ASTRONICS CORP
Form 10-Q
August 16, 2017
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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 10-Q

ýQuarterly report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934
For the quarterly period ended July 1, 2017
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	16-0959303
(State or other jurisdiction of incorporation or organization)	(IRS Employer Identification Number)
130 Commerce Way, East Aurora, New York	14052
(Address of principal executive offices)	(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)

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 ý 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 ý 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 filerý 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 ý
As of July 1, 2017, 28,701,344 shares of common stock were outstanding consisting of 21,685,182 shares of common stock ($.01 par value) and 7,016,162 shares of Class B common stock ($.01 par value).

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Part I – Financial Information
Item 1. Financial Statements
ASTRONICS CORPORATION
Consolidated Condensed Balance Sheets
July 1, 2017 with Comparative Figures for December 31, 2016
(In thousands)

	July 1, 2017 (Unaudited)	December 31, 2016
Current Assets:		
Cash and Cash Equivalents	$ 8,268	$ 17,901
Accounts Receivable, Net of Allowance for Doubtful Accounts	120,380	109,415
Inventories	134,423	116,597
Prepaid Expenses and Other Current Assets	14,444	11,160
Total Current Assets	277,515	255,073
Property, Plant and Equipment, Net of Accumulated Depreciation	122,646	122,812
Other Assets	15,738	13,149
Intangible Assets, Net of Accumulated Amortization	94,364	98,103
Goodwill	117,565	115,207
Total Assets	$ 627,828	$ 604,344
Current Liabilities:		
Current Maturities of Long-term Debt	$ 2,651	$ 2,636
Accounts Payable	30,840	25,070
Accrued Expenses and Other Current Liabilities	30,504	35,686
Customer Advance Payments and Deferred Revenue	20,095	23,168
Total Current Liabilities	84,090	86,560
Long-term Debt	160,315	145,484
Other Liabilities	35,700	34,851
Total Liabilities	280,105	266,895
Shareholders’ Equity:		
Common Stock	297	297
Accumulated Other Comprehensive Loss	(12,741)	(15,494)
Other Shareholders’ Equity	360,167	352,646
Total Shareholders’ Equity	347,723	337,449
Total Liabilities and Shareholders’ Equity	$ 627,828	$ 604,344

See notes to consolidated condensed financial statements.

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ASTRONICS CORPORATION
Consolidated Condensed Statements of Operations
Three and Six Months Ended July 1, 2017 With Comparative Figures for 2016
(Unaudited)
(In thousands, except per share data)

	Six Months Ended		Three Months Ended	
	July 1, 2017	July 2, 2016	July 1, 2017	July 2, 2016
Sales	$303,510	$323,956	$151,114	$164,426
Cost of Products Sold	231,043	239,638	116,964	119,591
Gross Profit	72,467	84,318	34,150	44,835
Selling, General and Administrative Expenses	44,094	44,108	22,401	22,224
Income from Operations	28,373	40,210	11,749	22,611
Interest Expense, Net of Interest Income	2,313	2,143	1,180	1,056
Income Before Income Taxes	26,060	38,067	10,569	21,555
Provision for Income Taxes	6,788	11,602	2,884	6,575
Net Income	$19,272	$26,465	$7,685	$14,980
Earnings Per Share:				
Basic	$0.66	$0.90	$0.27	$0.51
Diluted	$0.64	$0.87	$0.26	$0.50

See notes to consolidated condensed financial statements.

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ASTRONICS CORPORATION
Consolidated Condensed Statements of Comprehensive Income
Three and Six Months Ended July 1, 2017 With Comparative Figures for 2016
(Unaudited)
(In thousands)

	Six Months Ended		Three Months Ended	
	July 1, 2017	July 2, 2016	July 1, 2017	July 2, 2016
Net Income	$19,272	$26,465	$7,685	$14,980
Other Comprehensive Income:				
Foreign Currency Translation Adjustments	2,491	1,305	2,096	(511)
Retirement Liability Adjustment – Net of Tax	262	261	131	130
Other Comprehensive Income	2,753	1,566	2,227	(381)
Comprehensive Income	$22,025	$28,031	$9,912	$14,599

See notes to consolidated condensed financial statements.

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ASTRONICS CORPORATION
Consolidated Condensed Statements of Cash Flows
Six Months Ended July 1, 2017
With Comparative Figures for 2016
(Unaudited)
(In thousands)

	Six Months Ended	
	July 1, 2017	July 2, 2016
Cash Flows From Operating Activities:		
Net Income	$19,272	$26,465
Adjustments to Reconcile Net Income to Cash Provided By Operating Activities:		
Depreciation and Amortization	12,587	13,146
Provisions for Non-Cash Losses on Inventory and Receivables	918	928
Stock Compensation Expense	1,456	1,256
Deferred Tax Benefit	(536)	(980)
Other	(804)	320
Cash Flows from Changes in Operating Assets and Liabilities:		
Accounts Receivable	(7,076)	(10,860)
Inventories	(10,453)	(4,145)
Accounts Payable	3,349	(10)
Accrued Expenses	(7,106)	(3,643)
Other Current Assets and Liabilities	(2,668)	32
Customer Advanced Payments and Deferred Revenue	(4,143)	(9,992)
Income Taxes	(1,028)	10,107
Supplemental Retirement and Other Liabilities	758	695
Cash Provided By Operating Activities	4,526	23,319
Cash Flows From Investing Activities:		
Acquisition of Business, Net of Cash Acquired	(10,223)	—
Capital Expenditures	(5,750)	(6,176)
Other Investing Activities	186	(850)
Cash Used For Investing Activities	(15,787)	(7,026)
Cash Flows From Financing Activities:		
Proceeds from Long-term Debt	22,000	15,000
Payments for Long-term Debt	(7,341)	(18,279)
Purchase of Outstanding Shares for Treasury	(13,524)	(12,154)
Debt Acquisition Costs	—	(164)
Proceeds from Exercise of Stock Options	317	557
Income Tax Benefit from Exercise of Stock Options	—	529
Cash Provided By (Used For) Financing Activities	1,452	(14,511)
Effect of Exchange Rates on Cash	176	68
(Decrease) Increase in Cash and Cash Equivalents	(9,633)	1,850
Cash and Cash Equivalents at Beginning of Period	17,901	18,561
Cash and Cash Equivalents at End of Period	$8,268	$20,411

See notes to consolidated condensed financial statements.

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ASTRONICS CORPORATION
Notes to Consolidated Condensed Financial Statements
July 1, 2017
(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 2016 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 11, 2016.

Operating Results

The results of operations for any interim period are not necessarily indicative of results for the full year. Operating results for the six months ended July 1, 2017 are not necessarily indicative of the results that may be expected for the year ending December 31, 2017.

The balance sheet at December 31, 2016 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 for complete financial statements.

For further information, refer to the financial statements and footnotes thereto included in Astronics Corporation's 2016 annual report on Form 10-K.

Description of the Business

Astronics Corporation ("Astronics" or the "Company") is a leading supplier of products 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 & safety systems, avionics products, aircraft structures, systems certification, automated test systems and other products.

We have operations in the United States ("U.S."), Canada and France. We design and build our products through our wholly owned subsidiaries Armstrong Aerospace, Inc. ("Armstrong"); Astronics Advanced Electronic Systems Corp. ("AES"); Astronics AeroSat Corporation ("AeroSat"); Ballard Technology, Inc. ("Ballard"); Astronics DME LLC ("DME"); Luminescent Systems, Inc. ("LSI"); Luminescent Systems Canada, Inc. ("LSI Canada"); Max-Viz, Inc. ("Max-Viz"); Peco, Inc. ("Peco"); PGA Electronic s.a. ("PGA") and Astronics Test Systems, Inc. ("ATS"). On April 3, 2017, Astronics Custom Control Concepts Inc. ("CCC") acquired all of the assets and certain liabilities of Custom Control Concepts LLC.

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 $23.0 million and $21.4 million for the three months ended and $45.8 million and $44.6 million for the six months ended July 1, 2017 and July 2, 2016, respectively. Selling, general and administrative expenses include costs primarily related to our sales and marketing departments and administrative departments. Interest expense is shown net of interest income. Interest income was insignificant for the three and six months ended July 1, 2017 and July 2, 2016.

Foreign Currency Translation

The aggregate transaction gain or loss included in operations was insignificant for the three and six months ended July 1, 2017 and July 2, 2016.

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Accounting Pronouncements Adopted in 2017

On January 1, 2017, the Company adopted Accounting Standards Update ("ASU") No. 2016-09, Improvements to Employee Share-Based Payment Accounting. Prospectively, beginning January 1, 2017, excess tax benefits/deficiencies are reflected as income tax benefit/expense in the statement of income, resulting in a $0.3 million tax benefit for the six months ended July 1, 2017. The extent of excess tax benefits/deficiencies is subject to variation in the Company's stock price and timing/extent of employee stock option exercises. Under previous accounting guidance, when a share-based payment award such as a stock option was granted to an employee, the fair value of the award was generally recognized over the vesting period. However, the related deduction from taxes payable was based on the award's intrinsic value at the time of exercise, which could be either greater (creating an excess tax benefit) or less (creating a tax deficiency) than the compensation cost recognized in the financial statements. Excess tax benefits were recognized in additional paid-in capital ("APIC") within equity, while deficiencies were first recorded to APIC to the extent previously recognized excess tax benefits existed, after which time deficiencies were recorded to income tax expense. The Company's adoption of this ASU also resulted in associated excess tax benefits being classified as an operating activity in the same manner as other cash flows related to income taxes in the statement of cash flows prospectively beginning January 1, 2017. Based on the adoption methodology applied, the statement of cash flows classification of prior periods has not changed. As permitted by the ASU, the Company has elected to account for forfeitures as they occur. None of the other provisions in this amended guidance had a significant impact on the Company's consolidated financial statements.

In January 2017, the FASB issued ASU No. 2017-04, Simplifying the Test for Goodwill Impairment. Under the new standard, goodwill impairment would be measured as the amount by which a reporting unit's carrying value exceeds its fair value, not to exceed the carrying value of goodwill. This ASU eliminates existing guidance that requires an entity to determine goodwill impairment by calculating the implied fair value of goodwill by hypothetically assigning the fair value of a reporting unit to all of its assets and liabilities as if that reporting unit had been acquired in a business combination. This ASU is effective prospectively to annual and interim impairment tests beginning after December 15, 2019, with early adoption permitted. The adoption of ASU 2017-04 on January 1, 2017 had no impact on the financial statements as of or for the three or six months ended July 1, 2017, as there was no impairment analysis performed during the period.

2) Inventories
Inventories are as follows:

(In thousands)	July 1, 2017	December 31, 2016
Finished Goods	$31,140	$ 28,792
Work in Progress	27,888	20,790
Raw Material	75,395	67,015
	$134,423	$ 116,597

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

(In thousands)	July 1, 2017	December 31, 2016
Land	$11,189	$ 11,112
Buildings and Improvements	79,941	79,191
Machinery and Equipment	100,524	93,683
Construction in Progress	7,281	8,182
	198,935	192,168
Less Accumulated Depreciation	76,289	69,356

	$122,646	$ 122,812

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4) Intangible Assets

The following table summarizes acquired intangible assets as follows:

(In thousands)	Weighted Average Life	July 1, 2017 Gross Carrying Amount	July 1, 2017 Accumulated Amortization	December 31, 2016 Gross Carrying Amount	December 31, 2016 Accumulated Amortization
Patents	4 Years	$2,146	$ 1,544	$2,146	$ 1,450
Non-compete Agreement	3 Years	2,500	1,229	2,500	979
Trade Names	7 Years	10,433	3,626	10,189	3,153
Completed and Unpatented Technology	5 Years	25,207	10,481	24,118	9,221
Backlog	Less than 1 Year	11,384	11,277	11,224	11,224
Customer Relationships	11 Years	97,245	26,394	97,046	23,093
Total Intangible Assets	5 Years	$148,915	$ 54,551	$147,223	$ 49,120

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)	Six Months Ended July 1, 2017	Six Months Ended July 2, 2016	Three Months Ended July 1, 2017	Three Months Ended July 2, 2016
Amortization Expense	$5,340	$5,607	$2,722	$2,799

Amortization expense for acquired intangible assets expected for 2017 and for each of the next five years is summarized as follows:

(In thousands)	
2017	$10,756
2018	10,314
2019	9,935
2020	9,379
2021	9,333
2022	8,937

5) Goodwill

The following table summarizes the changes in the carrying amount of goodwill for the six months ended July 1, 2017:

(In thousands)	December 31, 2016	Acquisition	Foreign Currency Translation	July 1, 2017
Aerospace	$ 115,207	$ 1,804	$ 554	$117,565
Test Systems	—	—	—	—
	$ 115,207	$ 1,804	$ 554	$117,565

6) Long-term Debt and Notes Payable

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.

The Company's Credit Agreement consists of a $350 million revolving credit line with the option to increase the line by up to $150 million. On January 13, 2016, the Company amended the Agreement to add a new lender and extend the maturity date of the credit facility from September 26, 2019 to January 13, 2021. At July 1, 2017, there was $152.0 million outstanding on the

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revolving credit facility and there remains $196.9 million available, net of outstanding letters of credit. The credit facility allocates up to $20 million of the $350 million revolving credit line for the issuance of letters of credit, including certain existing letters of credit. At July 1, 2017, 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 3.5 to 1, increasing to 4.0 to 1 for up to two fiscal quarters following the closing of an acquisition permitted under the Agreement. The Company's leverage ratio was 1.77 to 1 at July 1, 2017. 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 137.5 basis points and 225 basis points based upon the Company's leverage ratio. The Company will also pay a commitment fee to the lenders in an amount equal to between 17.5 basis points and 35 basis points on the undrawn portion of the credit facility, based upon the Company's leverage ratio. The Company must also maintain a minimum interest coverage ratio (Adjusted EBITDA to interest expense) of 3.0 to 1 for the term of the Agreement. The Company's interest coverage ratio was 24.2 to 1 at July 1, 2017.
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.

7) 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)	Six Months Ended		Three Months Ended	
	July 1, 2017	July 2, 2016	July 1, 2017	July 2, 2016
Balance at Beginning of Period	$4,675	$5,741	$4,357	$5,122
Acquisitions	359	—	359	—
Warranties Issued	832	1,206	365	545
Warranties Settled	(1,224)	(1,290)	(517)	(405)
Reassessed Warranty Exposure	(5)	(296)	73	99
Balance at End of Period	$4,637	$5,361	$4,637	$5,361

8) Income Taxes

The effective tax rates were approximately 26.0% and 30.5% for the six months ended and 27.3% and 30.5% for the three months ended July 1, 2017 and July 2, 2016, respectively. The 2017 tax rates were favorably impacted relative to the statutory rate by excess tax benefits associated with the exercise of stock options, decreases in foreign tax rates, and from the federal research and development tax credit.

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9) Shareholders' Equity

The changes in shareholders' equity for the six months ended July 1, 2017 are summarized as follows:

(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	$297	21,955	7,665
Conversion of Class B Shares to Common Shares	—	686	(686)
Exercise of Stock Options	—	17	37
End of Period	$297	22,658	7,016
ADDITIONAL PAID IN CAPITAL			
Beginning of Period	$64,752		
Stock Compensation Expense	1,456		
Exercise of Stock Options	317		
End of Period	$66,525		
ACCUMULATED OTHER COMPREHENSIVE LOSS			
Beginning of Period	$(15,494)		
Foreign Currency Translation Adjustment	2,491		
Retirement Liability Adjustment – Net of Tax	262		
End of Period	$(12,741)		
RETAINED EARNINGS			
Beginning of Period	$305,512		
Net Income	19,272		
End of Period	$324,784		
TREASURY STOCK			
Beginning of Period	$(17,618)	(523)	
Purchase	(13,524)	(450)	
End of Period	$(31,142)	(973)	
TOTAL SHAREHOLDERS' EQUITY			
Beginning of Period	$337,449		
End of Period	$347,723	21,685	7,016

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 allows the Company to purchase shares of its common stock in accordance with applicable securities laws on the open market or through privately negotiated transactions. The Buyback Program may be suspended or discontinued at any time. Under this program, the Company has repurchased approximately 973,000 shares for $31.1 million.

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10) Earnings Per Share

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

(In thousands)	Six Months Ended		Three Months Ended	
	July 1, 2017	July 2, 2016	July 1, 2017	July 2, 2016
Weighted Average Shares - Basic	29,007	29,330	28,911	29,264
Net Effect of Dilutive Stock Options	1,128	960	1,178	962
Weighted Average Shares - Diluted	30,135	30,290	30,089	30,226

The 2016 information above has been adjusted to reflect the impact of the three-for-twenty Class B stock distribution to shareholders of record on October 11, 2016.

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 at July 1, 2017 was approximately 474,000 shares.

11) Accumulated Other Comprehensive Loss and Other Comprehensive Loss

The components of accumulated other comprehensive loss are as follows:

(In thousands)	July 1, 2017	December 31, 2016
Foreign Currency Translation Adjustments	$(6,106)	$ (8,597)
Retirement Liability Adjustment – Before Tax	(10,208)	(10,611)
Tax Benefit	3,573	3,714
Retirement Liability Adjustment – After Tax	(6,635)	(6,897)
Accumulated Other Comprehensive Loss	$(12,741)	$ (15,494)

The components of other comprehensive income are as follows:

(In thousands)	Six Months Ended		Three Months Ended	
	July 1, 2017	July 2, 2016	July 1, 2017	July 2, 2016
Foreign Currency Translation Adjustments	$2,491	$1,305	$2,096	$(511)
Retirement Liability Adjustments:				
Reclassifications to General and Administrative Expense:				
Amortization of Prior Service Cost	202	219	102	109
Amortization of Net Actuarial Losses	201	183	99	92
Tax Benefit	(141)	(141)	(70)	(71)
Retirement Liability Adjustment	262	261	131	130
Other Comprehensive Income	$2,753	$1,566	$2,227	$(381)

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12) Supplemental Retirement Plan and Related Post Retirement Benefits

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

	Six Months Ended		Three Months Ended	
(In thousands)	July 1, 2017	July 2, 2016	July 1, 2017	July 2, 2016
Service Cost	$92	$ 86	$46	$ 43
Interest Cost	448	450	224	225
Amortization of Prior Service Cost	194	207	97	103
Amortization of Net Actuarial Losses	186	172	93	86
Net Periodic Cost	$920	$ 915	$460	$ 457

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

	Six Months Ended		Three Months Ended	
(In thousands)	July 1, 2017	July 2, 2016	July 1, 2017	July 2, 2016
Service Cost	$4	$ 2	$2	$ 1
Interest Cost	20	20	10	10
Amortization of Prior Service Cost	8	12	5	6
Amortization of Net Actuarial Losses	15	11	6	6
Net Periodic Cost	$47	$ 45	$23	$ 23

13) Sales to Major Customers

The Company has a significant concentration of business with two major customers, each in excess of 10% of consolidated sales. The loss of either of these customers would significantly, negatively impact our sales and earnings. Sales to these two customers represented 20% and 18% of consolidated sales for the six months ended and 16% and 18% for the three months ended July 1, 2017. Sales to these customers were in the Aerospace segment. Accounts receivable from these customers at July 1, 2017 was approximately $32.1 million. Sales to these two customers represented 22% and 15% of consolidated sales for the six months ended and 21% and 16% for the three months ended July 2, 2016.

14) 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. The relief sought by Lufthansa includes requiring AES to stop selling and marketing the allegedly infringing power supply system, a recall of allegedly infringing products sold to commercial customers since November 26, 2003 and compensation for damages. The claim does not specify an estimate of damages and a damages claim would be pursued by Lufthansa in

separate court proceedings.

On February 6, 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 sales of the infringing product to enable Lufthansa to make an estimate

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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 July 1, 2017, there are no products 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 has submitted a petition to grant AES leave for appeal to the Federal Supreme Court. The Company believes it has valid defenses to refute the decision. Should the Federal Supreme Court decide to hear the case, the appeal process is estimated to extend up to two years. We estimate AES's potential exposure related to this matter to be approximately $1 million to $3 million. As loss exposure is not probable at this time, the Company has not recorded any liability with respect to this litigation as of July 1, 2017.

On November 26, 2014, Lufthansa filed a complaint in the United States District for the Western District of Washington. Lufthansa's complaint in this 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 has filed an appeal with the United States Court of Appeals for the Federal Circuit. The Company believes that it has valid defenses to Lufthansa's claims and will vigorously contest the appeal. 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 July 1, 2017.

15) Segment Information

Below are the sales and operating profit by segment for the six months ended July 1, 2017 and July 2, 2016 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)	Six Months Ended July 1, 2017	Six Months Ended July 2, 2016	Three Months Ended July 1, 2017	Three Months Ended July 2, 2016
Sales				
Aerospace	$266,374	$281,177	$129,547	$142,528
Less Intersegment Sales	—	(367)	—	(27)
Total Aerospace Sales	266,374	280,810	129,547	142,501
Total Test Systems Sales	37,136	43,146	21,567	21,925
Total Consolidated Sales	$303,510	$323,956	$151,114	$164,426
Operating Profit and Margins				
Aerospace	$33,738	$43,542	$13,984	$24,851
	12.7 %	15.5 %	10.8 %	17.4 %
Test Systems	1,750	3,284	1,432	1,074
	4.7 %	7.6 %	6.6 %	4.9 %
Total Operating Profit	35,488	46,826	15,416	25,925
	11.7 %	14.5 %	10.2 %	15.8 %
Deductions from Operating Profit				
Interest Expense, Net of Interest Income	2,313	2,143	1,180	1,056
Corporate Expenses and Other	7,115	6,616	3,667	3,314
Income Before Income Taxes	$26,060	$38,067	$10,569	$21,555

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Total Assets:

(In thousands)	July 1, 2017	December 31, 2016
Aerospace	$529,369	$ 500,892
Test Systems	77,382	76,575
Corporate	21,077	26,877
Total Assets	$627,828	$ 604,344

16) Fair Value

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

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

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

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

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

On a Recurring Basis:

A financial asset or liability's classification within the hierarchy is determined based on the lowest level input that is significant to the fair value measurement. The financial liabilities carried at fair value measured on a recurring basis consisted of contingent consideration related to a prior acquisition, valued at zero at December 31, 2016, determined using Level 3 inputs. This arrangement has expired and as of July 1, 2017 there are no financial liabilities carried at fair value measured on a recurring basis. There were no financial assets carried at fair value measured on a recurring basis at December 31, 2016 or July 1, 2017.

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.

At July 1, 2017, the fair value of goodwill and intangible assets classified using Level 3 inputs are comprised of the CCC goodwill and intangible assets acquired on April 3, 2017, which are currently valued based on management's best estimates. When the accounting for the acquisition is finalized, these intangible assets will be valued using discounted cash flow methodology.

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 July 1, 2017, the Company concluded that no indicators of impairment relating to intangible assets or goodwill existed and an interim test was not performed.

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17) Recent Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board ("FASB") issued ASU No. 2014-9, Revenue from Contracts with Customers. This new standard is effective for reporting periods beginning after December 15, 2017, pursuant to the issuance of ASU 2015-14, Revenue from Contracts with Customers: Deferral of Effective Date issued in August 2015. The comprehensive new standard will supersede existing revenue recognition guidance and require revenue to be recognized when promised goods or services are transferred to customers in amounts that reflect the consideration to which the company expects to be entitled in exchange for those goods or services. Adoption of the new rules could affect the timing of revenue recognition for certain transactions. The guidance permits two implementation approaches, one requiring retrospective application of the new standard with restatement of prior years and one requiring prospective application of the new standard with disclosure of results under old standards. The Company will adopt the new standard on January 1, 2018, using the modified retrospective transition method.

The adoption of this amendment may require us to accelerate the recognition of revenue as compared to current standards, for certain customers, in cases where we produce products unique to those customers; and for which we would have an enforceable right of payment for production completed to date. The Company has identified its revenue streams, reviewed the initial impacts of adopting the new standard on those revenue streams, and appointed a project management leader. The Company continues to evaluate the quantitative and qualitative impacts of the standard.

In February 2016, the FASB issued ASU No. 2016 - 02, Leases. The new standard is effective for reporting periods beginning after December 15, 2018. Early adoption is permitted. The standard will require lessees to report most leases as assets and liabilities on the balance sheet, while lessor accounting will remain substantially unchanged. The standard requires a modified retrospective transition approach for existing leases, whereby the new rules will be applied to the earliest year presented. The adoption of the standard is not expected to have a material effect on the Company's financial position, results of operations or cash flows.

In August 2016, the FASB issued ASU No. 2016-15, Classification of Certain Cash Receipts and Cash Payments, which is intended to reduce diversity in practice in how certain cash receipts and payments are presented and classified in the statement of cash flows. The standard provides guidance in a number of situations including, among others, settlement of zero-coupon bonds, contingent consideration payments made after a business combination, proceeds from the settlement of insurance claims, and distributions received from equity method investees. The ASU also provides guidance for classifying cash receipts and payments that have aspects of more than one class of cash flows. This ASU is effective for fiscal years beginning after December 15, 2017, with early adoption permitted. The standard requires application using a retrospective transition method. This ASU is not expected to have a material impact on the Company's consolidated results of operations and financial condition.

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. This ASU is effective for fiscal years beginning after December 15, 2017 on a prospective basis with early adoption permitted. The Company would apply this guidance to applicable transactions after the adoption date.

In March 2017, the FASB issued ASU 2017-07, Compensation-Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost, which requires employers to include only the service cost component of net periodic pension cost and net periodic postretirement benefit cost in operating expenses. The other components of net benefit cost, including amortization of prior service cost/credit and net actuarial gains/losses, and settlement and curtailment effects, are to be included in non-operating expenses. The ASU also stipulates that only the service cost component of net benefit cost is eligible for capitalization. The effective date for adoption of this guidance begins on January 1, 2018, with early adoption permitted. The Company is currently evaluating the effect that this standard will have on the consolidated financial statements.

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18) Acquisition

Custom Control Concepts LLC

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 not been finalized. CCC is included in our Aerospace segment.

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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, 2016.)

OVERVIEW

Astronics Corporation ("Astronics" or the "Company") is a leading supplier of products 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 & safety systems, avionics products, aircraft structures, systems certification and automated test systems.

Our Aerospace segment designs and manufactures products for the global aerospace industry. Product lines include lighting & safety systems, electrical power generation, distribution and motion systems, aircraft structures, avionics products, systems certification and other products. Our Aerospace customers are the airframe manufacturers ("OEM") that build aircraft for the commercial, military and general aviation markets, suppliers to those OEM's, aircraft operators such as airlines 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

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 (IFE) 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. CCC is included in our Aerospace segment.

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CONSOLIDATED RESULTS OF OPERATIONS AND OUTLOOK

(Dollars in thousands)	Six Months Ended		Three Months Ended	
	July 1, 2017	July 2, 2016	July 1, 2017	July 2, 2016
Sales	$303,510	$323,956	$151,114	$164,426
Gross Profit (sales less cost of products sold)	$72,467	$84,318	$34,150	$44,835
Gross Margin	23.9 %	26.0 %	22.6 %	27.3 %
Selling, General and Administrative Expenses	$44,094	$44,108	$22,401	$22,224
SG&A Expenses as a Percentage of Sales	14.5 %	13.6 %	14.8 %	13.5 %
Interest Expense, Net of Interest Income	$2,313	$2,143	$1,180	$1,056
Effective Tax Rate	26.0 %	30.5 %	27.3 %	30.5 %
Net Income	$19,272	$26,465	$7,685	$14,980

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

CONSOLIDATED SECOND QUARTER RESULTS

Consolidated sales were down $13.3 million from the same period last year. Aerospace segment sales of $129.5 million were down $13.0 million and Test Systems segment sales of $21.6 million were down $0.3 million.

Consolidated cost of products sold in the second quarter of 2017 decreased $2.6 million to $117.0 million compared with $119.6 million in the second quarter of 2016. The decrease was the result of lower organic sales volumes offset by the additional cost of products sold by CCC. Organic Engineering and Development (“E&D”) costs were $21.7 million in the quarter, up from $21.4 million of E&D costs in last year’s second quarter. As a percent of sales, organic E&D costs were 14.4% and 13.0% in the second quarters of 2017 and 2016, respectively. CCC incurred E&D costs of $1.2 million since its acquisition.

Selling, general and administrative (“SG&A”) expenses were $22.4 million or 14.8% of sales, in the second quarter of 2017 compared with $22.2 million, or 13.5% of sales, in the same period last year.

The effective tax rate for the quarter was 27.3%, compared with 30.5% in the second quarter of 2016. The first quarter 2017 tax rate was favorably impacted by excess tax benefits associated with employee share-based compensation, decreases in foreign tax rates, and from the federal research and development tax credit.

Net income for the quarter was $7.7 million, compared to $15.0 million in the second quarter of the prior year. Diluted earnings per share was $0.26 cents and $0.50 cents in the second quarters of 2017 and 2016 respectively.

CONSOLIDATED YEAR-TO-DATE RESULTS

Consolidated sales for the first six months of 2017 decreased by $20.4 million, or 6.3%, to $303.5 million. Aerospace segment sales were down $14.4 million, or 5.1% year-over-year, to $266.4 million, while Test Systems segment sales were down $6.0 million, or 13.9% to $37.1 million.

Consolidated costs of products sold decreased $8.6 million to $231.0 million from $239.6 million in the first six months of 2015. Organic E&D costs were 14.7% of sales, or $44.6 million, compared with $44.6 million, or 13.8% of sales, in the prior year’s first six months. SG&A expenses were $44.1 million, or 14.5% of sales, in the first six months of 2017 compared with $44.1 million, or 13.6% of sales, in the same period last year.

The effective tax rate for the first six months of 2017 was 26.0%, compared with 30.5% in the second six months of 2016. The tax rate in the first six months of 2017 was favorably impacted by excess tax benefits associated with employee share-based compensation and decreases in foreign tax rates, and from the federal research and development tax credit.

Net income for the first half of 2017 totaled $19.3 million, or $0.64 per diluted share.

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During the second quarter, the Company repurchased approximately 302,000 shares at an aggregate cost of $9.1 million under its share repurchase program. Since the inception of the program in February 2016, the Company has repurchased approximately 973,000 shares at an aggregate cost of $31.1 million.

CONSOLIDATED OUTLOOK

Consolidated sales in 2017 are forecasted to be in the range of $625 million to $645 million, which represents a decline from the high end of the previous range. The Aerospace forecast has been impacted by program timing, comparatively slower wide body retrofit and new build activity, combined with delayed decisions regarding passenger entertainment options by the airlines. While quoting activity remains very high, it looks increasingly like these issues will continue to pose a challenge for the Aerospace business for the remainder of 2017. Additionally, some significant new programs we have been pursuing in the Test business are now taking longer than anticipated, somewhat reducing 2017 expectations. Approximately $535 million to $550 million of revenue is expected from the Aerospace segment and $90 million to $95 million from the Test Systems segment.

Consolidated backlog at July 1, 2017 was $265.6 million, of which approximately $204.6 million is expected to ship in 2017.

The effective tax rate for 2017 is expected to be in the range of 28% to 31%.

Capital equipment spending in 2017 is expected to be in the range of $21 million to $25 million.

E&D costs are expected to be in the range of $96 million to $99 million including the engineering costs from the acquired Custom Control Concepts business.

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 15 of the Notes to Consolidated Condensed Financial Statements included in this report.

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AEROSPACE SEGMENT

(In thousands)	Six Months Ended July 1, 2017	Six Months Ended July 2, 2016	Three Months Ended July 1, 2017	Three Months Ended July 2, 2016
Sales				
Aerospace	$266,374	$281,177	$129,547	$142,528
Less Intersegment Sales	—	(367)	—	(27)
Total Aerospace Sales	$266,374	$280,810	$129,547	$142,501
Operating Profit	$33,738	$43,542	$13,984	$24,851
Operating Margin	12.7 %	15.5 %	10.8 %	17.4 %
Aerospace Sales by Market (In thousands)				
Commercial Transport	$208,079	$229,818	$98,355	$116,423
Military	30,931	26,254	15,785	13,973
Business Jet	18,251	14,232	10,716	7,707
Other	9,113	10,506	4,691	4,398
	$266,374	$280,810	$129,547	$142,501
Aerospace Sales by Product Line (In thousands)				
Electrical Power & Motion	$135,040	$150,957	$62,597	$75,564
Lighting & Safety	85,316	82,544	42,646	41,979
Avionics	20,076	16,818	10,940	9,344
Systems Certification	4,952	9,997	2,793	5,391
Structures	11,877	9,988	5,880	5,825
Other	9,113	10,506	4,691	4,398
	$266,374	$280,810	$129,547	$142,501

(In thousands)	July 1, 2017	December 31, 2016
Total Assets	$529,369	$500,892
Backlog	$215,648	$219,146

AEROSPACE SECOND QUARTER RESULTS

Aerospace segment sales decreased by $13.0 million, or 9.1%, when compared with the prior year's second quarter to $129.5 million. CCC contributed $3.5 million in sales in the 2017 second quarter.

Electrical Power & Motion sales decreased $13.0 million, or 17.2%, due to lower sales of in-seat and cabin power products, which have been impacted by program timing, comparatively slower wide body retrofit and new build activity, combined with delayed decisions regarding passenger entertainment options. Systems Certification sales decreased by $2.6 million on lower project activity. Avionics sales were up $1.6 million and included the CCC acquisition which offset lower antenna sales.

Aerospace operating profit for the second quarter of 2017 was $14.0 million, or 10.8% of sales, compared with $24.9 million, or 17.4% of sales, in the same period last year. Aerospace operating profit was negatively impacted by lower organic sales, $0.9 million operating loss from the CCC acquisition and increased organic E&D costs. Organic Aerospace E&D costs were $19.8 million compared with $19.0 million in the same period last year. CCC incurred E&D costs of $1.2 million during the quarter.

Aerospace orders in the second quarter of 2017 were $134.8 million. Backlog was $215.6 million at the end of the second quarter of 2017.

AEROSPACE YEAR-TO-DATE RESULTS

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Aerospace segment sales decreased by $14.4 million, or 5.1%, when compared with the prior year's first six months to $266.4 million.
Electrical Power & Motion sales decreased $15.9 million, or 10.5%, and Systems Certifications sales decreased $5.0 million, both for similar reasons as in the quarter. These declines were partially offset by $3.3 million higher Avionics sales related to the CCC acquisition, as well as a $2.7 million increase in sales of Lighting and Safety products.
Aerospace operating profit for the first six months of 2017 was $33.7 million, or 12.7% of sales, compared with $43.5 million, or 15.5% of sales, in the same period last year. Aerospace operating profit was negatively impacted by lower sales volumes and the operating loss from the acquired CCC business. E&D costs for Aerospace were $41.3 million (inclusive of $1.2 million related to the acquired CCC business) and $39.4 million in the first six of 2017 and 2016, respectively. Aerospace SG&A expense remained consistent at $31.1 million in the first six months of 2017 as compared with 2016.

AEROSPACE OUTLOOK

We expect 2017 sales for our Aerospace segment to be in the range of $535 million to $550 million. The Aerospace segment's backlog at the end of the first quarter of 2017 was $215.6 million with approximately $168.5 million expected to be shipped over the remaining part of 2017 and $195.4 million is expected to ship over the next 12 months.

TEST SYSTEMS SEGMENT

(In thousands)	Six Months Ended July 1, 2017	Six Months Ended July 2, 2016	Three Months Ended July 1, 2017	Three Months Ended July 2, 2016
Sales	$37,136	$43,146	$21,567	$21,925
Operating profit (loss)	$1,750	$3,284	$1,432	$1,074
Operating Margin	4.7 %	7.6 %	6.6 %	4.9 %

Test Systems Sales by Market (In thousands)				
Semiconductor	$11,711	$16,985	$7,080	$9,848
Aerospace & Defense	25,425	26,161	14,487	12,077
	$37,136	$43,146	$21,567	$21,925

(In thousands)	July 1, 2017	December 31, 2016
Total Assets	$77,382	$ 76,575
Backlog	$49,930	$ 38,887

TEST SYSTEMS SECOND QUARTER RESULTS

Sales in the second quarter of 2017 decreased approximately $0.3 million to $21.6 million compared with the same period in 2016, a decrease of 1.6%. Sales to the Semiconductor market decreased $2.8 million and sales to the Aerospace and Defense market increased $2.5 million compared with the same period in 2016.
Operating profit was $1.4 million, or 6.6% of sales, compared with $1.1 million, or 4.9% of sales, in last year's second quarter. E&D costs were $2.0 million, down from $2.4 million in the second quarter of 2016. Test Systems SG&A expense decreased to $2.9 million in the second quarter of 2017 compared with $3.2 million in the same period last year.
Orders for the Test Systems segment in the quarter were $23.9 million, for a book-to-bill ratio of 1.11 for the quarter. Backlog was $49.9 million at the end of the second quarter of 2017.

TEST SYSTEMS YEAR-TO-DATE RESULTS

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Sales in the first six months of 2017 decreased 13.9% to $37.1 million compared with sales of $43.1 million for the same period in 2016, due to lower sales to the Semiconductor market. Sales to the Semiconductor market decreased $5.3 million compared with the same period in 2016.

Operating profit was $1.8 million, or 4.7% of sales, compared with $3.3 million, or 7.6% of sales, in the first six months of 2016. E&D costs were $4.5 million in the first six months of 2017 compared with $5.3 million in the prior year period. SG&A costs declined to $5.9 million in the first six months of 2017 compared with $6.4 million in the same period in 2016.

TEST SYSTEMS OUTLOOK

We expect sales for the Test Systems segment for 2017 to be in the range of $90 million to $95 million. The Test Systems segment's backlog at the end of the second quarter of 2017 was $49.9 million with approximately $36.1 million expected to be shipped over the remaining part of 2017 and approximately $46.6 million scheduled to ship over the next 12 months.

LIQUIDITY AND CAPITAL RESOURCES

Operating Activities:

Cash provided by operating activities totaled $4.5 million for the first six months of 2017, as compared with $23.3 million during the same period in 2016. Cash flow from operating activities decreased compared with the same period of 2016 primarily due to the impact of lower net income and increases in net operating assets for the first six months of 2017 when compared with the first six months of 2016.

Investing Activities:

Cash used for investing activities included $10.2 million for the acquisition of CCC, as well as capital expenditures, which were $5.8 million for the first six months of 2017 compared with $6.2 million used in the same period of 2016. The Company expects capital spending in 2017 to be in the range of $21 million to $25 million.

Financing Activities:

The primary financing activities in 2017 relate 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 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.

The Company's Credit Agreement consists of a $350 million revolving credit line with the option to increase the line by up to $150 million. On January 13, 2016, the Company amended the Agreement to add a new lender and extend the maturity date of the credit facility from September 26, 2019 to January 13, 2021. At July 1, 2017 there was $152.0 million outstanding on the revolving credit facility and there remains $196.9 million available, net of outstanding letters of credit. The credit facility allocates up to $20 million of the $350 million revolving credit line for the issuance of letters of credit, including certain existing letters of credit. At July 1, 2017, 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 3.5 to 1, increasing to 4.0 to 1 for up to two fiscal quarters following the closing of an acquisition permitted under the Agreement. The Company's leverage ratio was 1.77 to 1 at July 1, 2017. 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 137.5 basis points and 225 basis points based upon the Company's leverage ratio. The Company will also pay a commitment fee to the lenders in an amount equal to between 17.5 basis points and 35 basis points on the undrawn portion of the credit facility, based upon the Company's leverage ratio. The Company must also maintain a minimum interest coverage ratio (Adjusted EBITDA to interest expense) of 3.0 to 1 for the term of the Agreement. The Company's interest coverage ratio was 24.2 to 1 at July 1, 2017.

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.

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BACKLOG

The Company’s backlog at July 1, 2017 was $265.6 million compared with $258.0 million at December 31, 2016 and $293.8 million at July 2, 2016.

CONTRACTUAL OBLIGATIONS AND COMMITMENTS

The following table represents contractual obligations as of July 1, 2017:

	Payments Due by Period				
(In thousands)	Total	2017	2018-2019	2019-2020	After 2020
Long-term Debt	$162,966	$1,335	$ 4,571	$ 156,164	$ 896
Purchase Obligations	98,347	87,309	11,038	—	—
Interest on Long-term Debt	15,568	2,269	8,784	4,503	12
Supplemental Retirement Plan and Post Retirement Obligations	22,347	207	826	811	20,503
Operating Leases	6,614	1,976	4,501	137	—
Other Long-term Liabilities	169	30	48	29	62
Total Contractual Obligations	$306,011	$93,126	$ 29,768	$ 161,644	$ 21,473

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 6, 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 2017 have not been significant.

CRITICAL ACCOUNTING POLICIES

Refer to the Company’s annual report on Form 10-K for the year ended December 31, 2016 for a complete discussion of the Company’s critical accounting policies.

RECENT ACCOUNTING PRONOUNCEMENTS

In May 2014, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) No. 2014-9, Revenue from Contracts with Customers. This new standard is effective for reporting periods beginning after December 15, 2017, pursuant to the issuance of ASU 2015-14, Revenue from Contracts with Customers: Deferral of Effective Date issued in August 2015. The comprehensive new standard will supersede existing revenue recognition guidance and require revenue to be recognized when promised goods or services are transferred to customers in amounts that reflect the consideration to which the company expects to be entitled in exchange for those goods or services. Adoption of the new rules could affect the timing of revenue recognition for certain transactions. The guidance permits two implementation approaches, one requiring retrospective application of the new standard with restatement of prior years and one requiring prospective application of the new standard with disclosure of results under old standards. The Company will adopt the new standard on January 1, 2018, using the modified retrospective transition method.

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The adoption of this amendment may require us to accelerate the recognition of revenue as compared to current standards, for certain customers, in cases where we produce products unique to those customers; and for which we would have an enforceable right of payment for production completed to date. The Company has identified its revenue streams, reviewed the initial impacts of adopting the new standard on those revenue streams, and appointed a project management leader. The Company continues to evaluate the quantitative and qualitative impacts of the standard.

In February 2016, the FASB issued ASU No. 2016 - 02, Leases. The new standard is effective for reporting periods beginning after December 15, 2018. Early adoption is permitted. The standard will require lessees to report most leases as assets and liabilities on the balance sheet, while lessor accounting will remain substantially unchanged. The standard requires a modified retrospective transition approach for existing leases, whereby the new rules will be applied to the earliest year presented. The adoption of the standard is not expected to have a material effect on the Company’s financial position, results of operations or cash flows.

In August 2016, the FASB issued ASU No. 2016-15, Classification of Certain Cash Receipts and Cash Payments, which is intended to reduce diversity in practice in how certain cash receipts and payments are presented and classified in the statement of cash flows. The standard provides guidance in a number of situations including, among others, settlement of zero-coupon bonds, contingent consideration payments made after a business combination, proceeds from the settlement of insurance claims, and distributions received from equity method investees. The ASU also provides guidance for classifying cash receipts and payments that have aspects of more than one class of cash flows. This ASU is effective for fiscal years beginning after December 15, 2017, with early adoption permitted. The standard requires application using a retrospective transition method. This ASU is not expected to have a material impact on the Company’s consolidated results of operations and financial condition.

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. This ASU is effective for

fiscal years beginning after December 15, 2017 on a prospective basis with early adoption permitted. The Company would apply this guidance to applicable transactions after the adoption date.

In March 2017, the FASB issued ASU 2017-07, Compensation-Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost, which requires employers to include only the service cost component of net periodic pension cost and net periodic postretirement benefit cost in operating expenses. The other components of net benefit cost, including amortization of prior service cost/credit and net actuarial gains/losses, and settlement and curtailment effects, are to be included in non-operating expenses. The ASU also stipulates that only the service cost component of net benefit cost is eligible for capitalization. The effective date for adoption of this guidance begins on January 1, 2018, with early adoption permitted. The Company is currently evaluating the effect that this standard will have on the consolidated financial statements.

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,” “approxim “estimates,” “predicts,” “potential,” “outlook,” “forecast,” “anticipates,” “presume” and “assume,” are forward-looking stateme

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.

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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

We have established disclosure controls and procedures that are designed to ensure that material information relating to us, including our consolidated subsidiaries, is made known to our Chief Executive Officer (principal executive officer) and Chief Financial Officer (principal financial officer) by others within our organization to allow timely decisions regarding required disclosure. Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of the effectiveness of our disclosure controls and procedures as of July 1, 2017. Based on this evaluation, as a result of the material weakness in our internal control over financial reporting described below, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were not effective as of July 1, 2017.

Notwithstanding the material weakness discussed below, our management, including our Chief Executive Officer and Chief Financial Officer, has concluded that the consolidated financial statements included in this report fairly present, in all material respects, our financial condition, results of operations and cash flows for the periods presented in conformity with accounting principles generally accepted in the United States.

During the quarter ended July 1, 2017, management discovered a material weakness in the design of information technology change controls over a report writing application. Additionally, management identified deficiencies in certain review controls over the financial statement consolidation process, which when aggregated along with the information technology change controls matter described above, aggregated to a material weakness over the financial statement close process as of December 31, 2016. Management does not expect adjustments to any previously issued financial statements as a result of these deficiencies.

The Company has begun implementing changes to the design and application of new controls as well as make significant changes to the design of existing controls over information technology as well as controls related to the financial statement consolidation process. The Company has made progress towards remediation of the material weakness as of the date of this filing and expects to complete remediation by December 31, 2017. We will continue the process of enhancing our controls as well as continue to test their effectiveness over the remainder of 2017.

We will be filing an amendment to the Company’s Annual Report on Form 10-K for the year ended December 31, 2016 and an amendment to the Company’s Quarterly Reports on Form 10-Q for the quarter ended April 1, 2017 to reflect the conclusion by our management that our disclosure controls and procedures were not effective as of those dates, and that there was a material weakness in our internal control over financial reporting as of the end of the periods covered by these reports.

b) Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting that occurred during the quarter ended July 1, 2017 that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

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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. The relief sought by Lufthansa includes requiring AES to stop selling and marketing the allegedly infringing power supply system, a recall of allegedly infringing products sold to commercial customers since November 26, 2003 and compensation for damages. The claim does not specify an estimate of damages and a damages claim would be pursued by Lufthansa in separate court proceedings.

On February 6, 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 sales of the infringing product 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 July 1, 2017 there are no products 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 has submitted a petition to grant AES leave for appeal to the Federal Supreme Court. The Company believes it has valid defenses to refute the decision. Should the Federal Supreme Court decide to hear the case, the appeal process is estimated to extend up to two years. We estimate AES's potential exposure related to this matter to be approximately $1 million to $3 million. As loss exposure is not probable at this time, the Company has not recorded any liability with respect to this litigation as of July 1, 2017.

On November 26, 2014, Lufthansa filed a complaint in the United States District for the Western District of Washington. Lufthansa's complaint in this 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 has filed an appeal with the United States Court of Appeals for the Federal Circuit. The Company believes that it has valid defenses to Lufthansa's claims and will vigorously contest the appeal. 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 July 1, 2017.
Other than this proceeding, we are not party to any significant pending legal proceedings that management believes will result in material adverse effect on our financial condition or results of operations.
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, 2016, 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.

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Item 2. Unregistered sales of equity securities and use of proceeds
(c) The following table summarizes our purchases of our common stock for the quarter ended July 1, 2017.

Period	(a) Total Number of Shares Purchased	(b) Average Price Paid Per Share	(c) Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	(d) Maximum Dollar Value of Shares that may yet be Purchased Under the Program (1)
April 1, 2017 - April 29, 2017	20,474	$30.45	20,474	$27,345,000
April 30, 2017 - May 27, 2017 (2)	123,538	$30.20	120,930	$23,694,000
May 28, 2017 - July 1, 2017	160,343	$30.16	160,343	$18,858,000

(1) On February 24, 2016, the Company's Board of Directors authorized the repurchase of up to $50 million of common stock.

(2) There were 2,608 shares transferred to us by employees in connection with the exercise of stock options.

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.

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SIGNATURES

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

		ASTRONICS CORPORATION
		(Registrant)
Date:	August 16, 2017	By: /s/ David C. Burney
		David C. Burney
		Executive Vice President and Chief Financial Officer
		(Principal Financial Officer)