that AES manufactures, uses, sells and offers for sale a power supply system that infringes upon a U.S. patent held by Lufthansa. The patent at issue in the U.S. action is based on technology similar to that involved in the German action. On April 25, 2016, the Court issued its ruling on claim construction, holding that the sole independent claim in the patent is indefinite, rendering all claims in the patent indefinite. Based on this ruling, AES filed a motion for summary judgment on the grounds that the Court’s ruling that the patent is indefinite renders the patent invalid and unenforceable. On July 20, 2016, the U.S. District Court granted the motion for summary judgment and issued an order dismissing all claims against AES with prejudice.

Lufthansa appealed the District Court's decision to the United States Court of Appeals for the Federal Circuit. On October 19, 2017, the Federal Circuit affirmed the district court’s decision, holding that the sole independent claim of the patent is indefinite, rending all claims on the patent indefinite. Lufthansa did not file a petition for en banc rehearing or petition the U.S. Supreme Court for a writ of certiorari. Therefore, there is no longer a risk of exposure from that lawsuit.

16) Segment Information

Below are the sales and operating profit by segment for the three and six months ended June 27, 2020 and June 29, 2019 and a reconciliation of segment operating profit to income before income taxes. Operating profit is net sales less cost of products sold and other operating expenses excluding interest and corporate expenses. Cost of products sold and other operating expenses are directly identifiable to the respective segment.

	Six Months Ended		Three Months Ended	
(In thousands)	June 27, 2020	June 29, 2019	June 27, 2020	June 29, 2019
Sales				
Aerospace	$ 243,734	$ 362,793	$ 102,597	$ 174,292
Less Intersegment Sales	(91)	(5)	(24)	(5)
Total Aerospace Sales	243,643	362,788	102,573	174,287
Test Systems	37,985	34,649	21,432	14,925
Less Intersegment Sales	(350)	(165)	(311)	(114)
Total Test Systems Sales	37,635	34,484	21,121	14,811
Total Consolidated Sales	$ 281,278	$ 397,272	$ 123,694	$ 189,098
Segment Measure of Operating (Loss) Profit and Margins				
Aerospace	$ (80,235)	$ 40,160	$ (17,090)	$ 14,392
	(32.9)%	11.1 %	(16.7)%	8.3 %
Test Systems	3,334	2,091	2,612	(94)
	8.9 %	6.1 %	12.4 %	(0.6)%
Total Segment Measure of Operating (Loss) Profit	(76,901)	42,251	(14,478)	14,298
	(27.3)%	10.6 %	(11.7)%	7.6 %
Additions/Deductions from Segment Measure of Operating (Loss) Profit				
Gain on Sale of Business	—	80,133	—	—
Interest Expense, Net of Interest Income	3,316	3,029	1,983	1,225
Corporate Expenses and Other	13,511	9,530	7,990	4,243
(Loss) Income Before Income Taxes	$ (93,728)	$ 109,825	$ (24,451)	$ 8,830

Total Assets:

(In thousands)	June 27, 2020	December 31, 2019
Aerospace	$ 501,536	$ 629,371
Test Systems	104,392	110,994
Corporate	52,598	42,351
Total Assets	$ 658,526	$ 782,716

17) Fair Value

A fair value measurement assumes that the transaction to sell an asset or transfer a liability occurs in the principal market for the asset or liability or, in the absence of a principal market, the most advantageous market for the asset or liability. Fair value is based upon an exit price model. The Company's assessment of the significance of a particular input to the fair value measurement in its entirety requires judgment, and involves consideration of factors specific to the asset or liability.

The Company follows a valuation hierarchy for disclosure of the inputs to valuation used to measure fair value. This hierarchy prioritizes the inputs into three broad levels as follows:

Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities.

Level 2 inputs are quoted prices for similar assets and liabilities in active markets or inputs that are observable for the asset or liability, either directly or indirectly through market corroboration, for substantially the full term of the financial instrument.

Level 3 inputs are unobservable inputs based on our own assumptions used to measure assets and liabilities at fair value.

On a Recurring Basis:

A financial asset or liability's classification within the hierarchy is determined based on the lowest level input that is significant to the fair value measurement.

The terms of the Diagnosys acquisition allow for a potential earn-out of up to an additional $13.0 million over the three years post-acquisition based on achievement of new order levels of over $72.0 million during that period. The fair value assigned to the earn-out is determined using the real options method, which requires Level 3 inputs such as new order forecasts, discount rate, volatility factors, and other market variables to assess the probability of Diagnosys achieving certain order levels over the period.

Of the severance charges recorded, $2.1 million and $2.4 million in the three and six months ended June 27, 2020, respectively, qualify as one-time termination benefit arrangements and were initially measured at fair value using level 3 inputs.

There were no other financial assets or liabilities carried at fair value measured on a recurring basis at December 31, 2019 or June 27, 2020.

On a Non-recurring Basis:

The Company tests goodwill at the reporting unit level on an annual basis or more frequently if an event occurs or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying amount. In accordance with the provisions of ASC Topic 350, I*ntangibles – Goodwill and Other*, the Company estimates the fair value of reporting units, utilizing unobservable Level 3 inputs. Level 3 inputs require significant management judgment due to the absence of quoted market prices or observable inputs for assets of a similar nature. The inputs underlying the fair value measurement of the reporting unit under the step-one analysis of the quantitative goodwill impairment test are classified as Level 3 inputs.

As further discussed in Note 6, we performed interim quantitative assessments for the reporting units which had goodwill as of March 28, 2020 and an additional interim quantitative assessment for the PECO reporting unit as of June 27, 2020. Based on our quantitative assessments, the Company recorded non-cash goodwill impairment charges associated with four Aerospace reporting units, totaling approximately $12.6 million and $86.3 million within the Impairment Loss line in the Consolidated Condensed Statement of Operations in the three and six months ended June 27, 2020, respectively. The impairment loss was calculated as the difference between the fair value of the reporting unit (which was calculated using level 3 inputs) and the carrying value of the reporting unit.

Long-lived assets are evaluated for recoverability whenever adverse effects or changes in circumstances indicate that the carrying value may not be recoverable. The recoverability test consists of comparing the undiscounted projected cash flows of the asset or asset group (which are Level 3 inputs) with the asset of asset group's carrying amount. Should the carrying amount exceed undiscounted projected cash flows, an impairment loss would be recognized to the extent the carrying amount exceeds fair value. In conjunction with the deteriorating economic conditions associated with the COVID-19 pandemic, we recorded an impairment charge to ROU assets of approximately $0.7 million incurred in the Aerospace segment within the Impairment Loss line in the Consolidated Condensed Statement of Operations in the six months ended June 27, 2020.

From time to time, the Company makes long-term, strategic equity investments in companies to promote business and strategic objectives. These investments are included in Other Assets on the Consolidated Condensed Balance Sheets. One of the investments incurred a full impairment charge which accounts for $3.5 million recorded within the Other Expense, Net of Other Income line in the accompanying Consolidated Condensed Statement of Operations for the three and six months ended June 27, 2020. This is a level 3 measurement as there were no observable price changes during the year.

The Freedom and Diagnosys intangible assets were valued using a discounted cash flow methodology, as of their respective acquisitions dates, and are classified as Level 3 inputs.

Due to their short-term nature, the carrying value of cash and equivalents, accounts receivable, accounts payable, and notes payable approximate fair value. The carrying value of the Company’s variable rate long-term debt instruments also approximates fair value due to the variable rate feature of these instruments.

18) Acquisition and Divestiture Activities

Acquisitions

Diagnosys Inc. and its affiliates

On October 4, 2019, the Company acquired the stock of the primary operating subsidiaries as well as certain other assets from mass transit and defense market test solution provider, Diagnosys Test Systems Limited for $7.0 million in cash, plus an earn-out estimated at a fair value of $2.5 million. The terms of the acquisition allow for a potential earn-out of up to an additional $13.0 million over the three years post-acquisition based on achievement of new order levels of over $72.0 million during that period. The acquired business has operations in Westford, Massachusetts as well as Ferndown, England, and an engineering center of excellence in Bangalore, India. Diagnosys is included in our Test Systems segment. Diagnosys is a developer and manufacturer of comprehensive automated test equipment providing test, support, and repair of high value electronics, electro-mechanical, pneumatic and printed circuit boards focused on the global mass transit and defense markets.

The purchase price allocation for this acquisition has not yet been finalized. Purchased intangible assets and goodwill are not expected to be deductible for tax purposes. This transaction was not considered material to the Company’s financial position or results of operations.

Freedom Communication Technologies, Inc.

On July 1, 2019, the Company acquired all of the issued and outstanding capital stock of Freedom. Freedom, located in Kilgore, Texas, is a leader in wireless communication testing, primarily for the civil land mobile radio market. Freedom is included in our Test Systems segment. The total consideration for the transaction was $21.8 million, net of $0.6 million in cash acquired. The purchase price allocation for this acquisition has been finalized. Purchased intangible assets and goodwill are not deductible for tax purposes. This transaction was not considered material to the Company’s financial position or results of operations.

Divestitures

Semiconductor Test Business

On February 13, 2019, the Company completed a divestiture of its semiconductor business within the Test Systems segment. The business was not core to the future of the Test Systems segment. The total proceeds of the divestiture amounted to $103.8 million. The Company recorded a pre-tax gain on the sale of $80.1 million in the first quarter of 2019. The income tax expense relating to the gain was $19.7 million.

The transaction also included two elements of contingent earnouts. The First Earnout is calculated based on a multiple of all future sales of existing and certain future derivative products to existing and future customers in each annual period from 2019 through 2022. The First Earnout may not exceed $35.0 million in total. The Second Earnout is calculated based on a multiple of future sales related to an existing product and program with an existing customer exceeding an annual threshold for each annual period from 2019 through 2022. The Second Earnout is not capped. For the Second Earnout, if the applicable sales in an annual period do not exceed the annual threshold, no amounts will be paid relative to such annual period; the sales in such annual period do not carry over to the next annual period. Due to the degree of uncertainty associated with estimating the future sales levels of the divested business and its underlying programs, and the lack of reliable predictive market information, the Company will recognize such earnout proceeds, if received, as additional gain on sale when such proceeds are realized or realizable. No amounts were payable to the Company under the First Earnout for the year ending December 31, 2019.

Airfield Lighting Product Line

On July 12, 2019, the Company sold intellectual property and certain assets with its Airfield Lighting product line for $1.0 million in cash. The Airfield Lighting product line, part of the Aerospace segment, was not core to the business and represented less than 1% of revenue. The Company recorded a pre-tax loss on the sale of approximately $1.3 million during the third quarter of 2019.

Other Disposal Activity

As of December 31, 2019, the Company had agreed to sell certain facilities within the Aerospace segment. Accordingly, the property, plant and equipment assets associated with these facilities of $1.5 million was classified as held for sale in the Consolidated Condensed Balance Sheet at December 31, 2019. The sale was completed in the first quarter of 2020.

19) Restructuring Charges

In the fourth quarter of 2019, in an effort to reduce the significant operating losses at our AeroSat business, we initiated a restructuring plan to reduce costs and minimize losses of our AeroSat antenna business. The plan narrows the initiatives for the AeroSat business to focus primarily on near-term opportunities pertaining to business jet connectivity. The plan has a downsized manufacturing operation remaining in New Hampshire, with significantly reduced personnel and operating expenses. Impairments and restructuring charges were recorded in 2019 as a result of the restructuring plan.

The Company incurred $0.1 million and $0.4 million in additional restructuring charges associated with severance at AeroSat during the three and six months ended June 27, 2020.

In the second quarter of 2020, the COVID-19 pandemic has significantly impacted the global economy, and particularly the aerospace industry, resulting in reduced expectations of the Company’s future operating results. As a result, the Company executed restructuring activities in the form of workforce reduction to align capacity with expected demand. Additional restructuring charges of $4.8 million and $5.0 million in severance expense associated primarily with the Aerospace segment was recorded in the three and six months ended June 27, 2020.

The following table reconciles the beginning and ending liability for restructuring charges relating to the Company’s restructuring plan described above:

		Restructuring Charges in the six months ended June 27, 2020			
(In thousands)	Accrual as of December 31, 2019	Cost of Products Sold	Selling, General and Administrative	Cash Paid	Accrual as of June 27, 2020
Accrued Expenses and Other Current Liabilities	$ 613	$ 280	$ 5,129	$ (1,236)	$ 4,786
Other Liabilities	4,577	—	—	—	4,577
	$ 5,190	$ 280	$ 5,129	$ (1,236)	$ 9,363

The charge to Accrued Expenses and Other Current Liabilities is comprised of employee termination benefits expected to be paid within the next 12 months as well as the current portions of payments to be made under AeroSat’s non-cancelable inventory purchase commitments. The charge to Other Liabilities represents the non-current portions of payments to be made under AeroSat’s non-cancelable inventory purchase commitments. The non-cancelable purchase commitments are for inventory in the future which is not expected to be purchased prior to the expiration date of such agreements as a result of the restructuring plan.

Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

(The following should be read in conjunction with Management's Discussion and Analysis of Financial Condition and Results of Operations contained in the Company's Form 10-K for the year ended December 31, 2019.)

OVERVIEW

Astronics Corporation ("Astronics" or the "Company") is a leading supplier of advanced technologies and products to the global aerospace and defense industries. Our products and services include advanced, high-performance electrical power generation and distribution systems, seat motion solutions, lighting and safety systems, avionics products, aircraft structures, systems certification, and automated test systems.

Our Aerospace segment designs and manufactures products for the global aerospace industry. Product lines include lighting and safety systems, electrical power generation, distribution and motions systems, aircraft structures, avionics products, systems certification, and other products. Our Aerospace customers are the airframe manufacturers ("OEM") that build aircraft for the commercial, military and general aviation markets, suppliers to those OEM's, aircraft operators such as airlines, suppliers to the aircraft operators, and branches of the U.S. Department of Defense. Our Test Systems segment designs, develops, manufactures and maintains automated test systems that support the aerospace and defense, communications and mass transit test systems as well as training and simulation devices for both commercial and military applications. In the Test Systems segment, Astronics' products are sold to a global customer base including OEM's and prime government contractors for both electronics and military products.

Our strategy is to increase our value by developing technologies and capabilities, either internally or through acquisition, and using those capabilities to provide innovative solutions to our targeted markets where our technology can be beneficial.

Important factors affecting our growth and profitability are the ongoing impacts of the COVID-19 pandemic and the timing and extent of recovery (as discussed more fully below), the rate at which new aircraft are produced, government funding of military programs, our ability to have our products designed into new aircraft and the rates at which aircraft owners, including commercial airlines, refurbish or install upgrades to their aircraft. New aircraft build rates and aircraft owners spending on upgrades and refurbishments is cyclical and dependent on the strength of the global economy. Once designed into a new aircraft, the spare parts business is frequently retained by the Company. Future growth and profitability of the test business is dependent on developing and procuring new and follow-on business. The nature of our Test Systems business is such that it pursues large multi-year projects. There can be significant periods of time between orders in this business which may result in large fluctuations of sales and profit levels and backlog from period to period.

Acquisitions and Divestitures

On February 13, 2019, the Company completed a divestiture of its semiconductor test business within the Test Systems segment. The total proceeds of the divestiture amounted to $103.8 million. The Company recorded a pre-tax gain on the sale of $80.1 million in the first quarter of 2019. The income tax expense relating to the gain was $19.7 million.

On July 1, 2019, the Company acquired all of the issued and outstanding capital stock of Freedom Communication Technologies, Inc. ("Freedom"). Freedom, located in Kilgore, Texas, is a leader in wireless communication testing, primarily for the civil land mobile radio market. Freedom is included in our Test Systems segment. The total consideration for the transaction was $21.8 million, net of $0.6 million in cash acquired.

On July 12, 2019, the Company sold intellectual property and certain assets associated with its Airfield Lighting product line for $1.0 million in cash. The Airfield Lighting product line, part of the Aerospace segment, represented less than 1% of revenue. The Company recorded a pre-tax loss on the sale of approximately $1.3 million.

On October 4, 2019, the Company acquired the stock of the primary operating subsidiaries as well as certain other assets from mass transit and defense market test solution provider, Diagnosys Test Systems Limited, for $7.0 million in cash, plus earn-outs estimated at a fair value of $2.5 million. Diagnosys Inc. and its affiliates ("Diagnosys") is included in our Test Systems segment. Diagnosys is a developer and manufacturer of comprehensive automated test equipment providing test, support, and repair of high value electronics, electro-mechanical, pneumatic and printed circuit boards focused on the global mass transit and defense markets. The terms of the acquisition allow for a potential earn-out of up to an additional $13.0 million over the three years post acquisition based on achievement of new order levels of over $72.0 million during that period. The acquired business has operations in Westford, Massachusetts as well as Ferndown, England, and an engineering center of excellence in Bangalore, India.

CONSOLIDATED RESULTS OF OPERATIONS AND OUTLOOK

	Six Months Ended		Three Months Ended	
($ in thousands)	June 27, 2020	June 29, 2019	June 27, 2020	June 29, 2019
Sales	$ 281,278	$ 397,272	$ 123,694	$ 189,098
Gross Profit (sales less cost of products sold)	$ 62,552	$ 92,440	$ 26,833	$ 40,363
Gross Margin	22.2 %	23.3 %	21.7 %	21.3 %
Selling, General and Administrative Expenses	$ 61,771	$ 58,986	$ 32,904	$ 29,790
SG&A Expenses as a Percentage of Sales	22.0 %	14.8 %	26.6 %	15.8 %
Impairment Loss	$ 87,016	$ —	$ 12,608	$ —
Gain on Sale of Business	$ —	$ 80,133	$ —	$ —
Interest Expense, Net of Interest Income	$ 3,316	$ 3,029	$ 1,983	$ 1,225
Effective Tax Rate	3.4 %	22.7 %	3.6 %	23.8 %
Net (Loss) Income	$ (90,542)	$ 84,872	$ (23,579)	$ 6,726

Financial results reflect the divestiture of the Test Systems' semiconductor business on February 13, 2019, and the acquisitions of Freedom acquired in July 2019, and Diagnosys acquired in October 2019 (collectively, the "Acquired Businesses").

A discussion by segment can be found at "Segment Results of Operations and Outlook" in this MD&A.

CONSOLIDATED SECOND QUARTER RESULTS

Consolidated sales were down $65.4 million compared to the second quarter of 2019. Aerospace sales were down $71.7 million. Test System sales increased $6.3 million. The Acquired Businesses contributed $2.5 million in sales in the second quarter of 2020.

Consolidated cost of products sold in the second quarter of 2020 was $96.9 million, compared with $148.7 million in the prior-year period. The decrease was primarily due to lower sales volume.

Selling, general and administrative ("SG&A") expenses were $32.9 million in the second quarter of 2020 compared with $29.8 million in the prior-year period. The Company incurred $4.9 million in restructuring-related severance charges in the second quarter of 2020, primarily in the Aerospace segment, compared to $2.2 million in the prior-year period, primarily in the Test Systems segment. Further, non-cash goodwill impairment charges of $12.6 million in the Aerospace segment were recognized in the current quarter due to reduced expectations of future operating results due to further commercial aircraft order reductions, delays and cancellations at a major customer of our PECO reporting unit.

Other Expense, Net of Other Income includes a $3.5 million impairment of an equity investment.

The effective tax rate for the quarter was 3.6%, compared with 23.8% in the second quarter of 2019. The 2020 tax rate was impacted by permanently non-deductible goodwill impairment of $12.6 million which no tax benefit has been recognized, and a Federal valuation allowance recorded during the three months ended June 27, 2020 of approximately $0.5 million.

Net loss was $23.6 million, or $(0.77) per diluted share, compared with net income of $6.7 million, or $0.20 per diluted share in the prior year. The impact of the impairment loss was $(0.41) per diluted share.

Bookings were $61.5 million, for a book-to-bill ratio of 0.50:1. Backlog at the end of the quarter was $307.2 million. Approximately $178.3 million of backlog is expected to ship in the remainder of 2020.

CONSOLIDATED YEAR-TO-DATE RESULTS

Consolidated sales were down $116.0 million compared to the first half of 2019. Aerospace sales were down $119.1 million. Test System sales increased $3.2 million. The Acquired Businesses contributed $6.0 million in sales in the first half of 2020.

Consolidated cost of products sold in the first half of 2020 was $218.7 million, compared with $304.8 million in the prior-year period. The decrease was primarily due to lower sales volume.

SG&A expenses were $61.8 million in the first half of 2020 compared with $59.0 million the prior-year period. The Company incurred $5.4 million in restructuring-related severance charges in the first half of 2020, primarily in the Aerospace segment, compared to $2.2 million in the prior-year period, primarily in the Test Systems segment. Further, non-cash goodwill and long-lived asset impairment charges of $87.0 million in the Aerospace segment were recognized in the current year due to reduced expectations of future operating results due to the COVID-19 pandemic, which has significantly impacted the global economy, and particularly the aerospace industry. The Company recognized full impairments of the goodwill of our Astronics Connectivity Systems and Certification ("ACSC"), PGA and Custom Control Concepts ("CCC") reporting units, and a partial impairment of the goodwill of our PECO reporting unit. Total goodwill impairment losses were $86.3 million in the six months ended June 27, 2020.

The effective tax rate for the first half of was 3.4%, compared with 22.7% in the first half of 2019. The 2020 tax rate was impacted by permanently non-deductible goodwill impairments of $60.8 million and a Federal valuation allowance recorded during the six months ended June 27, 2020 of approximately $7.5 million.

Net loss was $90.5 million, or $(2.94) per diluted share, compared with net income of $84.9 million, or $2.56 per diluted share in the prior year. The after tax impact of the goodwill and long-lived asset impairment losses was $81.4 million, or $(2.64) per diluted share.

Impact of COVID-19 and Operational Adjustments

As previously disclosed, we face risks related to outbreaks of infectious diseases, including the ongoing COVID-19 pandemic. The challenges posed by the COVID-19 pandemic on the global economy increased significantly as the first half of 2020 progressed. COVID-19 has caused disruption and volatility in the global capital markets, and has authored an economic slowdown. In response to COVID-19, national and local governments around the world have instituted certain measures, including travel bans, prohibitions on group events and gatherings, shutdowns of certain businesses, curfews, shelter-in-place orders and recommendations to practice social distancing. Although our operations have been deemed essential and we follow the COVID-19 guidelines from the Centers for Disease Control ("CDC") concerning the health and safety of our personnel, these measures have resulted in attenuating activity and, in some cases, required temporary closures of certain of our facilities, among other impacts. The duration of these measures is unknown, may be extended and additional measures may be imposed.

In response to the global COVID-19 pandemic, we have implemented actions to maintain the health of our employees as well as our financial health and liquidity.These actions include:

- Implementing social distancing measures, the use of masks, restricting visitors and unnecessary travel, and working from home whenever possible;
- Workforce reduction activities to align capacity with expected demand, reducing headcount by approximately 20% to approximately 2,300 employees currently;
- Eliminated consultants and temporary labor where possible;
- Implemented significant cost conservation measures;
- Suspending cash bonus plans and wage adjustments;
- Amended our revolving credit facility on May 4, 2020, as further described in the "Liquidity and Capital Resources" section below;
- Suspending share repurchases;
- Reducing capital spending to $8 million from an initial plan of $20 to $25 million; and
- Restrictions on marketing, trade shows, travel and discretionary spending for the remainder of the year.

These reductions collectively are substantial, lowering our cost structure by an estimated $55 million to $60 million for the year, beginning in the second quarter.

Analysis of Impact on Demand by Markets

The Company continues to monitor demand from three revenue streams to analyze the potential impact of the pandemic to its business. The three revenue streams are (1) new airplane production and OE demand, (2) the aftermarket for commercial transport aircraft, and (3) defense and other government markets.

An estimated 55% of sales in 2019, or about $425 million, was driven by the production of new airplanes in the commercial transport and business jet markets. For Astronics, the commercial transport market is the more significant of the two. Major manufacturers in both markets have revised their production plans downward given the pandemic, typically on the order of 35% to 45%, which is somewhat more than initial reductions announced earlier in the COVID-19 crisis. This number is significantly complicated by the 737 MAX, which was one of the Company's largest production programs in 2019 and remains grounded.

Another 25% of sales in 2019, or about $195 million, was to the aftermarket for commercial transport aircraft. These sales were primarily for inflight entertainment/connectivity and passenger power systems ("IFE") that were sold to airlines and aircraft leasing companies. This market is holding up better than initially anticipated. The current run rate has been about 50% of last year's demand level.

Approximately 20% of Astronics' revenue in 2019, or about $145 million, was to the defense or other government markets. This was comprised of the majority of the Test business and certain military aircraft programs. Demand in these end markets has not been affected by the pandemic and instead shows relative strength.

Additionally, Astronics has initiated efforts to develop new revenue streams that are technically attractive and complementary to existing engineering and manufacturing skill sets. These initiatives are expected to contribute up to $20 million in revenue in the second half of 2020.

Evaluating the demand from these revenue streams, and considering first half actual results, Astronics expects a significant decline in 2020 sales, perhaps to the range of $500 million to $525 million.

Outlook

As discussed above, the Company believes that, given its assumptions on the economic impacts of COVID-19 on its revenue streams in its Aerospace business, consolidated revenue could be in the range of $500 million to $525 million. Given the fluidity of the situation with the pandemic and local, state, and national government responses, other outcomes, both positive and negative, are very possible. Management believes it has structured the Company to be cash positive at this level

Capital expenditures for 2020 are expected to be approximately $8 million, reduced from initial plans of $20 million to $25 million for the year. The reduction reflects the change in tooling and equipment capacity requirements for certain programs that were either postponed or cancelled, as well as the deferral or cancellation of discretionary investments.

Consolidated backlog at June 27, 2020 was $307.2 million. Approximately 58% of the backlog is expected to ship in 2020.

The effective tax benefit rate for 2020 is expected to be in the range of 2% to 6%.

The ultimate impact of COVID-19 on our business, results of operations, financial condition and cash flows is dependent on future developments, including the duration of the pandemic and the related length of its impact on the global economy and specifically on the markets we are active in, which is uncertain and cannot be predicted at this time. See Part II, Item 1A, Risk Factors, for an additional discussion of risk related to COVID-19.

SEGMENT RESULTS OF OPERATIONS AND OUTLOOK

Operating profit, as presented below, is sales less cost of products sold and other operating expenses, excluding interest expense and other corporate expenses. Cost of products sold and other operating expenses are directly identifiable to the respective segment. Operating profit is reconciled to earnings before income taxes in Note 16 of the Notes to Consolidated Condensed Financial Statements included in this report.

AEROSPACE SEGMENT

(In thousands)	Six Months Ended June 27, 2020	Six Months Ended June 29, 2019	Three Months Ended June 27, 2020	Three Months Ended June 29, 2019
Sales	$ 243,734	$ 362,793	$ 102,597	$ 174,292
Less Intersegment Sales	(91)	(5)	(24)	(5)
Total Aerospace Sales	$ 243,643	$ 362,788	$ 102,573	$ 174,287
Operating (Loss) Profit	$ (80,235)	$ 40,160	$ (17,090)	$ 14,392
Operating Margin	(32.9)%	11.1 %	(16.7)%	8.3 %
Aerospace Sales by Market				
(In thousands)				
Commercial Transport	$ 170,323	$ 271,509	$ 67,548	$ 129,731
Military	32,165	40,498	14,052	19,545
Business Jet	30,548	37,123	15,542	17,286
Other	10,607	13,658	5,431	7,725
	$ 243,643	$ 362,788	$ 102,573	$ 174,287
Aerospace Sales by Product Line				
(In thousands)				
Electrical Power & Motion	$ 116,019	$ 176,579	$ 46,563	$ 84,042
Lighting & Safety	65,653	95,375	27,731	46,770
Avionics	41,277	59,543	19,134	25,682
Systems Certification	4,991	5,666	1,660	4,048
Structures	5,096	11,967	2,054	6,020
Other	10,607	13,658	5,431	7,725
	$ 243,643	$ 362,788	$ 102,573	$ 174,287

(In thousands)	June 27, 2020	December 31, 2019
Total Assets	$ 501,536	$ 629,371
Backlog	$ 226,364	$ 275,754

AEROSPACE SECOND QUARTER RESULTS

Aerospace segment sales decreased $71.7 million, or 41.1%, to $102.6 million. Sales were negatively affected by the continued grounding of the 737 MAX and the OEM's decision to reduce production rates, along with the spread of the COVID-19 virus throughout the second quarter.

Electrical Power and Motion sales were down $37.5 million compared with the prior-year period. Lighting & Safety sales decreased $19.0 million. Additionally, Avionics sales were down $6.5 million compared with the prior-year period.

Aerospace segment operating loss was $17.1 million compared with operating profit of $14.4 million the same period last year. Aerospace operating profit was impacted by goodwill impairment charges of $12.6 million and restructuring-related severance charges of $4.6 million, as previously discussed. Operating leverage lost on reduced sales also significantly impacted operating results.

AEROSPACE YEAR-TO-DATE RESULTS

Aerospace segment sales decreased $119.1 million, or 32.8%, to $243.6 million. Sales were negatively affected by the continued grounding of the 737 MAX and the OEM's decision to reduce production rates, along with the spread of the COVID-19 virus beginning in the later part of the first quarter.

Electrical Power and Motion sales were down $60.6 million compared with the prior-year period. Lighting & Safety sales decreased $29.7 million. Additionally, Avionics sales were down $18.3 million compared with the prior-year period.

Aerospace segment operating loss was $80.2 million compared with operating profit of $40.2 million the same period last year. Aerospace operating profit was impacted by impairment charges of $87.0 million, of which $86.3 million was related to goodwill, as previously discussed. Restructuring-related severance charges of $5.1 million and leverage lost on reduced sales also significantly impacted operating results.

AEROSPACE OUTLOOK

Aerospace bookings in the second quarter of 2020 were $43.3 million, for a book-to-bill ratio of 0.42:1. The Aerospace segment's backlog at the end of the second quarter of 2020 was $226.4 million with approximately $147.9 million expected to be shipped over the remaining part of 2020 and $185.9 million is expected to ship over the next 12 months.

TEST SYSTEMS SEGMENT

	Six Months Ended		Three Months Ended	
(In thousands)	June 27, 2020	June 29, 2019	June 27, 2020	June 29, 2019
Sales	$ 37,985	$ 34,649	$ 21,432	$ 14,925
Less Intersegment Sales	(350)	(165)	(311)	(114)
Net Sales	$ 37,635	$ 34,484	$ 21,121	$ 14,811
Operating profit	$ 3,334	$ 2,091	$ 2,612	$ (94)
Operating Margin	8.9 %	6.1 %	12.4 %	(0.6)%
Test Systems Sales by Market				
(In thousands)				
Semiconductor	$ 2,822	$ 5,596	$ 1,188	$ 2,242
Aerospace & Defense	34,813	28,888	19,933	12,569
	$ 37,635	$ 34,484	$ 21,121	$ 14,811

(In thousands)	June 27, 2020	December 31, 2019
Total Assets	$ 104,392	$ 110,994
Backlog	$ 80,822	$ 83,837

TEST SYSTEMS SECOND QUARTER RESULTS

Test Segment sales were $21.1 million, up $6.3 million compared to the prior-year period. The Acquired Businesses contributed $2.5 million in sales in the second quarter of 2020.

Test Systems operating profit was $2.6 million, or 12.4% of sales, compared with last year's essentially breakeven second quarter. Operating profit for the second quarter of 2019 was impacted by restructuring-related severance charges of $2.0 million.

TEST SYSTEMS YEAR-TO-DATE RESULTS

Test Segment sales were $37.6 million, up $3.2 million compared to the prior-year period. The Acquired Businesses contributed $6.0 million in sales in the first half of 2020, while Semiconductor sales decreased $2.8 million due to the sales of the semiconductor business which was divested on February 13, 2019.

Test Systems operating profit was $3.3 million, or 8.9% of sales, compared with operating profit of $2.1 million in the prior-year period. Operating profit in the prior-year period was impacted by restructuring-related severance charges of $2.0 million.

TEST SYSTEMS OUTLOOK

Bookings for the Test Systems segment in the quarter were $18.2 million, for a book-to-bill ratio of 0.86:1 for the quarter. The Test Systems segment's backlog at the end of the second quarter of 2020 was $80.8 million, with approximately $30.3 million expected to be shipped over the remaining part of 2020 and approximately $55.3 million scheduled to ship over the next 12 months.

LIQUIDITY AND CAPITAL RESOURCES

Operating Activities:

Cash provided by operating activities totaled $41.5 million for the first six months of 2020, as compared with $9.1 million cash provided by operating activities during the same period in 2019. Cash flow from operating activities increased compared with the same period of 2019 primarily due to the change in net operating assets compared with the prior period as well as the net non-cash effect on net income of the goodwill impairment loss in the first six months of 2020 compared to the net non-cash effect on net income of the gain from sale of the semiconductor business in the first six months of 2019.

Investing Activities:

Cash used for investing activities was $2.3 million for the first six months of 2020 compared with $96.9 million in cash provided by investing activities in the same period of 2019. The change compared to the prior-year period was a result of the $103.8 million in proceeds from the divestiture of the semiconductor business in 2019, slightly offset with a decrease in capital expenditures in the first half of 2020 compared with 2019. The Company expects capital spending in 2020 to be approximately $8 million.

Financing Activities:

The primary financing activities in the first six months of 2020 related to net payments on our senior credit facility of $15.0 million. The primary financing activities in the first six months of 2019 related to net payments on our senior credit facility of $105.0 million.

The Company's Fifth Amended and Restated Credit Agreement (the “Agreement”) provided for a $500 million revolving credit line with the option to increase the line by up to $150 million. The maturity date of the loans under the Agreement is February 16, 2023. The maximum permitted leverage ratio of funded debt, net of cash to Adjusted EBITDA (as defined in the Agreement) was 3.75 to 1, increasing to 4.50 to 1 for up to four fiscal quarters following the closing of an acquisition permitted under the Agreement, subject to limitations. The Company paid interest on the unpaid principal amount of the facility at a rate equal to one-, three- or six-month LIBOR plus between 1.00% and 1.50% based upon the Company’s leverage ratio. The Company also paid a commitment fee to the lenders in an amount equal to between 0.10% and 0.20% on the undrawn portion of the credit facility, based upon the Company’s leverage ratio.

The COVID-19 pandemic has significantly impacted the global economy, and particularly the aerospace industry, resulting in reduced expectations of the Company’s future operating results. As a result, the Company was projected to exceed its maximum permitted leverage ratio in the fourth quarter of 2020. Accordingly, on May 4, 2020, the Company executed an amendment to the Agreement (the “Amended Facility”), which reduced the revolving credit line from $500 million to $375 million. There remains the option to increase the line by up to $150 million. The Amended Facility suspends the application of the leverage ratio up through and including the second quarter of 2021 (the “suspension period”). The maximum net leverage ratio will be 6.00 to 1 for the third quarter of 2021, 5.50 to 1 for the fourth quarter of 2021, 4.50 to 1 for the first quarter of 2022, and return to 3.75 to 1 for each quarter thereafter.

At June 27, 2020, there was $173.0 million outstanding on the revolving credit facility and there remained $200.5 million available subject to the minimum liquidity covenant discussed below, net of outstanding letters of credit and bank guarantees. The credit facility allocates up to $20 million of the $375 million revolving credit line for the issuance of letters of credit, including certain existing letters of credit. At June 27, 2020, outstanding letters of credit and bank guarantees totaled $1.5 million.

Through the third quarter of 2021, the Amended Facility requires the Company to maintain minimum liquidity, defined as unrestricted cash plus the unused revolving credit commitments, of $180 million at all times, and a minimum interest coverage ratio of 1.75x on a quarterly basis, except for the first quarter of 2021, which is set at 1.50x. The Company was in compliance with its financial covenants at June 27, 2020. During the suspension period, the Company will pay interest on the unpaid principal amount of the Amended Facility at a rate equal to one-, three- or six-month LIBOR (which shall be at least 1.00%) plus 2.25%. The Company will also pay a commitment fee to the lenders in an amount equal to 0.35% on the undrawn portion of the Amended Facility. After the suspension period, the Company will pay interest on the unpaid principal amount of the Amended Facility at a rate equal to one-, three- or six-month LIBOR (which shall be at least 1.00%) plus between 1.00% to 2.25% based upon the Company’s leverage ratio. The Company will also pay a commitment fee to the lenders in an amount equal to 0.10% to 0.35% on the undrawn portion of the Amended Facility, based upon the Company’s leverage ratio. The Amended Facility provides for the payment of a consent fee of 15 basis points of the commitment for each consenting lender.

The Amended Facility also temporarily restricts certain activities, including acquisitions and share repurchases, and requires mandatory prepayments during the suspension period when the Company's cash balance exceeds $100 million. During the three months ended June 27, 2020, subsequent to the execution of the Amended Facility, the Company made prepayments approximating $160 million.

The Company's obligations under the Amended Facility are jointly and severally guaranteed by each domestic subsidiary of the Company other than non-material subsidiaries. The obligations are secured by a first priority lien on substantially all of the Company's and the guarantors' assets.

In the event of voluntary or involuntary bankruptcy of the Company or any subsidiary, all unpaid principal and other amounts owing under the Amended Facility automatically become due and payable. Other events of default, such as failure to make payments as they become due and breach of financial and other covenants, change of control, judgments over a certain amount, and cross default under other agreements give the agent the option to declare all such amounts immediately due and payable.

BACKLOG

The Company's backlog at June 27, 2020 was $307.2 million compared with $359.6 million at December 31, 2019 and $379.7 million at June 29, 2019.

CONTRACTUAL OBLIGATIONS AND COMMITMENTS

The following table represents contractual obligations as of June 27, 2020:

	Payments Due by Period				
(In thousands)	Total	2020	2021-2022	2023-2024	After 2024
Long-term Debt	$ 173,224	$ 224	$ —	$ 173,000	$ —
Interest on Long-term Debt	16,554	3,165	12,659	730	—
Purchase Obligations	104,265	82,230	21,718	171	146
Supplemental Retirement Plan and Post Retirement Obligations	27,449	202	753	973	25,521
Lease Obligations	31,041	3,763	13,930	7,056	6,292
Other Liabilities	5,232	3,445	732	672	383
Total Contractual Obligations	$ 357,765	$ 93,029	$ 49,792	$ 182,602	$ 32,342

Notes to Contractual Obligations Table

Long-Term Debt — See Part 1 Financial Information, Item 1 Financial Statements, Note 7, Long-Term Debt and Notes Payable included in this report.

Interest on Long-term Debt — Future interest payments have been calculated using the applicable interest rate of each debt facility based on actual borrowings as of June 27, 2020. Actual future borrowings and rates may differ from these estimates.

Purchase Obligations — Purchase obligations are comprised of the Company's commitments for goods and services in the normal course of business.

Lease Obligations — Financing and operating lease obligations are primarily related to the Company's facility leases and interest.

Other Liabilities — Table excludes the $16.4 million accrual recorded as management's best estimate of damages related to Lufthansa's indirect sales claim in Germany, as discussed in Part 1 Financial Information, Item 1 Financial Statements, Note 15, Legal Proceedings, as this will not become a contractual obligation until the appeals process is complete and amount of damages has been finalized.

MARKET RISK

The Company believes that there have been no material changes in the current year regarding the market risk information for its exposure to interest rate fluctuations. Although the majority of our sales, expenses and cash flows are transacted in U.S. dollars, we have exposure to changes in foreign currency exchange rates related to the Euro and the Canadian dollar. The Company believes that the impact of changes in foreign currency exchange rates in 2020 have not been significant.

CRITICAL ACCOUNTING POLICIES

Refer to Note 2 of the Notes to Consolidated Condensed Financial Statements included in this report for the Company's critical accounting policies with respect to revenue recognition. For a complete discussion of the Company's other critical accounting policies, refer to the Company's annual report on Form 10-K for the year ended December 31, 2019.

RECENT ACCOUNTING PRONOUNCEMENTS

Refer to Note 1 of the Notes to Consolidated Condensed Financial Statements included in this report.

FORWARD-LOOKING STATEMENTS

Information included in this report that does not consist of historical facts, including statements accompanied by or containing words such as "may," "will," "should," "believes," "expects," "expected," "intends," "plans," "projects," "approximate," "estimates," "predicts," "potential," "outlook," "forecast," "anticipates," "presume" and "assume," are forward-looking statements. Such forward-looking statements are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. These statements are not guarantees of future performance and are subject to several factors, risks and uncertainties, the impact or occurrence of which could cause actual results to differ materially from the expected results described in the forward-looking statements. Certain of these factors, risks and uncertainties are discussed in the sections of this report entitled "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations." New factors, risks and uncertainties may emerge from time to time that may affect the forward-looking statements made herein. Given these factors, risks and uncertainties, investors should not place undue reliance on forward-looking statements as predictive of future results. We disclaim any obligation to update the forward-looking statements made in this report.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

See Market Risk in Item 2, above.

Item 4. Controls and Procedures

a. Evaluation of Disclosure Controls and Procedures

The Company's management, with the participation of the Company's Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of the Company's disclosure controls and procedures as of June 27, 2020. Based on that evaluation, the Company's Chief Executive Officer and Chief Financial Officer concluded that the Company's disclosure controls and procedures were effective as of June 27, 2020.

b. Changes in Internal Control over Financial Reporting

There have been no changes in our internal control over financial reporting during the most recent fiscal quarter that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II - OTHER INFORMATION

Item 1. Legal Proceedings

Currently, we are involved in legal proceedings relating to an allegation of patent infringement and based on rulings to date we have concluded that losses related to these proceedings are probable. For a discussion of contingencies related to legal proceedings, see Note 15 of the Notes to Consolidated Condensed Financial Statements.

Item 1a. Risk Factors

In addition to other information set forth in this report, you should carefully consider the factors discussed in Part 1, Item 1A. “Risk Factors,” in our Annual Report on Form 10-K for the year ended December 31, 2019, which could materially affect our business, financial condition or results of operations. The risks described in our Annual Report on Form 10-K are not the only risks facing us. There have been no material changes to the Risk Factors except as set forth below:

The COVID-19 pandemic has adversely affected, and is expected to continue to pose risks to our business, results of operations, financial condition and cash flows, and other epidemics or outbreaks of infectious diseases may have a similar impact. As previously disclosed, we face risks related to outbreaks of infectious diseases, including the ongoing COVID-19 pandemic. In recent weeks, the COVID-19 coronavirus pandemic has caused significant volatility in financial markets, including the market price of our stock, and the commercial aerospace industry, which has raised the prospect of an extended global recession. In response to COVID-19, national and local governments around the world have instituted certain measures, including travel bans, prohibitions on group events and gatherings, shutdowns of certain businesses, curfews, shelter-in-place orders and recommendations to practice social distancing. Our operations have been deemed essential under applicable law, but there is no guarantee this will continue. We follow the COVID-19 guidelines from the CDC concerning the health and safety of our personnel, these measures have resulted in attenuating activity and, in some cases, required temporary closures of certain of our facilities, among other impacts. The duration of these measures is unknown, may be extended and additional measures, including facility closures, may be imposed.

Among the potential effects of COVID-19 and other similar outbreaks on the company include, but are not limited to, the following:

- Reduced consumer and investor confidence, instability in the credit and financial markets, volatile corporate profits, and reduced business and consumer spending, which may adversely affect our results of operations by reducing our sales, margins and/or net income as a result of a slowdown in customer orders or order cancellations. In addition, volatility in the financial markets could increase the cost of capital and/or limit its availability.
- Economic uncertainty as a result of COVID-19 is expected to make it difficult for our customers, suppliers and the company to accurately forecast and plan future business activities.
- Aircraft manufacturers have experienced a disruption in production and demand as customers defer delivery of new aircraft, resulting in slowed or halted production at facilities throughout the world. Commercial airlines have experienced a significant reduction in air traffic. Commercial airlines and other manufacturers have begun to focus on conserving cash to preserve liquidity, which will have a negative impact on airframe and aftermarket sales.
- The potential to weaken the financial position of some of our customers. If circumstances surrounding our customers’ financial capabilities were to deteriorate, asset write-downs or write-offs could negatively affect our operating results and, if large, could have a material adverse effect on our business, financial condition, results of operations and cash flow.
- Disruption of our supply chain. Our third-party manufacturers, suppliers, third-party distributors, sub-contractors and customers have been and will be disrupted by worker absenteeism, quarantines and restrictions on their employees’ ability to work, office and factory closures, disruptions to ports and other shipping infrastructure, border closures, or other travel or health-related restrictions. Depending on the magnitude of such effects on our manufacturing or the operations of our suppliers, third-party distributors, or sub-contractors, our supply chain, manufacturing and product shipments could be delayed, which could adversely affect our business, operations, and customer relationships.
- The need to incur additional restructuring charges to optimize our cost structure.

To the extent the COVID-19 pandemic adversely affects our business, results of operations, financial condition and cash flows, it may also heighten many of the other risks described in this section and in the “Risk Factors” section of our Annual Report on Form 10-K for the fiscal year ended December 31, 2019. The ultimate impact of COVID-19 on our business, results of operations, financial condition and cash flows is dependent on future developments, including the duration of the pandemic and the related length of its impact on the global economy, which are uncertain and cannot be predicted at this time.

Item 2. Unregistered sales of equity securities and use of proceeds

c. The following table summarizes our purchases of our common stock for the quarter ended June 27, 2020.

Period	(a) Total Number of Shares Purchased	(b) Average Price Paid Per Share	(c) Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	(d) Maximum Dollar Value of Shares that may yet be Purchased Under the Program (1)
March 29, 2020 - June 27. 2020	—	—	—	$41,483,815

In connection with the exercise of stock options, we accept, from time to time, delivery of shares to pay the exercise price of stock options.

(1) On September 17, 2019, the Company's Board of Directors authorized an additional repurchase of up to $50 million. Approximately 282,000 shares were repurchased at a cost of $7.7 million before the 10b5-1 plan associated with the share repurchase program was terminated on February 3, 2020.

Item 3. Defaults Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

None.

Item 5. Other Information

None.

Item 6. Exhibits

Exhibit 31.1	Section 302 Certification - Chief Executive Officer
Exhibit 31.2	Section 302 Certification - Chief Financial Officer
Exhibit 32	Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
Exhibit 101.1*	Instance Document
Exhibit 101.2*	Schema Document
Exhibit 101.3*	Calculation Linkbase Document
Exhibit 101.4*	Labels Linkbase Document
Exhibit 101.5*	Presentation Linkbase Document
Exhibit 101.6*	Definition Linkbase Document

* Submitted electronically herewith.

SIGNATURES

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

			ASTRONICS CORPORATION
			(Registrant)
Date:	August 4, 2020	By:	/s/ David C. Burney
			David C. Burney Executive Vice President and Chief Financial Officer (Principal Financial Officer)

Exhibit 31.1

SECTION 302 CERTIFICATION

Certification of Chief Executive Officer pursuant to Exchange Act rule 13a-14(a) as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Peter J. Gundermann, President and Chief Executive Officer, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Astronics Corporation;

1. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

1. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

1. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    a. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    a. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    a. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

1. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing equivalent functions):

    a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    a. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: 8/4/2020

/s/ Peter J. Gundermann

Peter J. Gundermann
President and Chief Executive Officer

Exhibit 31.2

SECTION 302 CERTIFICATION

Certification of Chief Financial Officer pursuant to Exchange Act Rule 13a-14(a) as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, David C. Burney, Chief Financial Officer, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Astronics Corporation;

1. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

1. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

1. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    a. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    a. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    a. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

1. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing equivalent functions):

    a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    a. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: 8/4/2020

/s/ David C. Burney

David C. Burney
Chief Financial Officer

Exhibit 32

Certification pursuant to
18 U.S.C. Section 1350,
as adopted pursuant to
Section 906 of the Sarbanes-Oxley Act of 2002

Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, the undersigned officers of Astronics Corporation (the "Company") hereby certify that:

The Company's Quarterly Report on Form 10-Q for the quarter ended June 27, 2020 fully complies with the requirements of section 13(a) or 15(d) of the Securities and Exchange Act of 1934 and the information contained in the Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of the Company.

August 4, 2020	/s/ Peter J. Gundermann
	Peter J. Gundermann
	Title: Chief Executive Officer
August 4, 2020	/s/ David C. Burney
	David C. Burney
	Title: Chief Financial Officer

This certification shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liability of that section. This certification shall not be deemed to be incorporated by reference into any filing under the Securities Act of 1933, as amended, or the Exchange Act, except to the extent specifically incorporated by the Company into such filing.