
**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 September 29, 2018

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)

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

Securities registered pursuant to Section 12(g) of the Act:
\$.01 par value Common Stock, \$.01 par value Class B Stock
(Title of Class)

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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 September 29, 2018, 32,314,884 shares of common stock were outstanding consisting of 21,654,081 shares of common stock (\$.01 par value) and 10,660,803 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
September 29, 2018 with Comparative Figures for December 31, 2017
(In thousands)

	September 29, 2018 (Unaudited)	December 31, 2017
Current Assets:		
Cash and Cash Equivalents	\$ 4,893	\$ 17,914
Accounts Receivable, Net of Allowance for Doubtful Accounts	189,110	132,633
Inventories	154,870	150,196
Prepaid Expenses and Other Current Assets	17,155	14,586
Total Current Assets	366,028	315,329
Property, Plant and Equipment, Net of Accumulated Depreciation	124,652	125,830
Other Assets	21,893	15,659
Intangible Assets, Net of Accumulated Amortization	138,347	153,493
Goodwill	125,136	125,645
Total Assets	\$ 776,056	\$ 735,956
Current Liabilities:		
Current Maturities of Long-term Debt	\$ 1,965	\$ 2,689
Accounts Payable	42,184	41,846
Accrued Expenses and Other Current Liabilities	43,338	38,749
Customer Advance Payments and Deferred Revenue	30,186	19,607
Total Current Liabilities	117,673	102,891
Long-term Debt	257,680	269,078
Other Liabilities	31,258	34,060
Total Liabilities	406,611	406,029
Shareholders' Equity:		
Common Stock	341	340
Accumulated Other Comprehensive Loss	(15,425)	(13,352)
Other Shareholders' Equity	384,529	342,939
Total Shareholders' Equity	369,445	329,927
Total Liabilities and Shareholders' Equity	\$ 776,056	\$ 735,956

See notes to consolidated condensed financial statements.

ASTRONICS CORPORATION
Consolidated Condensed Statements of Operations
Three and Nine Months Ended September 29, 2018 With Comparative Figures for 2017
(Unaudited)
(In thousands, except per share data)

	Nine Months Ended		Three Months Ended	
	September 29, 2018	September 30, 2017	September 29, 2018	September 30, 2017
Sales	\$ 600,339	\$ 453,146	\$ 212,674	\$ 149,636
Cost of Products Sold	467,315	348,186	166,354	117,143
Gross Profit	133,024	104,960	46,320	32,493
Selling, General and Administrative Expenses	87,919	65,573	27,976	22,099
Income from Operations	45,105	39,387	18,344	10,394
Other Expense, Net of Other Income	1,091	931	253	311
Interest Expense, Net of Interest Income	7,326	3,750	2,511	1,437
Income Before Income Taxes	36,688	34,706	15,580	8,646
Provision for (Benefit from) Income Taxes	2,370	9,374	(1,419)	2,586
Net Income	\$ 34,318	\$ 25,332	\$ 16,999	\$ 6,060
Earnings Per Share:				
Basic	\$ 1.06	\$ 0.77	\$ 0.53	\$ 0.19
Diluted	\$ 1.04	\$ 0.74	\$ 0.52	\$ 0.18

See notes to consolidated condensed financial statements.

ASTRONICS CORPORATION
Consolidated Condensed Statements of Comprehensive Income
Three and Nine Months Ended September 29, 2018 With Comparative Figures for 2017
(Unaudited)
(In thousands)

	Nine Months Ended		Three Months Ended	
	September 29, 2018	September 30, 2017	September 29, 2018	September 30, 2017
Net Income	\$ 34,318	\$ 25,332	\$ 16,999	\$ 6,060
Other Comprehensive (Loss) Income:				
Foreign Currency Translation Adjustments	(1,346)	3,987	226	1,496
Retirement Liability Adjustment – Net of Tax	646	392	216	130
Total Other Comprehensive (Loss) Income	(700)	4,379	442	1,626
Comprehensive Income	\$ 33,618	\$ 29,711	\$ 17,441	\$ 7,686

See notes to consolidated condensed financial statements.

ASTRONICS CORPORATION
Consolidated Condensed Statements of Cash Flows
Nine Months Ended September 29, 2018
With Comparative Figures for 2017
(Unaudited)
(In thousands)

	Nine Months Ended	
	September 29, 2018	September 30, 2017
Cash Flows From Operating Activities:		
Net Income	\$ 34,318	\$ 25,332
Adjustments to Reconcile Net Income to Cash Provided By Operating Activities:		
Depreciation and Amortization	26,756	19,269
Provisions for Non-Cash Losses on Inventory and Receivables	2,432	943
Stock Compensation Expense	2,349	2,203
Deferred Tax Benefit	(1,536)	(920)
Other	(507)	(657)
Cash Flows from Changes in Operating Assets and Liabilities:		
Accounts Receivable	(52,890)	(1,515)
Inventories	(15,768)	(18,480)
Accounts Payable	571	8,267
Accrued Expenses	4,977	(5,483)
Other Current Assets and Liabilities	(1,620)	(4,556)
Customer Advanced Payments and Deferred Revenue	19,241	(2,336)
Income Taxes	(4,315)	(883)
Supplemental Retirement and Other Liabilities	1,351	1,129
Cash Provided By Operating Activities	<u>15,359</u>	<u>22,313</u>
Cash Flows From Investing Activities:		
Acquisition of Business, Net of Cash Acquired	—	(10,199)
Capital Expenditures	(12,416)	(9,715)
Other Investing Activities	(3,376)	(2,070)
Cash Used For Investing Activities	<u>(15,792)</u>	<u>(21,984)</u>
Cash Flows From Financing Activities:		
Proceeds from Long-term Debt	35,015	42,000
Payments for Long-term Debt	(47,116)	(13,031)
Purchase of Outstanding Shares for Treasury	—	(32,382)
Debt Acquisition Costs	(516)	—
Proceeds from Exercise of Stock Options	283	349
Cash Used For Financing Activities	<u>(12,334)</u>	<u>(3,064)</u>
Effect of Exchange Rates on Cash	(254)	211
Decrease in Cash and Cash Equivalents	<u>(13,021)</u>	<u>(2,524)</u>
Cash and Cash Equivalents at Beginning of Period	17,914	17,901
Cash and Cash Equivalents at End of Period	<u>\$ 4,893</u>	<u>\$ 15,377</u>

See notes to consolidated condensed financial statements.

ASTRONICS CORPORATION
Notes to Consolidated Condensed Financial Statements
September 29, 2018
(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.

All share quantities and per share data reported have been restated to reflect the impact of the three-for-twenty Class B stock distribution to shareholders of record on October 12, 2018.

Operating Results

The results of operations for any interim period are not necessarily indicative of results for the full year. Operating results for the nine months ended September 29, 2018 are not necessarily indicative of the results that may be expected for the year ending December 31, 2018.

The balance sheet at December 31, 2017 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 2017 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, electronics and semiconductor 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 operations in the United States ("U.S."), Canada and France. We design and build our products through our wholly owned subsidiaries Astronics Advanced Electronic Systems Corp. ("AES"); Astronics AeroSat Corporation ("AeroSat"); Armstrong Aerospace, Inc. ("Armstrong"); Astronics Test Systems, Inc. ("ATS"); Ballard Technology, Inc. ("Ballard"); Astronics Connectivity Systems and Certification Corp. ("CSC"); Astronics Custom Control Concepts Inc. ("CCC"); Astronics DME LLC ("DME"); Luminescent Systems, Inc. ("LSI"); Luminescent Systems Canada, Inc. ("LSI Canada"); Max-Viz, Inc. ("Max-Viz"); Peco, Inc. ("Peco"); and PGA Electronic s.a. ("PGA").

On April 3, 2017, Astronics Custom Control Concepts Inc., a wholly owned subsidiary of the Company acquired substantially all the assets and certain liabilities of Custom Control Concepts LLC, located in Kent, Washington. CCC is a provider of cabin management and in-flight entertainment systems for a range of aircraft. CCC is included in our Aerospace segment.

On December 1, 2017, Astronics acquired substantially all of the assets of Telefonix Inc. and a related company, Product Development Technologies, LLC and its subsidiaries, to become CSC, primarily located in Waukegan and Lake Zurich, Illinois. CSC designs and manufactures advanced in-flight entertainment and connectivity equipment, and provides industry leading design consultancy services for the global aerospace industry. CSC is included in our Aerospace Segment.

For additional information regarding these acquisitions see Note 18.

Cost of Products Sold, Engineering and Development 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 \$31.2 million and \$23.7 million for the three months ended and \$89.0 million and \$69.5 million for the nine months ended September 29, 2018 and September 30, 2017, 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 nine months ended September 29, 2018 and September 30, 2017.

Foreign Currency Translation

The aggregate transaction gain or loss included in operations was insignificant for the three and nine months ended September 29, 2018 and September 30, 2017.

Newly Adopted and Recent Accounting Pronouncements

In May 2014, the FASB issued Accounting Standards Update (“ASU”) No. 2014-09, *Revenue from Contracts with Customers* (“ASU 2014-09”), that, together with several subsequent updates, outlines a single comprehensive model for entities to use in accounting for revenue arising from contracts with customers and supersedes most current revenue recognition guidance. ASU 2014-09 is based on the principle that an entity should recognize revenue to depict the transfer of goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. ASU 2014-09 also provides for enhanced disclosure requirements surrounding revenue recognition.

Prior to the adoption of ASU 2014-09, revenue on a significant portion of our contracts had been recognized at the time of shipment of goods, transfer of title and customer acceptance, as required. Our revenue transactions generally consist of a single performance obligation to transfer promised goods and are not accounted for under industry-specific guidance. We have retained much of the same accounting treatment used to recognize revenue under the prior standard. However, the adoption of ASU 2014-09 required us to accelerate the recognition of revenue as compared to the prior standard for certain customers, in cases where we produce products unique to those customers, and for which we would have an enforceable right of payment, inclusive of profit, for production completed to date.

We adopted ASU 2014-09 on January 1, 2018 using the modified retrospective method, which required the recognition of the cumulative effect of the transition as an adjustment to retained earnings. The Company elected to apply the standard only to open contracts as of January 1, 2018. Based on the application of the changes described above, we recognized a transition adjustment of \$3.3 million, net of tax effects, which increased our January 1, 2018 retained earnings. Based on our existing operations, ASU 2014-09 is not expected to have a material impact to net earnings for the year ended December 31, 2018. Refer to Note 2 for additional information.

During the first quarter of 2018, the Company early-adopted ASU No. 2018-02, *Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income*, which allows for a reclassification from accumulated other comprehensive income (loss) to retained earnings for stranded tax effects resulting from the Tax Cuts and Jobs Act. The Company applied the guidance as of the beginning of the period of adoption and reclassified approximately \$1.4 million from accumulated other comprehensive loss to retained earnings due to the change in federal corporate tax rate.

In February 2016, the FASB issued ASU No. 2016-02, *Leases*. ASU 2016-02 required entities to adopt the new standard using a modified retrospective method and initially apply the related guidance at the beginning of the earliest period presented in the financial statements. During July 2018, the FASB issued ASU 2018-11, which allows for an additional and optional transition method under which an entity would record a cumulative-effect adjustment at the beginning of the period of adoption (“cumulative-effect method”). We will adopt this guidance as of January 1, 2019 using the cumulative-effect method. We anticipate an increase in our assets and liabilities due to the recognition of the required right-of-use asset and corresponding lease obligations for leases that are currently classified as operating leases. While the adoption will result in an increase to assets and liabilities on the balance sheet, we do not expect that the impact will be material to our consolidated balance sheet. In addition, we do not expect that the adoption will result in a material impact to our consolidated statement of operations.

In October 2016, the FASB issued ASU No. 2016-16, *Income Taxes (Topic 740): Intra-Entity Transfer of Assets Other Than Inventory*, which requires entities to recognize income tax consequences of intra-entity transfers of assets, other than inventory, when the transfer occurs rather than when the asset is sold to a third party as is the case under current GAAP. The Company adopted ASU 2016-16 effective January 1, 2018, and such adoption did not have a material impact on the consolidated financial statements.

In January 2017, the FASB issued ASU No. 2017-01, *Clarifying the Definition of a Business*, which narrows the existing definition of a business and provides a framework for evaluating whether a transaction should be accounted for as an acquisition (or disposal) of assets or a business. The ASU requires an entity to evaluate if substantially all of the fair value of the gross assets acquired is concentrated in a single identifiable asset or a group of similar identifiable assets; if so, the set of transferred assets and activities (collectively, the set) is not a business. To be considered a business, the set would need to include an input and a substantive process that together significantly contribute to the ability to create outputs. The standard also narrows the definition of outputs. The definition of a business affects areas of accounting such as acquisitions, disposals

and goodwill. Under the new guidance, fewer acquired sets are expected to be considered businesses. The Company adopted ASU 2017-01 effective January 1, 2018. The Company will apply this guidance to applicable transactions after the adoption date on a prospective basis. No applicable transactions have occurred as of September 29, 2018.

In March 2017, the FASB issued ASU No. 2017-07, *Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost*. This ASU changes how employers that sponsor defined benefit pension and/or other postretirement benefit plans present the net periodic benefit cost in the income statement. This ASU was adopted as of January 1, 2018 on a retrospective basis. Under the new standard, only the service cost component of net periodic benefit cost would be included in operating expenses. All other net periodic benefit costs components (such as interest cost, prior service cost amortization and actuarial gain/loss amortization) would be reported outside of operating income. These include components totaling \$0.5 million and \$0.4 million for the three months ended and \$1.5 million and \$1.3 million for the nine months ended September 29, 2018 and September 30, 2017, respectively, that no longer are included within Selling, General and Administrative Expenses and instead are reported outside of income from operations, within Other Expense, Net of Other Income in our Consolidated Statements of Operations.

In May 2017, the FASB issued ASU No. 2017-09, *Scope of Modification Accounting*, that clarifies when changes to the terms or conditions of a share-based payment award must be accounted for as a modification. The general model for accounting for modifications of share-based payment awards is to record the incremental value arising from the changes as additional compensation cost. Under the new standard, fewer changes to the terms of an award would require accounting under this modification model. This ASU was adopted as of January 1, 2018. As the Company has not made changes to the terms or conditions of its issued share-based payment awards, this ASU had no impact on our consolidated results of operations and financial condition.

2) Revenue

As discussed in Note 1, ASU 2014-09 was adopted on January 1, 2018 using the modified retrospective method, which required the recognition of the cumulative effect of the transition as an adjustment to retained earnings.

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 service.

Payment terms and conditions vary by contract, although terms generally include a requirement of payment within a range from 30 to 60 days, 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. As of September 29, 2018, the Company does not have such incremental, material costs on any open contracts with an original expected duration of greater than one year, and therefore such costs are expensed as incurred. These incremental costs include, but are not limited to, sales commissions incurred to obtain a contract with a customer.

The Company recognizes an asset for certain costs to fulfill a contract if it is determined that the costs relate directly to a contract or anticipated contracts 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 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. Included in Inventories at September 29, 2018 are capitalized fulfillment costs of \$9.6 million. As of September 29, 2018, the Company estimates that the amortization period of these costs is approximately 4 years. Amortization of fulfillment costs recognized within Cost of Products Sold was insignificant in the three months ended and approximately \$0.7 million in the nine months ended September 29, 2018.

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. A contract's transaction price is allocated to each distinct performance obligation and recognized as revenue when, or as, the performance obligation is satisfied. 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. 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 a 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 not distinct, and, therefore, are accounted for as part of the existing contract. The aggregate effect of all modifications as of the period beginning January 1, 2018 has been reflected when identifying the satisfied and unsatisfied performance obligations, determining the transaction price and allocating the transaction price. Contracts modified prior to January 1, 2018 have not been retrospectively restated.

The vast 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 with customers in which the Company satisfies a promise to the customer to provide a product 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. Therefore, due to control transferring over time, the Company typically recognizes revenue on a straight-line basis throughout the contract period.

On September 29, 2018, we had \$398.1 million of remaining performance obligations, which we refer to as total backlog. We expect to recognize approximately \$187.5 million of our remaining performance obligations as revenue in 2018.

We recognized the cumulative effect of initially applying the new revenue standard as an adjustment to the opening balance of retained earnings. The comparative information has not been restated and continues to be reported under the accounting standards in effect for those periods.

The cumulative effect of the changes made to our consolidated January 1, 2018 balance sheet for the adoption of ASU 2014-09, were as follows (in thousands):

Balance Sheet	Balance at December 31, 2017	Adjustments Due to ASU 2014-09	Balance at January 1, 2018
Assets			
Accounts Receivable, Net of Allowance for Doubtful Accounts	\$ 132,633	\$ 4,005	\$ 136,638
Inventories	\$ 150,196	\$ (7,957)	\$ 142,239
Liabilities			
Accrued Income Taxes	\$ 261	\$ 1,028	\$ 1,289
Customer Advance Payments and Deferred Revenue	\$ 19,607	\$ (8,176)	\$ 11,431
Deferred Income Taxes	\$ 5,121	\$ (72)	\$ 5,049
Equity			
Retained Earnings	\$ 325,191	\$ 3,268	\$ 328,459

In accordance with the new revenue standard requirements, the disclosure of the impact of adoption on our consolidated income statement and balance sheet was as follows (in thousands):

Income Statement	For the Nine Months Ended September 29, 2018			For the Three Months Ended September 29, 2018		
	As Reported	Effect of Change Higher/(Lower)	Balances Without Adoption of ASU 2014-09	As Reported	Effect of Change Higher/(Lower)	Balances Without Adoption of ASU 2014-09
Revenues						
Aerospace	\$ 500,383	\$ 424	\$ 499,959	\$ 169,579	\$ 1,195	\$ 168,384
Test Systems	\$ 99,956	\$ 1,344	\$ 98,612	\$ 43,095	\$ 1,919	\$ 41,176
Costs and Expenses						
Cost of Products Sold	\$ 467,315	\$ 1,272	\$ 466,043	\$ 166,354	\$ 2,739	\$ 163,615
Provision for (Benefit from) Income Taxes	\$ 2,370	\$ 152	\$ 2,218	\$ (1,419)	\$ 130	\$ (1,549)
Net Income	\$ 34,318	\$ 344	\$ 33,974	\$ 16,999	\$ 245	\$ 16,754

Balance Sheet	September 29, 2018		
	As Reported	Effect of Change Higher/(Lower)	Balances Without Adoption of ASU 2014-09
Assets			
Accounts Receivable, Net of Allowance for Doubtful Accounts	\$ 189,110	\$ 10,114	\$ 178,996
Inventories	\$ 154,870	\$ (9,230)	\$ 164,100
Liabilities			
Accrued Expenses and Other Current Liabilities	\$ 43,338	\$ 1,895	\$ 41,443
Customer Advance Payments and Deferred Revenue	\$ 30,186	\$ (3,836)	\$ 34,022
Other Liabilities	\$ 31,258	\$ (787)	\$ 32,045
Equity			
Other Shareholders' Equity	\$ 384,529	\$ 3,612	\$ 380,917

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 Balance Sheet.

Billings in excess of cost includes billings in excess of revenue recognized as well as deferred revenue, which includes advanced payments, up-front payments, and progress billing payments. Billings in excess of cost are classified as current liabilities, reported in our Consolidated Balance Sheet within Customer Advance Payments and Deferred Revenue. 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 incurs costs to satisfy 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 \$6.3 million during the three and nine months ended September 29, 2018 in revenues that were included in the contract liability balance at July 1, 2018 and January 1, 2018.

The Company's contract assets and contract liabilities consist of costs in excess of billings and billings in excess of cost, respectively. The following table presents the beginning and ending balances of contract assets and contract liabilities during the nine months ended September 29, 2018 (in thousands):

	Contract Assets		Contract Liabilities	
Beginning Balance, January 1, 2018 (1)	\$	24,423	\$	11,431
Ending Balance, September 29, 2018	\$	29,927	\$	30,912

(1) Due to the adoption of ASU 2014-09 effective January 1, 2018, the Company recorded a transition adjustment to the opening balance of Contract Assets and Contract Liabilities at January 1, 2018. Refer to the cumulative effect of the changes table above for further explanation of the changes made to our consolidated January 1, 2018 balance sheet.

The following table presents our revenue disaggregated by Market Segments (in thousands):

	Nine Months Ended		Three Months Ended	
	September 29, 2018	September 30, 2017	September 29, 2018	September 30, 2017
Aerospace Segment				
Commercial Transport	\$ 402,539	\$ 306,898	\$ 136,692	\$ 98,821
Military	46,410	46,297	16,125	15,365
Business Jet	30,291	28,844	9,289	10,592
Other	21,143	12,998	7,473	3,885
Aerospace Total	500,383	395,037	169,579	128,663
Test Systems Segment				
Semiconductor	72,061	18,343	33,596	6,632
Aerospace & Defense	27,895	39,766	9,499	14,341
Test Systems Total	99,956	58,109	43,095	20,973
Total	\$ 600,339	\$ 453,146	\$ 212,674	\$ 149,636

The following table presents our revenue disaggregated by Product Lines (in thousands):

	Nine Months Ended		Three Months Ended	
	September 29, 2018	September 30, 2017	September 29, 2018	September 30, 2017
Aerospace Segment				
Electrical Power & Motion	\$ 218,931	\$ 199,014	\$ 78,610	\$ 63,972
Lighting & Safety	129,244	122,317	43,481	37,001
Avionics	100,354	31,424	31,059	11,348
Systems Certification	12,028	9,405	2,373	4,454
Structures	18,683	19,879	6,583	8,003
Other	21,143	12,998	7,473	3,885
Aerospace Total	500,383	395,037	169,579	128,663
Test Systems	99,956	58,109	43,095	20,973
Total	\$ 600,339	\$ 453,146	\$ 212,674	\$ 149,636

3) Inventories

Inventories are as follows:

(In thousands)	September 29, 2018	December 31, 2017
Finished Goods	\$ 31,951	\$ 35,193
Work in Progress	39,319	33,219
Raw Material	83,600	81,784
	\$ 154,870	\$ 150,196

4) Property, Plant and Equipment

The following table summarizes Property, Plant and Equipment as follows:

(In thousands)	September 29, 2018	December 31, 2017
Land	\$ 11,205	\$ 11,237
Buildings and Improvements	82,666	81,872
Machinery and Equipment	109,871	105,827
Construction in Progress	6,643	9,761
	<u>210,385</u>	<u>208,697</u>
Less Accumulated Depreciation	85,733	82,867
	<u>\$ 124,652</u>	<u>\$ 125,830</u>

5) Intangible Assets

The following table summarizes acquired intangible assets as follows:

(In thousands)	Weighted Average Life	September 29, 2018		December 31, 2017	
		Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
Patents	11 years	\$ 2,146	\$ 1,694	\$ 2,146	\$ 1,629
Non-compete Agreement	4 years	10,900	3,932	10,900	1,687
Trade Names	10 years	11,465	4,915	11,492	4,114
Completed and Unpatented Technology	10 years	38,069	14,951	38,114	11,931
Backlog	2 years	14,424	14,424	14,424	12,184
Customer Relationships	15 years	137,984	36,725	137,967	30,005
Total Intangible Assets	12 years	<u>\$ 214,988</u>	<u>\$ 76,641</u>	<u>\$ 215,043</u>	<u>\$ 61,550</u>

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

(In thousands)	Nine Months Ended		Three Months Ended	
	September 29, 2018	September 30, 2017	September 29, 2018	September 30, 2017
Amortization Expense	<u>\$ 15,144</u>	<u>\$ 8,269</u>	<u>\$ 4,276</u>	<u>\$ 2,929</u>

Amortization expense for acquired intangible assets expected for 2018 and for each of the next five years is summarized as follows:

(In thousands)	
2018	\$ 19,403
2019	16,707
2020	15,981
2021	14,072
2022	13,637
2023	12,470

6) Goodwill

The following table summarizes the changes in the carrying amount of goodwill for the nine months ended September 29, 2018:

(In thousands)	December 31, 2017	Acquisition/Adjustments	Foreign Currency Translation	September 29, 2018
Aerospace	\$ 125,645	\$ (241)	\$ (268)	\$ 125,136
Test Systems	—	—	—	—
	<u>\$ 125,645</u>	<u>\$ (241)</u>	<u>\$ (268)</u>	<u>\$ 125,136</u>

7) Long-term Debt and Notes Payable

The Company's Fourth Amended and Restated Credit Agreement (the "Original Facility") provided for a \$350 million revolving credit line with the option to increase the line by up to \$150 million. The maturity date of the Original Facility was January 13, 2021. On February 16, 2018, the Company modified and extended the Original Facility by entering into the Fifth Amended and Restated Credit Agreement (the "Agreement"), which provides for a \$500 million revolving credit line with the option to increase the line by up to \$150 million. A new lender was added to the facility as well. The outstanding balance of the Original Facility was rolled into the Agreement on the date of closing. The maturity date of the loans under the Agreement is February 16, 2023. At September 29, 2018, there was \$252.0 million outstanding on the revolving credit facility and there remains \$246.9 million available, net of outstanding letters of credit. The credit facility allocates up to \$20 million of the \$500 million revolving credit line for the issuance of letters of credit, including certain existing letters of credit. At September 29, 2018, outstanding letters of credit totaled \$1.1 million.

The maximum permitted leverage ratio of funded debt to Adjusted EBITDA (as defined in the Agreement) is 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's leverage ratio was 2.59 to 1 at September 29, 2018. The Company will pay 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 will also pay 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 Company's obligations under the Credit Agreement as amended are jointly and severally guaranteed by each domestic subsidiary of the Company other than a non-material subsidiary. 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 Agreement 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 from 12 to 60 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:

(In thousands)	Nine Months Ended		Three Months Ended	
	September 29, 2018	September 30, 2017	September 29, 2018	September 30, 2017
Balance at Beginning of Period	\$ 5,136	\$ 4,675	\$ 5,180	\$ 4,637
Acquisitions	—	359	—	—
Warranties Issued	2,102	1,315	801	483
Warranties Settled	(2,219)	(1,832)	(934)	(608)
Reassessed Warranty Exposure	(77)	101	(105)	106
Balance at End of Period	<u>\$ 4,942</u>	<u>\$ 4,618</u>	<u>\$ 4,942</u>	<u>\$ 4,618</u>

9) *Income Taxes*

During the three and nine months ended September 29, 2018, the Company determined that a revised state filing position could be taken which would reduce the taxable income apportioned for certain state income tax purposes. The Company concluded that amended state income tax returns would be filed for the open tax years of 2014 through 2017 to reflect this revised tax position and claim the associated tax benefits. Due to the revised filing position, the associated deferred tax liabilities have been revalued as well. Accordingly, the Company has recorded a discrete tax benefit of \$4.0 million (net of a \$1.7 million uncertain tax position reserve) related to these items in three and nine month periods ended September 29, 2018. The Company has also reflected this filing position in calculating its 2018 tax provision.

The effective tax rates were approximately (9.1)% and 29.9% for the three months ended and 6.5% and 27.0% for the nine months ended September 29, 2018 and September 30, 2017, respectively. In addition to the adjustments described above, the 2018 tax rate was favorably impacted by a reduction to the provisional income tax on the deemed repatriation of foreign earnings and profits of approximately \$0.4 million which was recognized as a discrete item during the period. Absent these discrete adjustments, the tax rate for the three and nine months ended September 29, 2018 would have been 18.5% and 19.3% respectively. Finally, the 2018 tax rate was favorably impacted by the federal research and development tax credit, the impact of which was partially offset by state tax expense.

On December 22, 2017, the President of the United States signed into law the Tax Cuts and Jobs Act (the “Act”). The legislation significantly changed U.S. tax law by, among other things, lowering corporate income tax rates, implementing a territorial tax system and imposing a repatriation tax on deemed repatriated earnings of foreign subsidiaries. The Act permanently reduced the U.S. corporate income tax rate from a maximum of 35% to a 21% rate, effective January 1, 2018.

While the Tax Cuts and Jobs Act provides for a territorial tax system, beginning in 2018, it includes the foreign-derived intangible income (“FDII”) and global intangible low-taxed income (“GILTI”) provisions. The Company elected to account for GILTI tax in the period in which it is incurred. The GILTI provisions require the Company to include in its U.S. income tax return foreign subsidiary earnings in excess of an allowable return on the foreign subsidiary’s tangible assets. The GILTI tax expense resulted from required allocations of interest expense to the GILTI income, which created a U.S. foreign tax credit limitation. The FDII provisions allow for a deduction equal to a percentage of the foreign-derived intangible income of a domestic corporation. As a result of these provisions, net, the Company’s effective tax rate decreased approximately 0.3% and increased approximately 0.2% for the six months and three months ended September 29, 2018, respectively.

On December 22, 2017, the SEC staff issued Staff Accounting Bulletin No. 118 (“SAB 118”) to address the application of GAAP in situations when a registrant does not have the necessary information available, prepared, or analyzed (including computations) in reasonable detail to complete the accounting for certain income tax effects of the Act. The Company recognized provisional tax impacts related to the deemed repatriated earnings and the revaluation of deferred tax assets and liabilities in its consolidated financial statements for the year ended December 31, 2017. During the six months and three months ended September 29, 2018, the Company did not make any adjustments to its provisional amounts included in its consolidated financial statements for the year ended December 31, 2017. During the three and nine months ended September 29, 2018, the Company made an adjustment to its provisional amounts included in its consolidated financial statements for the year ended December 31, 2017 resulting in a benefit of approximately \$0.4 million. The Company expects that there could be more changes in interpretations and assumptions made by the Company or additional regulatory guidance issued that would further adjust the provisional tax amounts. As such, the accounting for the income tax effects of the Act are provisional as of September 29, 2018. The accounting will be completed in the fourth quarter of 2018.

10) Shareholders' Equity

The changes in shareholders' equity for the nine months ended September 29, 2018 are summarized as follows as adjusted to reflect the impact of the three-for-twenty distribution of Class B Stock as discussed in Note 11:

(Dollars and Shares in thousands)	Amount	Number of Shares	
		Common Stock	Convertible Class B Stock
Shares Authorized		40,000	15,000
Share Par Value		\$ 0.01	\$ 0.01
COMMON STOCK			
Beginning of Period	\$ 340	22,861	11,082
Conversion of Class B Shares to Common Shares		443	(443)
Exercise of Stock Options	1	25	22
End of Period	\$ 341	23,329	10,661
ADDITIONAL PAID IN CAPITAL			
Beginning of Period	\$ 67,748		
Stock Compensation Expense	2,349		
Exercise of Stock Options	282		
End of Period	\$ 70,379		
ACCUMULATED OTHER COMPREHENSIVE LOSS			
Beginning of Period	\$ (13,352)		
Adoption of ASU 2018-02	(1,373)		
Foreign Currency Translation Adjustment	(1,346)		
Retirement Liability Adjustment – Net of Tax	646		
End of Period	\$ (15,425)		
RETAINED EARNINGS			
Beginning of Period	\$ 325,191		
Adoption of ASU 2014-09	3,268		
Adoption of ASU 2018-02	1,373		
Net Income	34,318		
End of Period	\$ 364,150		
TREASURY STOCK			
Beginning of Period	\$ (50,000)	(1,675)	
Purchase	—	—	
End of Period	\$ (50,000)	(1,675)	
TOTAL SHAREHOLDERS' EQUITY			
Beginning of Period	\$ 329,927		
End of Period	\$ 369,445	21,654	10,661

On February 24, 2016, the Company's Board of Directors authorized the repurchase of up to \$50 million of common stock (the "Buyback Program"). The Buyback Program allowed the Company to purchase shares of its common stock in accordance with applicable securities laws on the open market or through privately negotiated transactions. The Company has repurchased approximately 1,675,000 shares and has completed that program. On December 12, 2017, the Company's Board of Directors authorized an additional repurchase of up to \$50 million. No amounts have been repurchased under the new program as of September 29, 2018.

11) Earnings Per Share

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

(In thousands)	Nine Months Ended		Three Months Ended	
	September 29, 2018	September 30, 2017	September 29, 2018	September 30, 2017
Weighted Average Shares - Basic	32,304	33,096	32,317	32,570
Net Effect of Dilutive Stock Options	731	1,124	652	780
Weighted Average Shares - Diluted	33,035	34,220	32,969	33,350

The above information has been adjusted to reflect the impact of the three-for-twenty Class B stock distribution to shareholders of record on October 12, 2018.

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 19,000 shares as of September 29, 2018.

12) Accumulated Other Comprehensive Loss and Other Comprehensive Income

The components of accumulated other comprehensive loss are as follows:

(In thousands)	September 29, 2018	December 31, 2017
Foreign Currency Translation Adjustments	\$ (5,811)	\$ (4,465)
Retirement Liability Adjustment – Before Tax	(12,170)	(12,988)
Tax Benefit of Retirement Liability Adjustment	3,929	4,101
Adoption of ASU 2018-02	(1,373)	—
Retirement Liability Adjustment – After Tax	(9,614)	(8,887)
Accumulated Other Comprehensive Loss	\$ (15,425)	\$ (13,352)

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

(In thousands)	Nine Months Ended		Three Months Ended	
	September 29, 2018	September 30, 2017	September 29, 2018	September 30, 2017
Foreign Currency Translation Adjustments	\$ (1,346)	\$ 3,987	\$ 226	\$ 1,496
Retirement Liability Adjustments:				
Reclassifications to General and Administrative Expense:				
Amortization of Prior Service Cost	303	303	101	101
Amortization of Net Actuarial Losses	515	300	172	100
Tax Benefit	(172)	(211)	(57)	(71)
Retirement Liability Adjustment	646	392	216	130
Other Comprehensive (Loss) Income	\$ (700)	\$ 4,379	\$ 442	\$ 1,626

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.

(In thousands)	Nine Months Ended		Three Months Ended	
	September 29, 2018	September 30, 2017	September 29, 2018	September 30, 2017
Service Cost	\$ 150	\$ 138	\$ 50	\$ 46
Interest Cost	675	672	225	224
Amortization of Prior Service Cost	291	291	97	97
Amortization of Net Actuarial Losses	471	279	157	93
Net Periodic Cost	\$ 1,587	\$ 1,380	\$ 529	\$ 460

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:

(In thousands)	Nine Months Ended		Three Months Ended	
	September 29, 2018	September 30, 2017	September 29, 2018	September 30, 2017
Service Cost	\$ 12	\$ 6	\$ 4	\$ 2
Interest Cost	34	30	11	10
Amortization of Prior Service Cost	12	12	4	4
Amortization of Net Actuarial Losses	44	21	15	7
Net Periodic Cost	\$ 102	\$ 69	\$ 34	\$ 23

14) Sales to Major Customers

The Company has a significant concentration of business with three 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 three customers represented 15%, 15%, and 12% of consolidated sales for the nine months ended and 13%, 14%, and 15% for the three months ended September 29, 2018. Sales to these customers were in the Aerospace and Test Systems segments. Accounts receivable from these customers at September 29, 2018 was approximately \$74.1 million. Sales to these three customers represented 20%, 17%, and 4% of consolidated sales for the three and nine months ended September 30, 2017.

15) Legal Proceedings

The Company is subject to various legal proceedings, claims, and litigation arising in the ordinary course of business. While the outcome of these matters is currently not determinable, we do not expect these matters will have a material adverse effect on our business, financial position, results of operations, or cash flows. However, the results of these matters cannot be predicted with certainty. Should the Company fail to prevail in any legal matter or should several legal matters be resolved against the Company in the same reporting period, then the financial results of that particular reporting period could be materially adversely affected.

On December 29, 2010, Lufthansa Technik AG (“Lufthansa”) filed a Statement of Claim in the Regional State Court of Mannheim, Germany. Lufthansa’s claim asserts that our subsidiary, 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 does 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 does not require AES to recall products that are already installed in aircraft or have 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. Additionally, if Lufthansa provides the required bank guarantee specified in the decision, the Company may be required to offer a recall of products that are in the distribution channels in Germany. No such bank guarantee has been issued to date. As of September 29, 2018, there are no products subject to the order in the distribution channels in Germany.

The Company appealed to the Higher Regional Court of Karlsruhe. On November 15, 2016, the Court 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. We estimate that the German Federal Supreme Court will provide its ruling on this issue in January 2019.

In July 2017, Lufthansa filed an action in the Regional State Court of Mannheim for payment of damages caused by the alleged patent infringement of AES, related to direct sales of the allegedly infringing product in Germany (associated with the original December 2010 action discussed above). In this action, which was served on AES on April 11, 2018, Lufthansa claims payment of approximately \$6.2 million plus interest. In October 2018, Lufthansa increased its claim to approximately \$6.4 million plus interest. According to AES's assessment, this claim is significantly higher than justified. We estimate AES's potential exposure to be approximately \$1 million to \$3 million, and have recorded a reserve of \$1 million associated with this matter. Such amount is recorded within Other Accrued Expenses and Selling, General and Administrative Expenses in the accompanying financial statements as of and for the nine month period ended September 29, 2018. An oral hearing has been scheduled for March 15, 2019. A first instance decision in this matter is expected in mid-2019.

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 seeks an injunction, an order obliging AES to provide information and accounting and a finding that AES owes damages for the attacked indirect sales. AES will vigorously defend against the action. No amount of claimed damages has been specified by Lufthansa and such amount is not quantifiable at this time. An oral hearing in this matter has been scheduled for March 15, 2019. A first instance decision in this matter is expected in mid-2019. As loss exposure is neither probable nor estimable at this time, the Company has not recorded any liability with respect to this litigation as of September 29, 2018.

In December 2017, Lufthansa filed patent infringement cases in the United Kingdom 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. As loss exposure is neither probable nor estimable at this time, the Company has not recorded any liability with respect to these matters as of September 29, 2018.

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, rendering 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 nine months ended September 29, 2018 and September 30, 2017 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.

(Dollars in thousands)	Nine Months Ended		Three Months Ended	
	September 29, 2018	September 30, 2017	September 29, 2018	September 30, 2017
Sales				
Aerospace	\$ 500,445	\$ 395,037	\$ 169,588	\$ 128,663
Less Intersegment Sales	(62)	—	(9)	—
Total Aerospace Sales	500,383	395,037	169,579	128,663
Test Systems	99,956	58,109	\$ 43,095	\$ 20,973
Total Consolidated Sales	\$ 600,339	\$ 453,146	\$ 212,674	\$ 149,636
Operating Profit and Margins				
Aerospace	\$ 47,525	\$ 46,753	\$ 16,210	\$ 13,015
	9.5 %	11.8 %	9.6 %	10.1 %
Test Systems	10,151	2,843	5,833	1,093
	10.2 %	4.9 %	13.5 %	5.2 %
Total Operating Profit	57,676	49,596	22,043	14,108
	9.6 %	10.9 %	10.4 %	9.4 %
Deductions from Operating Profit				
Interest Expense, Net of Interest Income	7,326	3,750	2,511	1,437
Corporate Expenses and Other	13,662	11,140	3,952	4,025
Income Before Income Taxes	\$ 36,688	\$ 34,706	\$ 15,580	\$ 8,646

Total Assets:

(In thousands)	September 29, 2018	December 31, 2017
Aerospace	\$ 639,826	\$ 621,047
Test Systems	112,455	90,859
Corporate	23,775	24,050
Total Assets	\$ 776,056	\$ 735,956

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. There were no financial assets or liabilities carried at fair value measured on a recurring basis at December 31, 2017 or September 29, 2018.

On a Non-recurring Basis:

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 Company utilizes a discounted cash flow analysis to estimate the fair value of reporting units utilizing unobservable inputs. The fair value measurement of the reporting unit under the step-one and step-two analysis of the quantitative goodwill impairment test are classified as Level 3 inputs.

Intangible assets that are amortized 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. For the Company's indefinite-lived intangible asset, the impairment test consists of comparing the fair value, determined using the relief from royalty method, with its carrying amount. An impairment loss would be recognized for the carrying amount in excess of its fair value.

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. As of September 29, 2018, the Company concluded that no indicators of impairment relating to intangible assets or goodwill existed and an interim test was not performed.

18) Acquisitions

Astronics Custom Control Concepts, Inc.

On April 3, 2017, Astronics Custom Control Concepts Inc., a wholly owned subsidiary of the Company, acquired substantially all the assets and certain liabilities of Custom Control Concepts LLC ("CCC"), located in Kent, Washington. CCC is a provider of cabin management and in-flight entertainment systems for a range of aircraft. The total consideration for the transaction was approximately \$10.2 million, net of \$0.5 million in cash acquired. All of the goodwill and purchased intangible assets are expected to be deductible for tax purposes over 15 years. The purchase price allocation for this acquisition has been finalized. CCC is included in our Aerospace segment.

Astronics Connectivity Systems and Certifications Corp.

On December 1, 2017, Astronics acquired substantially all of the assets of Telefonix Inc. and a related company, Product Development Technologies, LLC and its subsidiaries, to become Astronics Connectivity Systems and Certifications Corp. ("CSC"), primarily located in Waukegan and Lake Zurich, Illinois. CSC designs and manufactures advanced in-flight entertainment and connectivity equipment, and provides industry-leading design consultancy services for the global aerospace industry. The total consideration for the transaction was approximately \$103.8 million, net of \$0.2 million in cash acquired. All of the goodwill and purchased intangible assets are expected to be deductible for tax purposes over 15 years. CSC is included in our Aerospace Segment.

Refer to the Company's annual report on form 10-K for the fiscal year ended December 31, 2017 for further details on the assets acquired and liabilities assumed. There were no significant changes to the preliminary allocation of purchase price in the three or nine months ended September 29, 2018. The purchase price allocation for this acquisition has been finalized.

The following summary, prepared on a pro forma basis, combines the consolidated results of operations of the Company with those of CSC as if the acquisition took place on January 1, 2017. The pro forma consolidated results include the impact of certain adjustments, including increased interest expense on acquisition debt, amortization of purchased intangible assets and income taxes.

Unaudited	Nine Months Ended		Three Months Ended	
	September 30, 2017 as reported	September 30, 2017 Pro Forma	September 30, 2017 as reported	September 30, 2017 Pro Forma
(in thousands, except earnings per share)				
Sales	\$ 453,146	\$ 499,958	\$ 149,636	\$ 166,789
Net income	\$ 25,332	\$ 24,173	\$ 6,060	\$ 5,941
Basic earnings per share	\$ 0.77	\$ 0.73	\$ 0.19	\$ 0.18
Diluted earnings per share	\$ 0.74	\$ 0.71	\$ 0.18	\$ 0.18

The pro forma results are not necessarily indicative of what actually would have occurred if the acquisition had been in effect for the three and nine months ended September 30, 2017. In addition, they are not intended to be a projection of future results.

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, 2017.)

OVERVIEW

Astronics Corporation ("Astronics" or the "Company") is a leading provider of advanced technologies to the global aerospace, defense, electronics and semiconductor industries. Our products and services include advanced, high-performance electrical power generation, distribution and motion systems, lighting and safety systems, avionics products, aircraft structures, systems certification, aircraft structures, 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 motion systems, aircraft structures, avionics products, systems certification, connectivity 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 and branches of the U.S. Department of Defense as well as the Federal Aviation Administration and airport operators. Our Test Systems segment designs, develops, manufactures and maintains automated test systems that support the semiconductor, aerospace, communications and weapons 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 the aerospace and defense, semiconductor and other markets where our technology can be beneficial.

Important factors affecting our growth and profitability are 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 Systems business is dependent on developing and procuring new and follow-on business in commercial electronics and semiconductor markets as well as with the military. 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

Astronics Custom Control Concepts, Inc.

On April 3, 2017, Astronics Custom Control Concepts Inc., a wholly owned subsidiary of the Company, acquired substantially all the assets and certain liabilities of Custom Control Concepts LLC ("CCC"), located in Kent, Washington. CCC is a provider of cabin management and in-flight entertainment systems for a range of aircraft. The total consideration for the transaction was approximately \$10.2 million, net of \$0.5 million in cash acquired. The purchase price allocation for this acquisition has been finalized. CCC is included in our Aerospace segment.

Astronics Connectivity Systems and Certifications Corp.

On December 1, 2017, Astronics acquired substantially all of the assets of Telefonix Inc. and a related company, Product Development Technologies, LLC and its subsidiaries, to become Astronics Connectivity Systems and Certifications Corp. ("CSC"), primarily located in Waukegan and Lake Zurich, Illinois. CSC designs and manufactures advanced in-flight entertainment and connectivity equipment, and provides industry leading design consultancy services for the global aerospace industry. Under the terms of the Agreement, the total consideration for the transaction was approximately \$103.8 million, net of \$0.2 million in cash acquired. The purchase price allocation for this acquisition has been finalized. CSC is included in our Aerospace segment.

CONSOLIDATED RESULTS OF OPERATIONS AND OUTLOOK

(Dollars in thousands)	Nine Months Ended				Three Months Ended			
	September 29, 2018		September 30, 2017		September 29, 2018		September 30, 2017	
Sales	\$	600,339	\$	453,146	\$	212,674	\$	149,636
Gross Profit (sales less cost of products sold)	\$	133,024	\$	104,960	\$	46,320	\$	32,493
Gross Margin		22.2 %		23.2 %		21.8 %		21.7 %
Selling, General and Administrative Expenses	\$	87,919	\$	65,573	\$	27,976	\$	22,099
SG&A Expenses as a Percentage of Sales		14.6 %		14.5 %		13.2 %		14.8 %
Interest Expense, Net of Interest Income	\$	7,326	\$	3,750	\$	2,511	\$	1,437
Effective Tax Rate		6.5 %		27.0 %		(9.1) %		29.9 %
Net Income	\$	34,318	\$	25,332	\$	16,999	\$	6,060

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

CONSOLIDATED THIRD QUARTER RESULTS

Consolidated sales were up 42% or \$63.0 million from the same period last year, including \$20.8 million in sales from the CSCte acquisition. Organic revenue was \$191.9 million, up 28% compared with the prior-year period driven by Test revenue more than doubling and 15.6% organic growth in the Aerospace segment.

Consolidated cost of products sold in the third quarter of 2018 increased \$49.3 million to \$166.4 million compared with \$117.1 million in the third quarter of 2017. The increase in costs of products sold was a result of higher organic sales as well as the acquired business. Consolidated cost of products sold was also impacted by a \$3.9 million program charge recognized due to the revision of estimated costs to complete a long-term contract assumed with the acquisition of the CCC business.

Consolidated Engineering and Development (“E&D”) costs were \$31.2 million. Organic E&D costs were \$26.4 million, compared with \$23.7 million in last year’s third quarter. As a percent of organic sales, organic E&D costs were 13.8% and 15.8% in the third quarters of 2018 and 2017, respectively.

Selling, general and administrative (“SG&A”) expenses were up \$5.9 million to \$28.0 million, or 13.2% of sales, in the third quarter of 2018 compared with \$22.1 million, or 14.8% of sales, in the same period last year. The acquisition contributed \$4.6 million to SG&A, including \$1.6 million of intangible asset amortization expense. Consolidated intangible asset amortization expense was \$4.3 million compared with \$2.9 million in the prior year. Consolidated intangible asset amortization expense is expected to be \$4.3 million in the fourth quarter of 2018 also.

A tax benefit was recorded for the third quarter of 2018 compared with a 29.9% effective tax rate in the third quarter of 2017. This was the result of a net tax benefit of \$4.0 million recorded in the quarter for refund claims derived from a revised state filing position that reduces the taxable income apportioned for state income tax purposes and the resulting revaluation of deferred tax liabilities. In addition, the 2018 third quarter tax rate was favorably impacted by a reduction to the provisional income tax on the deemed repatriation of foreign earnings and profits of approximately \$0.4 million. Absent these discrete adjustments, the tax rate for the quarter would have been 19.3%. The 2018 third quarter tax rate also benefited from the lower Federal statutory tax rate partially offset by the elimination of the Domestic Production Activities Deduction resulting from the Tax Cuts and Jobs Act.

Net income was \$17.0 million, or \$0.52 per diluted share, compared with \$6.1 million, or \$0.18 per diluted share, in the prior year.

Bookings were up 25% to \$233.8 million, for a book-to-bill ratio of 1.10:1. Backlog at the end of the quarter was \$398.1 million. Approximately \$187.5 million of backlog is expected to ship in the final quarter of 2018.

CONSOLIDATED YEAR-TO-DATE RESULTS

Consolidated sales for the first nine months of 2018 increased by \$147.2 million, or 32.5%, including \$72.8 million in acquired revenue. Aerospace segment sales were up \$105.3 million to \$500.4 million. Test Systems segment sales were up \$41.8 million, or 72.0%, to \$100.0 million.

Consolidated cost of products sold was \$467.3 million in the first nine months of 2018 compared with \$348.2 million in the first nine months of 2017. The increase in consolidated cost of products sold was driven by higher organic sales as well as the

acquired businesses. Consolidated cost of products sold was negatively impacted by the lower margin profile of CCC due to low volume and a \$7.5 million year-to-date loss associated with the long-term contract previously discussed. Additionally, expense related to the fair value step-up of acquired inventory was \$1.3 million, and was fully expensed in the first quarter. Organic E&D costs were 14.4% of organic sales, or \$76.0 million, compared with \$69.5 million, or 15.3% of sales, in the prior year's first nine months. Additionally, acquisitions contributed E&D costs of \$13.0 million in the first nine months of 2018.

SG&A expenses were \$87.9 million, or 14.6% of sales, in the first nine months of 2018 compared with \$65.6 million, or 14.5% of sales, in the same period last year. Acquisitions contributed \$16.9 million to SG&A, including \$7.2 million of intangible asset amortization expense. Also contributing to higher SG&A was a \$1.0 million litigation reserve recorded in the first quarter of 2018 for an ongoing matter. Corporate overhead expenses increased by \$2.5 million due to increased staffing and higher legal and accounting costs.

The effective tax rate for the first nine months of 2018 was 6.5%, compared with 27.0% in the first nine months of 2017. The decrease was due to the factors identified in the quarter, as described above. Absent these discrete adjustments, the tax rate for the first nine months of 2018 would have been 18.5%. Finally, the tax rate for the first nine months of 2018 was favorably impacted when compared with the first nine months of 2017 by the decrease in the Federal statutory tax rate partially offset by the elimination of the Domestic Production Activities Deduction resulting from the Tax Cuts and Jobs Act.

Net income for the first half of 2018 totaled \$34.3 million, or \$1.04 per diluted share.

CONSOLIDATED OUTLOOK

Fourth quarter sales are forecasted to be in the range of \$190 million to \$200 million, with \$170 million to \$175 million expected from the Aerospace segment and \$20 million to \$25 million from the Test segment.

Consolidated annual sales for 2018 are forecasted to be in the range of \$790 million to \$800 million, with \$670 million to \$675 million expected from the Aerospace segment and \$120 million to \$125 million from the Test segment.

Consolidated backlog at September 29, 2018 was \$398.1 million, compared with \$393.7 million at December 31, 2017. Approximately \$187.5 million is expected to ship in 2018.

We expect the effective tax rate for the fourth quarter to be in the range of 18% to 21%. The effective tax rate for the year, inclusive of the adjustments referred to above, is expected to be in the range of 10% to 13%.

Capital equipment spending in 2018 is expected to be between \$18 million to \$22 million, lower than the prior forecast of \$24 million to \$28 million.

E&D costs for 2018 are expected to be in the range of \$115 million to \$120 million, up slightly from the previous forecast of \$110 million to \$115 million.

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)	Nine Months Ended		Three Months Ended	
	September 29, 2018	September 30, 2017	September 29, 2018	September 30, 2017
Sales	\$ 500,445	\$ 395,037	\$ 169,588	\$ 128,663
Less Intersegment Sales	(62)	—	(9)	—
Total Aerospace Sales	\$ 500,383	\$ 395,037	\$ 169,579	\$ 128,663
Operating Profit	\$ 47,525	\$ 46,753	\$ 16,210	\$ 13,015
Operating Margin	9.5 %	11.8 %	9.6 %	10.1 %

Aerospace Sales by Market

(In thousands)				
Commercial Transport	\$ 402,539	\$ 306,898	\$ 136,692	\$ 98,821
Military	46,410	46,297	16,125	15,365
Business Jet	30,291	28,844	9,289	10,592
Other	21,143	12,998	7,473	3,885
	\$ 500,383	\$ 395,037	\$ 169,579	\$ 128,663

Aerospace Sales by Product Line

(In thousands)				
Electrical Power & Motion	\$ 218,931	\$ 199,014	\$ 78,610	\$ 63,972
Lighting & Safety	129,244	122,317	43,481	37,001
Avionics	100,354	31,424	31,059	11,348
Systems Certification	12,028	9,405	2,373	4,454
Structures	18,683	19,879	6,583	8,003
Other	21,143	12,998	7,473	3,885
	\$ 500,383	\$ 395,037	\$ 169,579	\$ 128,663

(In thousands)	September 29, 2018	December 31, 2017
Total Assets	\$ 639,826	\$ 621,047
Backlog	\$ 325,735	\$ 298,604

AEROSPACE THIRD QUARTER RESULTS

Aerospace segment sales increased by \$40.9 million, or 31.8%, to \$169.6 million, when compared with the prior year's third quarter. Organic sales increased \$20.1 million, or 15.6%, while CSC contributed \$20.8 million in sales in the 2018 third quarter.

Avionics sales were up \$19.7 million, largely due to the addition of CSC, which contributed \$17.2 million. Electrical Power & Motion increased by \$14.6 million, or 22.9%, due to higher sales of in-seat power and seat motion products. Sales of Lighting & Safety products were up \$6.5 million due to a general increase in volume. Sales of other products were up \$3.6 million, due primarily to the acquisition. System Certification sales decreased by \$2.1 million on lower project activity.

Aerospace operating profit for the third quarter of 2018 was \$16.2 million, or 9.6% of sales, compared with \$13.0 million, or 10.1% of sales, in the same period last year. Organic Aerospace E&D costs were \$23.3 million compared with \$21.1 million in the same period last year. The acquisition added \$4.8 million in E&D costs.

Aerospace operating profit benefited from the contribution margin on higher organic sales and the addition of CSC offset by a \$3.9 million program charge related to the aforementioned CCC long-term contract. Intangible asset amortization expense for CSC was \$1.6 million in the third quarter.

Aerospace bookings in the third quarter of 2018 were up 35% to \$196.7 million compared with the prior year period. The book-to-bill ratio was 1.16:1 for the quarter. Backlog was \$325.7 million at the end of the third quarter of 2018.

AEROSPACE YEAR-TO-DATE RESULTS

Aerospace segment sales increased by \$105.3 million, or 26.7%, to \$500.4 million, when compared with the prior year's first nine months.

Avionics sales increased by \$68.9 million, driven primarily by the acquisitions, which contributed \$63.6 million in Avionics sales. Electrical Power & Motion sales increased \$19.9 million, or 10.0%, and Lighting & Safety sales increased \$6.9 million, both for similar reasons as in the quarter. Systems Certifications sales increased \$2.6 million on higher project activity earlier in the year. Sales of other products were up \$8.1 million to \$21.1 million, due primarily to the CSC acquisition.

Aerospace operating profit was \$47.5 million, or 9.5% of sales, compared with \$46.8 million, or 11.8% of sales, in the same period last year. Aerospace operating profit in the first nine months of 2018 benefited from higher organic sales and the addition of CSC, offset by the \$7.5 million year-to-date loss related to the CCC long-term contract previously discussed. Aerospace operating profit in the first nine months of 2018 was also negatively impacted by a \$1.0 million litigation reserve and purchase accounting expenses. As is typical during the first few quarters following an acquisition, non-cash costs were higher than what is expected over the long-term, as short-lived intangible assets are amortized and the fair value step-up costs relating to the acquired inventory is expensed. Intangible asset amortization expense for the acquisitions was \$7.2 million in the first nine months. Also related to the acquisitions was fair value inventory step-up expense of \$1.3 million that was recorded in the first quarter.

E&D costs for Aerospace were \$80.3 million and \$62.5 million in the first nine months of 2018 and 2017, respectively. Acquisitions contributed \$13.0 million in 2018 to Aerospace E&D expenses.

AEROSPACE OUTLOOK

We expect 2018 sales for our Aerospace segment to be in the range of \$670 million to \$675 million. The Aerospace segment's backlog at the end of the third quarter of 2018 was \$325.7 million with approximately \$166.2 million expected to be shipped over the remaining part of 2018 and \$315.0 million is expected to ship over the next 12 months.

TEST SYSTEMS SEGMENT

(In thousands)	Nine Months Ended		Three Months Ended	
	September 29, 2018	September 30, 2017	September 29, 2018	September 30, 2017
Sales	\$ 99,956	\$ 58,109	\$ 43,095	\$ 20,973
Operating profit	\$ 10,151	\$ 2,843	\$ 5,833	\$ 1,093
Operating Margin	10.2 %	4.9 %	13.5 %	5.2 %

Test Systems Sales by Market

(In thousands)	September 29, 2018	September 30, 2017	September 29, 2018	September 30, 2017
Semiconductor	\$ 72,061	\$ 18,343	\$ 33,596	\$ 6,632
Aerospace & Defense	27,895	39,766	9,499	14,341
	\$ 99,956	\$ 58,109	\$ 43,095	\$ 20,973

(In thousands)	September 29, 2018	December 31, 2017
Total Assets	\$ 112,455	\$ 90,859
Backlog	\$ 72,335	\$ 95,086

TEST SYSTEMS THIRD QUARTER RESULTS

Sales in the third quarter of 2018 increased approximately \$22.1 million to \$43.1 million, more than doubling compared with the same period in 2017. A \$27.0 million increase in sales to the Semiconductor market was offset by a \$4.8 million decrease in sales to the Aerospace & Defense market when compared with the prior-year period.

Operating profit for the segment was \$5.8 million, or 13.5% of sales, compared with \$1.1 million, or 5.2% of sales, in last year's third quarter. Higher margin was driven by the increase in volume. E&D costs were \$3.1 million, up from \$2.6 million in the third quarter of 2017.

Bookings for the Test Systems segment in the quarter were \$37.1 million, for a book-to-bill ratio of 0.86:1 for the quarter. Backlog was \$72.3 million at the end of the third quarter of 2018.

TEST SYSTEMS YEAR-TO-DATE RESULTS

Sales in the first nine months of 2018 increased 72.0% to \$100.0 million compared with sales of \$58.1 million for the same period in 2017. The growth was driven by a \$53.7 million increase in sales to the Semiconductor market. This was somewhat offset by a decrease in Aerospace & Defense sales of \$11.9 million.

Operating profit increased \$7.3 million to \$10.2 million, or 10.2% of sales, as a result of increased volume. E&D costs were \$8.7 million in the first nine months of 2018 compared with \$7.0 million in the prior year period.

TEST SYSTEMS OUTLOOK

We expect sales for the Test Systems segment for 2018 to be in the range of \$120 million to \$125 million. The Test Systems segment's backlog at the end of the third quarter of 2018 was \$72.3 million, with approximately \$21.3 million expected to be shipped over the remaining part of 2018 and approximately \$58.9 million scheduled to ship over the next 12 months.

LIQUIDITY AND CAPITAL RESOURCES

Operating Activities:

Cash provided by operating activities totaled \$15.4 million for the first nine months of 2018, as compared with \$22.3 million during the same period in 2017. Cash flow from operating activities decreased compared with the same period of 2017 as higher net income and higher depreciation and amortization expense due to the acquisition of CSC was more than offset by higher increases in net operating assets for the first nine months of 2018 when compared with the first nine months of 2017.

Investing Activities:

Cash used for investing activities was \$15.8 million for the first nine months of 2018 compared with \$22.0 million used in the same period of 2017. The decrease was a result of business acquisitions in the prior year, offset by increased capital expenditures in the current year. The Company expects capital spending in 2018 to be in the range of \$18 million to \$22 million.

Financing Activities:

The primary financing activities in the first nine months of 2018 related to net payments on our senior credit facility of \$10.0 million and \$0.5 million of costs incurred related to the execution of the Agreement in February 2018. The primary financing activities in the first nine months of 2017 related to net borrowings on our senior credit facility to fund operations, the acquisition of CCC and purchases of treasury stock as part of the buyback program announced on February 24, 2016, under which the Board of Directors authorized the repurchase of up to \$50 million of common stock.

The Company's cash needs for working capital, debt service and capital equipment during the remainder of 2018 is expected to be met by cash flows from operations and cash balances and, if necessary, utilization of the revolving credit facility.

On February 24, 2016, the Company's Board of Directors authorized the repurchase of up to \$50 million of common stock (the "Buyback Program"). The Buyback Program allowed the Company to purchase shares of its common stock in accordance with applicable securities laws on the open market or through privately negotiated transactions. The Company has repurchased approximately 1,675,000 shares and has completed that program. On December 12, 2017, the Company's Board of Directors authorized an additional repurchase of up to \$50 million of common stock. No amounts have been repurchased under the new program as of September 29, 2018.

The Company's Fourth Amended and Restated Credit Agreement (the "Original Facility") provided for a \$350 million revolving credit line with the option to increase the line by up to \$150 million. The maturity date of the original facility was January 13, 2021. On February 16, 2018, the Company modified and extended the Original Facility by entering into the Fifth Amended and Restated Credit Agreement (the "Agreement"), which provides for a \$500 million revolving credit line with the option to increase the line by up to \$150 million. A new lender was added to the facility as well. The outstanding balance in the Original Facility were rolled into the Agreement on the date of closing. The maturity date of the loans under the Agreement is February 16, 2023. At September 29, 2018, there was \$252.0 million outstanding on the revolving credit facility and there remains \$246.9 million available, net of outstanding letters of credit. The credit facility allocates up to \$20 million of the \$500 million revolving credit line for the issuance of letters of credit, including certain existing letters of credit. At September 29, 2018, outstanding letters of credit totaled \$1.1 million.

The maximum permitted leverage ratio of funded debt to Adjusted EBITDA (as defined in the Agreement) is 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's leverage ratio was 2.59 to 1 at September 29, 2018. The Company will pay 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 will also pay 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 Company's obligations under the Credit Agreement as amended are jointly and severally guaranteed by each domestic subsidiary of the Company other than a non-material subsidiary. 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 Agreement 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 September 29, 2018 was \$398.1 million compared with \$393.7 million at December 31, 2017 and \$302.3 million at September 30, 2017.

CONTRACTUAL OBLIGATIONS AND COMMITMENTS

The following table represents contractual obligations as of September 29, 2018:

(In thousands)	Payments Due by Period				
	Total	2018	2019-2020	2021-2022	After 2022
Long-term Debt	\$ 259,645	\$ 655	\$ 4,010	\$ 2,980	\$ 252,000
Purchase Obligations	150,433	91,306	59,080	47	—
Interest on Long-term Debt	38,310	2,425	18,146	17,407	332
Supplemental Retirement Plan and Post Retirement Obligations	26,135	105	833	812	24,385
Operating Leases	19,625	1,181	8,196	5,749	4,499
Other Long-term Liabilities	233	116	26	32	59
Total Contractual Obligations	\$ 494,381	\$ 95,788	\$ 90,291	\$ 27,027	\$ 281,275

Notes to Contractual Obligations Table

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

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

Operating Leases — Operating lease obligations are primarily related to the Company's facility leases.

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 2018 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, 2017.

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 September 29, 2018. 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 September 29, 2018.

a. 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

The Company is subject to various legal proceedings, claims, and litigation arising in the ordinary course of business. While the outcome of these matters is currently not determinable, we do not expect these matters will have a material adverse effect on our business, financial position, results of operations, or cash flows. However, the results of these matters cannot be predicted with certainty. Should the Company fail to prevail in any legal matter or should several legal matters be resolved against the Company in the same reporting period, then the financial results of that particular reporting period could be materially adversely affected.

On December 29, 2010, Lufthansa Technik AG (“Lufthansa”) filed a Statement of Claim in the Regional State Court of Mannheim, Germany. Lufthansa’s claim asserts that our subsidiary, 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 does 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 does not require AES to recall products that are already installed in aircraft or have 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. Additionally, if Lufthansa provides the required bank guarantee specified in the decision, the Company may be required to offer a recall of products that are in the distribution channels in Germany. No such bank guarantee has been issued to date. As of September 29, 2018, there are no products subject to the order in the distribution channels in Germany.

The Company appealed to the Higher Regional Court of Karlsruhe. On November 15, 2016, the Court 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. We estimate that the German Federal Supreme Court will provide its ruling on this issue in January 2019.

In July 2017, Lufthansa filed an action in the Regional State Court of Mannheim for payment of damages caused by the alleged patent infringement of AES, related to direct sales of the allegedly infringing product in Germany (associated with the original December 2010 action discussed above). In this action, which was served on AES on April 11, 2018, Lufthansa claims payment of approximately \$6.2 million plus interest. In October 2018, Lufthansa increased its claim to approximately \$6.4 million plus interest. According to AES’s assessment, this claim is significantly higher than justified. We estimate AES’s potential exposure to be approximately \$1 million to \$3 million, and have recorded a reserve of \$1 million associated with this matter. Such amount is recorded within Other Accrued Expenses and Selling, General and Administrative Expenses in the accompanying financial statements as of and for the nine month period ended September 29, 2018. An oral hearing has been scheduled for March 15, 2019. A first instance decision in this matter is expected in mid-2019.

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 seeks an injunction, an order obliging AES to provide information and accounting and a finding that AES owes damages for the attacked indirect sales. AES will vigorously defend against the action. No amount of claimed damages has been specified by Lufthansa and such amount is not quantifiable at this time. An oral hearing in this matter has been scheduled for March 15, 2019. A first instance decision in this matter is expected in mid-2019. As loss exposure is neither probable nor estimable at this time, the Company has not recorded any liability with respect to this litigation as of September 29, 2018.

In December 2017, Lufthansa filed patent infringement cases in the United Kingdom 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. As loss exposure is neither probable nor estimable at this time, the Company has not recorded any liability with respect to these matters as of September 29, 2018.

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, rendering 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.

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, 2017, 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. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial also may materially adversely affect our business, financial condition and/or results of operations.

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

None.

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: <u>November 7, 2018</u>	By: <u>/s/ David C. Burney</u> David C. Burney Executive Vice President and Chief Financial Officer (Principal Financial Officer)

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: November 7, 2018

/s/ Peter J. Gundermann
Peter J. Gundermann
President and Chief Executive Officer

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: November 7, 2018

/s/ David C. Burney

David C. Burney

Chief Financial Officer

**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 September 29, 2018 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.

November 7, 2018

/s/ Peter J. Gundermann

Peter J. Gundermann
Title: Chief Executive Officer

November 7, 2018

/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.