

TWIN DISC INC
Form 10-K
August 31, 2017

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D. C. 20549

FORM 10-K

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

For the Fiscal Year Ended June 30, 2017

Commission File Number 1-7635

TWIN DISC, INCORPORATED

(Exact Name of Registrant as Specified in its Charter)

Wisconsin 39-0667110
(State or Other Jurisdiction of Incorporation or Organization) (I.R.S. Employer Identification Number)

1328 Racine Street, Racine, Wisconsin 53403
(Address of Principal Executive Office) (Zip Code)

Registrant's Telephone Number, including area code: (262) 638-4000

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

Title of each class	Name of each exchange on which registered:
<u>Common stock, no par</u>	<u>The NASDAQ Stock Market LLC</u>
<u>Preferred stock purchase rights</u>	<u>The NASDAQ Stock Market LLC</u>

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

None

(Title of Class)

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

YES [] NO []

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.

YES [] NO []

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

YES [] NO []

Indicate by check mark whether the registrant has submitted electronically 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 (§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 if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of the registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K [].

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large Accelerated Filer [] Accelerated Filer []

Non-accelerated Filer [] Smaller reporting company [] Emerging growth company []

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act [].

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act).

YES [] NO []

At December 30, 2016, the last business day of the registrant's second fiscal quarter, the aggregate market value of the common stock held by non-affiliates of the registrant was \$123,053,259. Determination of stock ownership by affiliates was made solely for the purpose of responding to this requirement and registrant is not bound by this determination for any other purpose.

At August 24, 2017, the registrant had 11,572,523 shares of its common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE:

Portions of the Proxy Statement for the Annual Meeting of Shareholders to be held October 26, 2017, which will be filed pursuant to Regulation 14A not later than 120 days after the end of the fiscal year covered by this report, are incorporated by reference into Part III.

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PART I

Item 1. Business

Twin Disc, Incorporated (“Twin Disc”, or the “Company”) was incorporated under the laws of the state of Wisconsin in 1918. Twin Disc designs, manufactures and sells marine and heavy duty off-highway power transmission equipment. Products offered include: marine transmissions, surface drives, propellers and boat management systems as well as power-shift transmissions, hydraulic torque converters, power take-offs, industrial clutches and controls systems. The Company sells its products to customers primarily in the commercial, pleasure craft, and military marine markets as well as in the energy and natural resources, government and industrial markets. The Company's worldwide sales to both domestic and foreign customers are transacted through a direct sales force and a distributor network. The products described above have accounted for more than 90% of revenues in each of the last three fiscal years.

Most of the Company's products are machined from cast iron, forgings, cast aluminum and bar steel which generally are available from multiple sources and which are believed to be in adequate supply.

The Company has applied for patents in both the United States and certain foreign countries on inventions made in the course of its development work for which commercial applications are considered probable. The Company regards its patents collectively as important but does not consider its business dependent upon any one of such patents.

The business is not considered to be seasonal except to the extent that employee vacations and plant shutdowns, particularly in Europe, occur mainly in the months of July and August, curtailing production during that period.

The Company's products receive direct widespread competition, including from divisions of other larger independent manufacturers. The Company also competes for business with parts manufacturing divisions of some of its major customers. The primary competitive factors for the Company's products are design, technology, performance, price, service and availability. The Company's top ten customers accounted for approximately 48% of the Company's consolidated net sales during the year ended June 30, 2017. There was one customer, Great Lakes Power Companies, an authorized distributor of the Company, that accounted for 11% of consolidated net sales in fiscal 2017.

Unfilled open orders for the next six months of \$46.4 million at June 30, 2017 compares to \$35.7 million at June 30, 2016. Since orders are subject to cancellation and rescheduling by the customer, the six-month order backlog is considered more representative of operating conditions than total backlog. However, as procurement and manufacturing "lead times" change, the backlog will increase or decrease, and thus it does not necessarily provide a

valid indicator of the shipping rate. Cancellations are generally the result of rescheduling activity and do not represent a material change in backlog.

Management recognizes that there are attendant risks that foreign governments may place restrictions on dividend payments and other movements of money, but these risks are considered minimal due to the political relations the United States maintains with the countries in which the Company operates or the relatively low investment within individual countries. No material portion of the Company's business is subject to renegotiation of profits or termination of contracts at the election of the U.S. government.

Engineering and development costs include research and development expenses for new product development and major improvements to existing products, and other costs for ongoing efforts to refine existing products. Research and development costs charged to operations totaled \$1.5 million, \$1.8 million and \$2.3 million in fiscal 2017, 2016 and 2015, respectively. Total engineering and development costs were \$8.9 million, \$9.5 million and \$11.1 million in fiscal 2017, 2016 and 2015, respectively.

Compliance with federal, state and local provisions regulating the discharge of materials into the environment, or otherwise relating to the protection of the environment, is not anticipated to have a material effect on capital expenditures, earnings or the competitive position of the Company.

The number of persons employed by the Company at June 30, 2017 was 672.

A summary of financial data by segment and geographic area for the years ended June 30, 2017, 2016 and 2015 appears in Note J to the consolidated financial statements.

The Company's internet website address is www.twindisc.com. **The Company makes available free of charge (other than an investor's own internet access charges) through its website the Company's Annual Report on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K, and amendments to those reports, as soon as reasonably practicable after it electronically files such material with, or furnishes such material to, the United States Securities and Exchange Commission.** In addition, the Company makes available, through its website, important corporate governance materials. This information is also available from the Company upon request. The Company is not including the information contained on or available through its website as a part of, or incorporating such information by reference into, this Annual Report on Form 10-K.

Item 1A. Risk Factors

The Company's business involves risk. The following information about these risks should be considered carefully together with other information contained in this report. The risks described below are not the only risks the Company faces. Additional risks not currently known, deemed immaterial or that could apply to any issuer may also result in adverse results for the Company's business.

As a global company, the Company is subject to currency fluctuations and any significant movement between the U.S. dollar and the euro, in particular, could have an adverse effect on its profitability. Although the Company's financial results are reported in U.S. dollars, a significant portion of its sales and operating costs are realized in euros and other foreign currencies. The Company's profitability is affected by movements of the U.S. dollar against the euro and the other currencies in which it generates revenues and incurs expenses. Significant long-term fluctuations in relative currency values, in particular a significant change in the relative values of the U.S. dollar or euro, could have an adverse effect on the Company's profitability and financial condition. While the long-term impacts of the United Kingdom's vote to exit the European Union (commonly known as "Brexit") are currently unknown, any resulting unfavorable currency impact to the euro could have an adverse effect on the Company's profitability and financial condition.

Certain of the Company's products are directly or indirectly used in oil exploration and oil drilling, and are thus dependent upon the strength of those markets and oil prices. In recent years, the Company has seen significant variations in the sales of its products that are used in oil and energy related markets. The variability in these markets has been defined by the change in oil prices and the global demand for oil. Significant decreases in oil prices and

reduced demand for oil and capital investment in the oil and energy markets adversely affect the sales of these products and the Company's profitability. The cyclical nature of the global oil and gas market presents the ongoing possibility of a severe cutback in demand, which would create a significant adverse effect on the sales of these products and ultimately on the Company's profitability.

Many of the Company's product markets are cyclical in nature or are otherwise sensitive to volatile or variable factors. A downturn or weakness in overall economic activity or fluctuations in those other factors could have a material adverse effect on the Company's overall financial performance. Historically, sales of many of the products that the Company manufactures and sells have been subject to cyclical variations caused by changes in general economic conditions and other factors. In particular, the Company sells its products to customers primarily in the pleasure craft, commercial and military marine markets, as well as in the energy and natural resources, government and industrial markets. The demand for the products may be impacted by the strength of the economy generally, governmental spending and appropriations, including security and defense outlays, fuel prices, interest rates, as well as many other factors. Adverse economic and other conditions may cause the Company's customers to forego or otherwise postpone purchases in favor of repairing existing equipment.

In the event of an increase in the global demand for steel, the Company could be adversely affected if it experiences shortages of raw castings and forgings used in the manufacturing of its products. With the continued development of certain developing economies, in particular China and India, the global demand for steel has risen significantly in recent years. The Company selects its suppliers based on a number of criteria, and the Company expects that they will be able to support its growing needs. However, there can be no assurance that a significant increase in demand, capacity constraints or other issues experienced by the Company's suppliers will not result in shortages or delays in their supply of raw materials to the Company. If the Company were to experience a significant or prolonged shortage of critical components from any of its suppliers, particularly those who are sole sources, and could not procure the components from other sources, the Company would be unable to meet its production schedules for some of its key products and would miss product delivery dates which would adversely affect its sales, profitability and relationships with its customers.

The Company continues to face the prospect of increasing commodity costs, including steel, other raw materials and energy that could have an adverse effect on future profitability. To date, the Company has been successful with offsetting the effects of increased commodity costs through cost reduction programs and pricing actions. However, if material prices were to continue to increase at a rate that could not be recouped through product pricing, it could potentially have an adverse effect on the Company's future profitability.

If the Company were to lose business with any key customers, the Company's business would be adversely affected. Although there was only one customer, Great Lakes Power Companies, that accounted for 10% or more of consolidated net sales in fiscal 2017, deterioration of a business relationship with one or more of the Company's significant customers would cause its sales and profitability to be adversely affected.

The termination of relationships with the Company's suppliers, or the inability of such suppliers to perform, could disrupt its business and have an adverse effect on its ability to manufacture and deliver products. The Company relies on raw materials, component parts, and services supplied by outside third parties. If a supplier of significant raw materials, component parts or services were to terminate its relationship with the Company, or otherwise cease supplying raw materials, component parts, or services consistent with past practice, the Company's ability to meet its obligations to its customers may be affected. Such a disruption with respect to numerous products, or with respect to a few significant products, could have an adverse effect on the Company's profitability and financial condition.

A significant design, manufacturing or supplier quality issue could result in recalls or other actions by the Company that could adversely affect profitability. As a manufacturer of highly engineered products, the performance, reliability and productivity of the Company's products is one of its competitive advantages. While the Company prides itself on putting in place procedures to ensure the quality and performance of its products and suppliers, a significant quality or product issue, whether due to design, performance, manufacturing or supplier quality issue, could lead to warranty actions, scrapping of raw materials, finished goods or returned products, the deterioration in a customer relationship, or other action that could adversely affect warranty and quality costs, future sales and profitability.

The Company faces risks associated with its international sales and operations that could adversely affect its business, results of operations or financial condition. Sales to customers outside the United States approximated 51% of the Company's consolidated net sales for fiscal 2017. The Company has international manufacturing operations in Belgium, Italy, and Switzerland. In addition, the Company has international distribution operations in Singapore, China, Australia, Japan, Italy, Belgium, India and Canada. The Company's international sales and operations are subject to a number of risks, including:

- currency exchange rate fluctuations
- export and import duties, changes to import and export regulations, and restrictions on the transfer of funds
- problems with the transportation or delivery of its products
- issues arising from cultural or language differences
- potential labor unrest
- longer payment cycles and greater difficulty in collecting accounts receivables
- compliance with trade and other laws in a variety of jurisdictions
- changes in tax law

These factors could adversely affect the Company's business, results of operations or financial condition.

A material disruption at the Company's manufacturing facilities in Racine, Wisconsin could adversely affect its ability to generate sales and meet customer demand. The majority of the Company's manufacturing, based on fiscal 2017 sales, came from its facilities in Racine, Wisconsin. If operations at these facilities were to be disrupted as a result of significant equipment failures, natural disasters, power outages, fires, explosions, adverse weather conditions or other reasons, the Company's business and results of operations could be adversely affected. Interruptions in production would increase costs and reduce sales. Any interruption in production capability could require the Company to make substantial capital expenditures to remedy the situation, which could negatively affect its profitability and financial condition. The Company maintains property damage insurance which it believes to be adequate to provide for reconstruction of its facilities and equipment, as well as business interruption insurance to mitigate losses resulting from any production interruption or shutdown caused by an insured loss. However, any recovery under this insurance policy may not offset the lost sales or increased costs that may be experienced during the disruption of operations. Lost sales may not be recoverable under the policy and long-term business disruptions could result in a loss of customers. If this were to occur, future sales levels and costs of doing business, and therefore profitability, could be adversely affected.

Any failure to meet debt obligations and maintain adequate asset-based borrowing capacity could adversely affect the Company's business and financial condition. The Company's five-year revolving credit facility entered into in April 2016 is secured by certain personal property assets such as accounts receivable, inventory, and machinery and equipment. Under this agreement, the Company's borrowing capacity is based on the eligible balances of these assets and it is required to maintain sufficient borrowing base at all times to secure its outstanding borrowings. As of June 30, 2017, the Company had a borrowing capacity that exceeded its outstanding loan balance (see Note G of the Notes to the Consolidated Financial Statements). Based on its annual financial plan, the Company believes that it will generate sufficient cash flow levels throughout fiscal 2018 in order to maintain compliance with this borrowing base.

However, as with all forward-looking information, there can be no assurance that the Company will achieve the planned results in future periods especially due to the significant uncertainties flowing from the current economic environment. If the Company is not able to achieve these objectives and to meet the required covenants under the agreements, the Company may require forbearance from its existing lenders in the form of waivers and/or amendments of its credit facilities or be required to arrange alternative financing. Failure to obtain relief from covenant violations or to obtain alternative financing, if necessary, would have a material adverse impact on the Company.

The Company recorded significant non-cash goodwill impairment charges in fiscal 2017 and 2016. The Company carries a remaining balance of goodwill in the amount of \$2.6 million as of June 30, 2017 after the impairment charges recognized in fiscal 2017 and fiscal 2016. Any further deterioration in the industry or business may trigger future impairment charges, which may have a material adverse effect to our financial results.

The Company may experience negative or unforeseen tax consequences. The Company reviews the probability of the realization of its net deferred tax assets each period based on forecasts of taxable income in both the U.S. and foreign jurisdictions. This review uses historical results, projected future operating results based upon approved business plans, eligible carryforward periods, tax planning opportunities and other relevant considerations. Adverse changes in the profitability and financial outlook in the U.S. or foreign jurisdictions may require the creation of a valuation allowance to reduce the Company's net deferred tax assets. Such changes could result in material non-cash expenses in the period in which the changes are made and could have a material adverse impact on the Company's results of operations and financial condition.

Taxing authority challenges may lead to tax payments exceeding current reserves. The Company is subject to ongoing tax examinations in various jurisdictions. As a result, the Company may record incremental tax expense based on expected outcomes of such matters. In addition, the Company may adjust previously reported tax reserves based on expected results of these examinations. Such adjustments could result in an increase or decrease to the Company's effective tax rate. Future changes in tax law in various jurisdictions around the world and income tax holidays could have a material impact on the Company's effective tax rate, foreign rate differential, future income tax expense and cash flows.

Security breaches and other disruptions could compromise the Company's information and expose it to liability, which would cause its business and reputation to suffer. In the ordinary course of its business, the Company collects and stores sensitive data, including its proprietary business information and that of its customers, suppliers and business partners, as well as personally identifiable information of its customers and employees, in its internal and external data centers, cloud services, and on its networks. The secure processing, maintenance and transmission of this information is critical to the Company's operations and business strategy. Despite the Company's security measures, its information technology and infrastructure, and that of its partners, may be vulnerable to malicious attacks or breaches due to employee error, malfeasance or other disruptions, including as a result of rollouts of new systems. Any such breach or operational failure would compromise the Company's networks and/or that of its partners and the information stored there could be accessed, publicly disclosed, lost or stolen. Any such access, disclosure or other loss of information could result in legal claims or proceedings and/or regulatory penalties, disrupt the Company's operations, damage its reputation, and/or cause a loss of confidence in its products and services, which could adversely affect its business.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Manufacturing Segment

The Company owns two manufacturing, assembly and office facilities in Racine, Wisconsin, U.S.A., one in Nivelles, Belgium, two in Decima, Italy and one in Novazzano, Switzerland. The aggregate floor space of these six plants approximates 767,000 square feet. One of the Racine facilities includes office space, which includes the Company's corporate headquarters. The Company leases additional manufacturing, assembly and office facilities in Italy (Limite sull'Arno) and India (Kancheepuram).

Distribution Segment

The Company also has operations in the following locations, all of which are leased and are used for sales offices, warehousing and light assembly or product service:

Jacksonville, Florida, U.S.A. Gold Coast, Queensland, Australia

Coburg, Oregon, U.S.A. Singapore

Kent, Washington, U.S.A. Shanghai, China

Edmonton, Alberta, Canada Guangzhou, China

Burnaby, British Columbia, Canada Chennai, India

Brisbane, Queensland, Australia Coimbatore, India

Perth, Western Australia, Australia Saitama City, Japan

The Company believes its properties are well maintained and adequate for its present and anticipated needs.

Item 3. Legal Proceedings

Twin Disc is a defendant in several product liability or related claims of which the ultimate outcome and liability to the Company, if any, are not presently determinable. Management believes that the final disposition of such litigation will not have a material impact on the Company's results of operations, financial position or cash flows.

Item 4. Mine Safety Disclosures

Not applicable.

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Executive Officers of the Registrant

Pursuant to General Instruction G(3) of Form 10-K, the following list is included as an unnumbered Item in Part I of this Report in lieu of being included in the Proxy Statement for the Annual Meeting of Shareholders to be held on October 26, 2017.

<u>Name</u>	<u>Age</u>	<u>Position</u>
John H. Batten	52	President, Chief Executive Officer
Jeffrey S. Knutson	52	Vice President – Finance, Chief Financial Officer, Treasurer and Secretary
Malcolm F. Moore	66	Executive Vice President, Chief Operating Officer
Dean J. Bratel	53	Vice President – Sales and Applied Technology
Denise L. Wilcox	60	Vice President – Human Resources
Michael B. Gee	50	Vice President – Engineering
Donald J. Nelson	56	Vice President – Operations
Debbie A. Lange	59	Corporate Controller

Officers are elected annually by the Board of Directors at the Board meeting held in conjunction with each Annual Meeting of the Shareholders. Each officer holds office until a successor is duly elected, or until he/she resigns or is removed from office.

John H. Batten, President, Chief Executive Officer. Effective November 1, 2013, Mr. Batten was named President, Chief Executive Officer. Prior to this promotion, Mr. Batten served as President and Chief Operating Officer since July 2008, Executive Vice President since November 2004, Vice President and General Manager – Marine and Propulsion since October 2001 and Commercial Manager – Marine and Propulsion since 1998. Mr. Batten joined Twin Disc in 1996 as an Application Engineer.

Jeffrey S. Knutson, Vice President – Finance, Chief Financial Officer, Treasurer and Secretary. Mr. Knutson was named Chief Financial Officer and Treasurer in June 2015. Mr. Knutson was named Vice President – Finance, Interim Chief Financial Officer and Interim Treasurer in February 2015. Mr. Knutson was appointed Corporate Secretary in June 2013, and was Corporate Controller from his appointment in October 2005 until August 2015. Mr. Knutson joined the Company in February 2005 as Controller of North American Operations. Prior to joining Twin Disc, Mr. Knutson held Operational Controller positions with Tower Automotive (since August 2002) and Rexnord Corporation (since November 1998).

Malcolm F. Moore, Executive Vice President, Chief Operating Officer. Mr. Moore was appointed to the role of Executive Vice President, Chief Operating Officer effective August 1, 2016. He was hired as Executive Vice President – Operations effective July 1, 2015 after resigning from the Twin Disc Board of Directors on June 30, 2015.

Prior to joining Twin Disc, Mr. Moore was President and CEO of Digi-Star LLC, a leading supplier of electronic components and software used in precision agriculture. Prior to leading Digi-Star, he held a variety of positions including Executive Vice President and COO, President and COO, and President and CEO of Gehl Company, a publicly-owned manufacturer and distributor of equipment used in construction and agriculture.

Dean J. Bratel, Vice President – Sales and Applied Technology. Mr. Bratel assumed his current role on August 1, 2016, after serving as Vice President, Sales and Marketing since January 2015. He served as Vice President, Americas (since June 2013), Vice President, Engineering (since November 2004), Director of Corporate Engineering (since January 2003), Chief Engineer (since October 2001) and Engineering Manager (since December 1999). Mr. Bratel joined Twin Disc in 1987.

Denise L. Wilcox, Vice President - Human Resources. Ms. Wilcox was promoted to her current role in November 2004, after serving in the role of Director, Corporate Human Resources since 2002. Prior to that, she held the role of Manager, Compensation and Benefits since her hire in 1998. Before joining the Company, Ms. Wilcox held positions at Johnson International and Runzheimer International.

Michael B. Gee, Vice President – Engineering. Mr. Gee was promoted to his current role in January 2015, after serving in the role of Director of Engineering since July of 2013. Prior to that, he was Chief Engineer (since September 2004) and has held several other positions in the Company, including Engineering Manager, Project Engineer, Design Engineer, and Experimental Engineer.

Donald J. Nelson, Vice President – Operations. Mr. Nelson was hired as Vice President, Operations in December 2016. Prior to joining the Company, Mr. Nelson was President, AeroSpace; Group Vice Executive Vice President at Rexnord Industries, LLC (since 2014), and President, Autolite Spark Plug, a division of UCI-FRAM Group, LLC (since 2012). Prior to these positions, he held several positions at Rexnord Industries, LLC (from 2006-2011), including Vice President/General Manager of Rexnord Aerospace Group, Vice President/General Manager of Rexnord Gear Group, and Director of Operations, Falk. Mr. Nelson also held positions at Alcoa, Inc. and at The Boeing Company.

Debbie A. Lange, Corporate Controller – Ms. Lange was hired as Corporate Controller effective August 4, 2015. Prior to joining the Company, Ms. Lange was the Director of Accounting Research & Special Projects at Sealed Air Corporation (since 2011), a global manufacturer and provider of food packaging solutions, product packaging and cleaning and hygiene solutions. Prior to her role at Sealed Air, Ms. Lange held the position of Director of Global Accounting and Reporting at Diversey, Inc.

PART II

Item 5. Market for the Registrant's Common Stock and Related Stockholder Matters

The Company's common stock is traded on the NASDAQ Global Select Market under the symbol TWIN. The price information below represents the high and low sales prices per quarter from July 1, 2015 through June 30, 2017:

Quarter	Fiscal Year Ended 6/30/17			Fiscal Year Ended 6/30/16		
	High	Low	Dividend	High	Low	Dividend
First Quarter	\$13.34	\$9.35	\$ -	\$18.80	\$12.11	\$ 0.09
Second Quarter	15.52	10.01	-	14.71	10.20	0.09
Third Quarter	21.75	14.38	-	11.50	8.19	-
Fourth Quarter	21.27	14.81	-	13.43	8.50	-

For information regarding the Company's equity-based compensation plans, see the discussion under Item 12 of this report. As of August 24, 2017, shareholders of record numbered 484. The closing price of Twin Disc common stock

as of August 24, 2017 was \$16.83.

Issuer Purchases of Equity Securities

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 Number of Shares that May Yet Be Purchased Under the Plans or Programs
April 1, 2017 – April 28, 2017	0	NA	0	315,000
April 29, 2017 – May 26, 2017	0	NA	0	315,000
May 27, 2017 - June 30, 2017	0	NA	0	315,000
Total	0	NA	0	315,000

On February 1, 2008, the Board of Directors authorized the purchase of up to 500,000 shares of Common Stock at market values, of which 250,000 shares were purchased during fiscal 2009 and 125,000 shares were purchased during fiscal 2012. On July 27, 2012, the Board of Directors authorized the purchase of an additional 375,000 shares of Common Stock at market values. This authorization has no expiration. During the second quarter of fiscal 2013, the Company purchased 185,000 shares under this authorization. The Company did not make any purchases during fiscal 2015, 2016 and 2017. As of June 30, 2017, 315,000 shares remain authorized for purchase.

Performance Graph

The following table compares total shareholder return over the last five fiscal years to the Standard & Poor's 500 Machinery (Industrial) Index and the Russell 2000 index. The S&P 500 Machinery (Industrial) Index consists of a broad range of manufacturers. The Russell 2000 Index consists of a broad range of 2,000 companies. The Company believes, because of the similarity of its business with those companies contained in the S&P 500 Machinery (Industrial) Index, that comparison of shareholder return with this index is appropriate. Total return values for the Corporation's common stock, the S&P 500 Machinery (Industrial) Index and the Russell 2000 Index were calculated based upon an assumption of a \$100 investment on June 30, 2012 and based upon cumulative total return values assuming reinvestment of dividends on a quarterly basis.

Item 6. Selected Financial Data

Financial Highlights

(in thousands, except per share amounts)

Fiscal Years Ended June 30,

Statement of Operations Data:

	2017	2016	2015	2014	2013
Net sales	\$168,182	\$166,282	\$265,790	\$263,909	\$285,282
Net (loss) earnings	(6,115)	(13,013)	11,385	3,870	4,251
Net (loss) earnings attributable to Twin Disc	(6,294)	(13,104)	11,173	3,644	3,882
Basic (loss) earnings per share attributable to Twin Disc common shareholders	(0.56)	(1.17)	0.99	0.32	0.34
Diluted (loss) earnings per share attributable to Twin Disc common shareholders	(0.56)	(1.17)	0.99	0.32	0.34
Dividends per share	-	0.18	0.36	0.36	0.36

June 30,

Balance Sheet Data	2017	2016	2015	2014	2013
Total assets	\$210,898	\$213,922	\$249,862	\$266,985	\$285,458
Total long-term debt	6,323	8,501	10,231	14,800	23,472

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations*Note on Forward-Looking Statements*

Statements in this report (including but not limited to certain statements in Items 1, 3 and 7) and in other Company communications that are not historical facts are forward-looking statements, which are based on management's current expectations. These statements involve risks and uncertainties that could cause actual results to differ materially from what appears here.

Forward-looking statements include the Company's description of plans and objectives for future operations and assumptions behind those plans. The words "anticipates," "believes," "intends," "estimates," and "expects," or similar anticipatory expressions, usually identify forward-looking statements. In addition, goals established by the Company should not be viewed as guarantees or promises of future performance. There can be no assurance the Company will be successful in achieving its goals.

In addition to the assumptions and information referred to specifically in the forward-looking statements, other factors, including, but not limited to those factors discussed under Item 1A, Risk Factors, could cause actual results to be materially different from what is presented in any forward-looking statements.

Results of Operations

(In thousands)

	2017	%	2016	%	2015	%
Net sales	\$168,182		\$166,282		\$265,790	
Cost of goods sold	119,950		125,687		182,758	
Gross profit	48,232	28.7	40,595	24.4	83,032	31.2
Marketing, engineering and administrative expenses	52,773	31.4	57,113	34.3	64,264	24.2
Restructuring of operations	1,791	1.1	921	0.6	3,282	1.2
Goodwill and other asset impairment charge	2,646	1.6	7,602	4.6	-	-
Other operating expense (income)	-	-	(445)	(0.3)	-	-
(Loss) earnings from operations	\$(8,978)	(5.3)	\$(24,596)	(14.8)	\$15,486	5.8

Fiscal 2017 Compared to Fiscal 2016*Net Sales*

Net sales for fiscal 2017 increased 1.1%, or \$1.9 million, to \$168.2 million from \$166.3 million in fiscal 2016. The slight increase reflects an increase in demand for the Company's oil and gas related products in North America, primarily during the second half of fiscal 2017. Asian demand for the Company's commercial marine products remained depressed, while demand from European customers also remained weak, hampered by local economic concerns and an unfavorable currency dynamic for the Company's U.S. produced goods. Excluding oil and gas applications, North American demand remained relatively stable for the Company's commercial marine and industrial products. Currency translation had a negligible impact on fiscal 2017 sales.

Sales at our manufacturing segment increased 3.9%, or \$5.5 million, versus the same period last year. In the current fiscal year, the Company's North American manufacturing operation, the largest, experienced a 15.7% increase in sales compared to fiscal 2016. The primary driver for this significant increase was improved demand for the Company's oil and gas related products, both new units and aftermarket service parts, primarily during the second half of the fiscal year. This increase is driven by stabilizing oil prices and consistent production levels requiring reinvestment in capital equipment following a lengthy pause created by the decline in oil prices starting in fiscal 2015. The Company's Italian manufacturing operations, which have been adversely impacted by the softness in the European mega yacht and industrial markets, experienced a sales decrease of 3.7% compared to the prior fiscal year. The Company's Belgian manufacturing operation saw a 19.4% decrease in sales in fiscal 2017 as the marine markets served by this operation continue to struggle. The Company's Swiss manufacturing operation, which supplies customized propellers for the global mega yacht and patrol boat markets, experienced a 4.4% increase in sales, primarily due to improvements in the

global patrol boat market.

Sales at our distribution segment were down 8.6%, or \$6.4 million, compared to fiscal 2016. The Company's distribution operation in Singapore, its largest Company-owned distribution operation, experienced a 26.9% reduction in sales due to a continuing decline in demand for various commercial applications and pressure-pumping transmissions for the Chinese oil and gas market following several years of very strong growth. The Company's distribution operation in the Northwest of the United States and Southwest of Canada experienced an increase in sales of 4.8% on the improved activity in the North American oil and gas market during the second half of the fiscal year. The Company's distribution operation in Australia, which provides boat accessories, propulsion and marine transmission systems primarily for the pleasure craft market, saw sales improve by 8.3%, driven by improved activity in the Australian pleasure craft market over the prior fiscal year.

Net sales for the Company's largest product market, marine transmission and propulsion systems, were down 7.4% compared to the prior fiscal year. This decrease reflects a continuing decline in the Asian commercial marine market and continued weakness in the global pleasure craft market. In the off-highway transmission market, the year-over-year increase of 46.0% can be attributed primarily to increased shipments of the Company's pressure pumping transmission systems and components to the North American oil and gas market, primarily during the second half of the fiscal year. The decrease experienced in the Company's industrial products of 11.3% was due to reduced volume in agriculture, mining and general industrial markets, primarily in the North American and Italian regions.

Geographically, sales to the U.S. and Canada improved 8% in fiscal 2017 compared to fiscal 2016, representing 55% of consolidated sales for fiscal 2017 compared to 52% in fiscal 2016. North American sales benefited from increased demand for oil and gas related products in the second half of the fiscal year. Sales into China declined 12.0% compared to fiscal 2016, driven by the combination of reduced oil and gas demand and a decline in commercial marine activity. China sales represented 4.7% of 2017 consolidated net sales, down from 5.4% in fiscal 2016 and 7.4% in fiscal 2015. Overall sales into the Asia Pacific market represented approximately 17% of sales in fiscal 2017, compared to 20% in fiscal 2016. Sales into the European market declined approximately 3% from fiscal 2016 levels while accounting for 21% of consolidated net sales compared to 22% in fiscal 2016. See Note J of the Notes to the consolidated financial statements for more information on the Company's business segments and foreign operations.

Gross Profit

In fiscal 2017, gross profit increased \$7.6 million, or 18.8%, to \$48.2 million on a sales increase of only \$1.9 million. Gross profit as a percentage of sales increased 430 basis points in fiscal 2017 to 28.7%, compared to 24.4% in fiscal 2016. The table below summarizes the gross profit trend by quarter for fiscal years 2017 and 2016:

	1 st Qtr	2 nd Qtr	3 rd Qtr	4 th Qtr	Year
<u>Gross Profit:</u> (\$ millions)					
2017	\$9.2	\$8.9	\$13.3	\$16.8	\$48.2
2016	\$8.2	\$11.6	\$9.6	\$11.2	\$40.6

% of Sales:

2017	25.6%	26.6%	29.5%	31.4%	28.7%
2016	21.9%	25.9%	23.2%	26.2%	24.4%

There were a number of factors that impacted the Company's overall gross profit rate in fiscal 2017. Gross profit for the year was favorably impacted by higher volumes, a favorable product mix, a favorable exchange impact (\$0.3 million) and positive cost reduction efforts. The Company estimates the net favorable impact of increased volumes on gross margin in fiscal 2017 was approximately \$0.8 million. The favorable shift in product mix, primarily related to

the improved North American demand for the Company's oil and gas transmission products, had an estimated favorable impact of \$2.3 million. The remaining improvement in margin (\$4.2 million) is due to the continued benefit of cost reduction actions across the global enterprise, along with significant improvements in operating efficiency.

Marketing, Engineering and Administrative (ME&A) Expenses

Marketing, engineering, and administrative (ME&A) expenses of \$52.8 million were down \$4.3 million, or 7.6%, compared to the prior fiscal year. As a percentage of sales, ME&A expenses decreased to 31.4% of sales versus 34.3% of sales in fiscal 2016. The reduction in fiscal 2017 compared to the prior year was driven by lower pension expense (\$0.3 million), reduced corporate development spending (\$0.9 million) and the positive impact of an aggressive global cost reduction program (\$5.0 million). These savings were partially offset by an increase to bonus expense (\$1.6 million) and stock based compensation (\$0.3 million).

Restructuring of Operations

During the course of fiscal 2017, the Company executed a series of targeted restructuring activities, resulting in a pre-tax restructuring charge of \$1.8 million, or \$0.16 per diluted share. These actions are focused on reducing the Company's operating costs due to the challenging global market conditions, and resulted in headcount reductions at the Company's operations in Italy, Belgium, India and the United States.

Goodwill and Other Asset Impairment Charge

For the quarter ended March 31, 2017, the Company performed a review of potential triggering events, such as the continued market softness and operating losses experienced during the quarter, and concluded that there were sufficient qualitative indicators in the third fiscal quarter that made it more likely than not that an impairment of the domestic industrial goodwill may have occurred. The Company completed a full impairment test, the result of which was a full impairment of the goodwill related to the U.S. Industrial business unit (\$2.5 million) that remained after the fiscal 2016 impairment. An asset impairment charge of \$0.1 million was also recorded related to the restructuring activities in India. See further discussion in Note P in the Notes to the Consolidated Financial Statements.

In fiscal 2016, the Company conducted its annual assessment for goodwill impairment as of June 30, 2016 using updated inputs, including appropriate risk-based, country and company specific weighted average discount rates for all of the Company's reporting units. The analysis identified an impairment in the domestic industrial business and the European propulsion business resulting in a charge of \$7.6 million. See further discussion in Note D in the Notes to the Consolidated Financial Statements.

Other Operating Income

During fiscal 2016, the Company sold the distribution rights and assets of its distribution entity covering the southeast U.S. territory for approximately \$4.1 million. As a result, a net operating gain of \$0.4 million was recorded.

Interest Expense

Interest expense of \$0.3 million for fiscal 2017 was down 29% versus fiscal 2016. Interest on the Company's revolving credit facility ("revolver") in fiscal 2017 was level with fiscal 2016 at \$0.2 million, as a lower average balance was offset by a slightly higher average interest rate. The average borrowing on the revolver, computed monthly, decreased to \$8.4 million in fiscal 2017, compared to \$12.3 million in the prior fiscal year. The interest rate on the revolver was a range of 1.20% to 2.21% in the prior fiscal year compared to a range of 2.22% to 2.80% in the current year. The interest expense on the Company's \$25 million Senior Note, which carried a fixed rate of 6.05%, totaled \$0.2 million in fiscal 2016. The final payment on the Senior Note was made in April 2016.

Other income (expense), net and Interest Income

In fiscal 2017, the decrease in other income (expense), net, was primarily due to lower fixed asset disposal losses when compared to the prior year. Interest income was lower in fiscal 2017 when compared to the prior year due to lower cash balances as the Company paid down long term debt.

Income Taxes

The effective tax rate for the twelve months of fiscal 2017 was 35.8%, which was significantly lower than the prior year rate of 48.6%. The fiscal 2016 effective tax rate was favorably impacted by a tax strategy which resulted in the recognition of foreign tax credits associated with the repatriation of \$9.7 million in cash from our European operations (\$2.4 million). Adjusting for this non-recurring tax benefit, the fiscal 2016 effective tax rate would have been 39.1%

The Company maintains valuation allowances when it is more likely than not that all or a portion of a deferred tax asset will not be realized. Changes in valuation allowances from period to period are included in the tax provision in the period of change. In determining whether a valuation allowance is required, the Company takes into account such factors as prior earnings history, expected future earnings, carry-back and carry-forward periods, and tax strategies that could potentially enhance the likelihood of realization of a deferred tax asset. During fiscal 2017, the Company reported operating income in certain foreign jurisdictions where the loss carryforward period is unlimited. The Company has evaluated the likelihood of whether the net deferred tax assets related to these jurisdictions would be realized and concluded that based primarily upon the uncertainty to achieve levels of sustained improvement and uncertain exchange rates in these jurisdictions: (a) it is more likely than not that \$3.8 million of deferred tax assets would not be realized; and that (b) a full valuation allowance on the balance of deferred tax assets relating to these jurisdictions continues to be necessary. The Company recorded a net increase in valuation allowance of \$0.7 million in fiscal 2017 due to higher cumulative operating losses in these jurisdictions. Management believes that it is more likely than not that the results of future operations will generate sufficient taxable income and foreign source income to realize the remaining deferred tax assets.

Order Rates

As of June 30, 2017, the Company's backlog of orders scheduled for shipment during the next six months (six-month backlog) was \$46.4 million, or approximately 30% higher than the six-month backlog of \$35.7 million as of June 30, 2016. The Company's backlog improved during the second half of the fiscal 2017 with the increase in North American demand for the Company's oil and gas related products.

Fiscal 2016 Compared to Fiscal 2015

Net Sales

Net sales for fiscal 2016 decreased 37.4%, or \$99.5 million, to \$166.3 million from \$265.8 million in fiscal 2015. The decrease was primarily the result of a dramatic reduction in demand for the Company's oil and gas related products in both North America and Asia driven by the extended global decline in oil and natural gas prices, along with weakening demand in Asia for the Company's commercial marine products. Demand from European customers remained weak, hampered by local economic concerns and an unfavorable currency dynamic for the Company's U.S. produced goods. Excluding oil and gas applications, North American demand remained relatively stable for the Company's commercial marine and industrial products. Currency translation had a \$7.9 million unfavorable impact on fiscal 2016 sales compared to the prior year due to the strengthening of the U.S. dollar against the euro and Asian currencies.

Sales at our manufacturing segment were down 39.4%, or \$91.6 million, versus the same period last year. Compared to fiscal 2015, on average, the U.S. dollar strengthened against the euro. The net translation effect of this on foreign manufacturing operations was to reduce revenues for the manufacturing segment by approximately \$3.8 million versus the prior year, before eliminations. In the current fiscal year, the Company's North American manufacturing operation, the largest, experienced a 50.7% decrease in sales compared to fiscal 2015. The primary driver for this significant decrease was a sharp decline in global demand for oil and gas related products as a result of the decline in global oil prices, along with reduced demand in Asia for commercial marine products due to generally challenging Asian economic conditions. The Company's Italian manufacturing operations, which have been adversely impacted by the softness in the European mega yacht and industrial markets, experienced a sales decrease of 14.2% compared to the prior fiscal year. The Company's Belgian manufacturing operation saw 6.8% decrease in sales in fiscal 2016 as stable North American demand was offset by unfavorable currency movements. The Company's Swiss manufacturing operation, which supplies customized propellers for the global mega yacht and patrol boat markets, experienced an 11.4% decrease in sales, primarily due to unfavorable currency movements along with the timing of shipments for the global patrol boat and Italian mega yacht markets.

Sales at our distribution segment were down 38.5%, or \$46.4 million, compared to fiscal 2015. Compared to fiscal 2015, on average, the Asian currencies weakened against the U.S. dollar. The net translation effect of this on foreign distribution operations was to decrease revenues for the distribution segment by approximately \$4.1 million versus the prior year, before eliminations. The Company's distribution operation in Singapore, its largest Company-owned distribution operation, experienced a 54.9% reduction in sales due to a decline in demand for various commercial applications and pressure-pumping transmissions for the Chinese oil and gas market following several years of very strong growth. The Company's distribution operation in the Northwest of the United States and Southwest of Canada experienced a decrease in sales of 42.8% on the decline of the North American oil and gas market throughout the fiscal year. The Company's distribution operation in Australia, which provides boat accessories, propulsion and marine transmission systems for the pleasure craft market, saw flat sales despite an unfavorable currency movement, driven by improved shipments in the Australian mega yacht market over the prior fiscal year.

Net sales for the Company's largest product market, marine transmission and propulsion systems, were down 29.9% compared to the prior fiscal year. This decrease reflects a sharp decline in the Asian commercial marine market, reduced demand for offshore supply vessels driven by the global decline in oil prices, continued weakness in the global pleasure craft market and a significant currency impact. In the off-highway transmission market, the year-over-year decrease of 62% can be attributed primarily to reduced shipments of the Company's pressure pumping transmission systems and components to the North American and Asian oil and gas market. The decrease experienced in the Company's industrial products of nearly 23% was due to decreased sales into the North American oil and gas market, along with reduced volume in agriculture, mining and general industrial markets, primarily in the North American and Italian regions.

Geographically, sales to the U.S. and Canada declined nearly 41% in fiscal 2016 compared to fiscal 2015, representing 52% of consolidated sales for fiscal 2016 compared to 55% in fiscal 2015. North American sales were severely impacted by reduced demand for oil and gas related products throughout the fiscal year. Sales into China declined 54.2% compared to fiscal 2015, driven by the combination of reduced oil and gas demand and a decline in commercial marine activity. China sales represented 5.4% of 2016 consolidated net sales, down from 7.4% in fiscal 2015 and 12.8% in fiscal 2014. Overall sales into the Asia Pacific market represented approximately 20% of sales in fiscal 2016, compared to 21% in fiscal 2015. Sales into the European market also suffered, reporting a 17% decrease from fiscal 2015 levels while accounting for 22% of consolidated net sales compared to only 17% in fiscal 2015. See Note J of the Notes to the consolidated financial statements for more information on the Company's business segments and foreign operations.

Gross Profit

In fiscal 2016, gross profit decreased \$42.4 million, or 51.1%, to \$40.6 million. Gross profit as a percentage of sales decreased 680 basis points in fiscal 2016 to 24.4%, compared to 31.2% in fiscal 2015. The table below summarizes the gross profit trend by quarter for fiscal years 2016 and 2015:

	1 st Qtr	2 nd Qtr	3 rd Qtr	4 th Qtr	Year
<u>Gross Profit:</u>					
(\$ millions)					
2016	\$8.2	\$11.6	\$9.6	\$11.2	\$40.6
2015	\$22.4	\$22.1	\$19.0	\$19.5	\$83.0
<u>% of Sales:</u>					
2016	21.9%	25.9%	23.2%	26.2%	24.4%
2015	34.5%	30.4%	31.2%	29.0%	31.2%

There were a number of factors that impacted the Company's overall gross profit rate in fiscal 2016. Gross profit for the year was negatively impacted by significantly lower volumes, an unfavorable product mix and an unfavorable exchange impact (\$1.1 million). The Company estimates the net unfavorable impact of decreased volumes on gross margin in fiscal 2016 was approximately \$44.4 million. The unfavorable shift in product mix, primarily related to the significant decline in the Company's oil and gas transmission business, had an estimated unfavorable impact of \$4.0 million. These unfavorable movements were partially offset by an aggressive effort to reduce the Company's fixed cost structure, resulting in savings of \$7.1 million in fiscal 2016.

Marketing, Engineering and Administrative (ME&A) Expenses

Marketing, engineering, and administrative (ME&A) expenses of \$57.1 million were down \$7.2 million, or 11.1%, compared to the prior fiscal year. As a percentage of sales, ME&A expenses increased to 34.3% of sales versus 24.2% of sales in fiscal 2015. The reduction in fiscal 2016 compared to the prior year was driven by lower bonus expense (\$3.2 million), a favorable currency impact (\$1.7 million) and aggressive spending reductions across the global enterprise (\$5.9 million). These savings were partially offset by an increase to pension expense (\$2.0 million), stock based compensation (\$0.7 million), spending on corporate development activities (\$0.7 million) and costs related to third quarter activity to revise the Wells Fargo and Prudential credit agreements (\$0.2 million).

Restructuring of Operations

During the course of fiscal 2016, the Company executed a series of targeted restructuring activities, resulting in a pre-tax restructuring charge of \$0.9 million, or \$0.08 per diluted share. These actions are focused on reducing the Company's operating costs due to the challenging global market conditions, and resulted in headcount reductions at the Company's operations in Italy, Singapore and the United States.

Goodwill Impairment Charge

The Company conducted its annual assessment for goodwill impairment as of June 30, 2016 using updated inputs, including appropriate risk-based, country and company specific weighted average discount rates for all of the Company's reporting units. The analysis identified an impairment in the domestic industrial business and the European propulsion business resulting in a charge of \$7.6 million. See further discussion in Note D in the Notes to the Consolidated Financial Statements.

Other Operating Income

During fiscal 2016, the Company sold the distribution rights and assets of its distribution entity covering the southeast U.S. territory for approximately \$4.1 million. As a result, a net operating gain of \$0.4 million was recorded.

Interest Expense

Interest expense of \$0.4 million for fiscal 2016 was down 30% versus fiscal 2015. Interest on the Company's revolving credit facility ("revolver") increased to \$0.2 million in fiscal 2016. The increase can be attributed to an overall increase in the average borrowings and the average interest rate year-over-year. The average borrowing on the revolver, computed monthly, increased to \$12.3 million in fiscal 2016, compared to \$10.7 million in the prior fiscal year. The interest rate on the revolver was a range of 1.16% to 1.20% in the prior fiscal year compared to a range of 1.20% to 2.21% in the current year. The interest expense on the Company's \$25 million Senior Note, which carried a fixed rate of 6.05%, decreased \$0.2 million to \$0.2 million, due to a lower remaining principal balance. The final payment on the Senior Note was made in April 2016.

Other income (expense), net and Interest Income

For the fiscal 2016 full year, Other, net declined by \$1.3 million due primarily to a prior year life insurance benefit and unfavorable exchange movements related to the Japanese yen, Singapore dollar, euro and Australian dollar. Interest income was flat in fiscal 2016 compared to the prior year.

Income Taxes

The effective tax rate for the twelve months of fiscal 2016 was 48.6%, which is significantly higher than the prior year rate of 28.4%. The full year effective rates are impacted by the non-deductibility of operating results in a certain foreign jurisdiction that is subject to a full valuation allowance. Adjusting both fiscal years for the results of this jurisdiction, the fiscal 2016 full year rate would have been 45.0% compared to 30.9% for the same period in fiscal 2015. The fiscal 2016 effective tax rate was favorably impacted by a tax strategy which resulted in the recognition of foreign tax credits associated with the repatriation of \$9.7 million in cash from our European operations (\$2.4 million). Adjusting for this non-recurring tax benefit, the fiscal 2016 effective tax rate would have been 36.2%. The fiscal 2015 rate was favorably impacted by a change in the jurisdictional mix of earnings, along with favorable discrete items related to foreign earnings, and the reinstatement of the research and development credit for calendar 2015.

The Company maintains valuation allowances when it is more likely than not that all or a portion of a deferred tax asset will not be realized. Changes in valuation allowances from period to period are included in the tax provision in the period of change. In determining whether a valuation allowance is required, the Company takes into account such factors as prior earnings history, expected future earnings, carry-back and carry-forward periods, and tax strategies that could potentially enhance the likelihood of realization of a deferred tax asset. During fiscal 2016, the Company reported operating income in certain foreign jurisdictions where the loss carryforward period is unlimited. The

Company has evaluated the likelihood of whether the net deferred tax assets related to these jurisdictions would be realized and concluded that based primarily upon the uncertainty to achieve levels of sustained improvement and uncertain exchange rates in these jurisdictions; (a) it is more likely than not that \$3.1 million of deferred tax assets would not be realized; and that (b) a full valuation allowance on the balance of deferred tax assets relating to these jurisdictions continues to be necessary. The Company recorded a net decrease in valuation allowance of \$0.5 million in fiscal 2016 due to lower cumulative operating losses in these jurisdictions. Management believes that it is more likely than not that the results of future operations will generate sufficient taxable income and foreign source income to realize the remaining deferred tax assets.

Order Rates

As of June 30, 2016, the Company's backlog of orders scheduled for shipment during the next six months (six-month backlog) was \$35.7 million, or approximately 4% higher than the six-month backlog of \$34.4 million as of June 30, 2015. The Company's backlog remained relatively consistent through the year, as markets remained at a relatively low level throughout fiscal 2016.

Liquidity and Capital Resources

Fiscal Years 2017, 2016 and 2015

The net cash provided by operating activities in fiscal 2017 totaled \$3.2 million, a slight decrease (\$0.2 million or 6%) from fiscal 2016. The slight change is primarily the result of a significant improvement in net earnings (\$6.9 million) being offset by moderating working capital improvements (\$8.3 million lower in fiscal 2017), as the prior fiscal year benefited from successful inventory reductions. While inventory improved slightly in fiscal 2017 (\$0.4 million), fiscal 2016 saw a \$13.7 million improvement driven by declining volumes and strong working capital management. While the accounts receivable balance increased significantly in fiscal 2017 (\$6.0 million) on the strong second half sales volume, receivable performance improved in fiscal 2017, with days sales outstanding falling from 66 days at June 30, 2016 to 56 days at June 30, 2017. Accounts payable saw a corresponding volume-driven increase (\$6.6 million).

The net cash provided by operating activities in fiscal 2016 totaled \$3.4 million, a decrease of \$13.7 million, or approximately 80%, versus fiscal 2015. The decrease compared to the prior fiscal year is primarily due to the decline in earnings totaling \$24.4 million. This decline was partially offset by reduced working capital. Accounts receivable decreased by \$18.4 million, driven by the reduced sales volume and strong collection efforts. The inventory improvement is the successful result of a concerted global effort to manage working capital levels in light of the challenging market conditions. Net inventory as a percentage of the six-month backlog decreased from 232% as of June 30, 2015 to 186% as of June 30, 2016. The decrease in accounts payable reflects the reduced purchasing activity throughout the fiscal year as a result of the reduced volume, while accrued liabilities declined with the payment of severance and bonus obligations.

The net cash provided by operating activities in fiscal 2015 totaled \$17.1 million, a decrease of \$8.7 million, or approximately 33.7%, versus fiscal 2014. The reduction compared to fiscal 2014 primarily relates to an increase in accounts receivable, a reduction in accrued retirement benefits and an increase in a life insurance receivable. These unfavorable movements were partially offset by a significant reduction in inventory. Adjusted for an \$8.1 million impact of foreign currency translation, net inventory decreased by \$9.3 million compared to the prior fiscal year end. The majority of this decrease was seen at the Company's North American operations in response to the decline in demand through the second half of the fiscal year. Net inventory as a percentage of the six-month backlog increased from 148% as of June 30, 2014 to 232% as of June 30, 2015. The increase in receivables compared to the prior year end relates to timing of shipments within the fourth quarter, along with a slight easing of payment patterns due to economic pressures in the oil and gas market. The decrease in accounts payable is in line with the reduced purchase activity through the fourth quarter.

The net cash used by investing activities primarily represents capital spending activity totaling \$3.1 million. The fiscal 2017 capital projects were again limited to critical replacement and maintenance items and costs related to new

product introduction. This was partially offset by proceeds from the sale of certain operating assets, primarily associated with the closure of our India plant.

The net cash provided by investing activities in fiscal 2016 of \$1.1 million represents primarily the proceeds from the sale of Twin Disc Southeast in the first quarter of the fiscal year (\$3.5 million) and the proceeds from a life insurance policy (\$2.0 million), partially offset by relatively modest capital spending activity totaling \$4.2 million. The capital projects for fiscal 2016 were limited to key replacement items and high potential new product introductions.

The net cash used for investing activities in fiscal 2015 of \$6.8 million consisted primarily of capital expenditures for machinery and equipment and facility upgrades at our U.S., Belgian and Singapore facilities. In fiscal 2015, the Company spent \$9.0 million for capital expenditures, up from \$7.2 million in fiscal 2014. The Company also received a net reimbursement of premiums paid on executive split dollar life insurance policies during the year (\$1.9 million) due to resignations and retirements.

The net cash used by financing activities in fiscal 2017 of \$2.4 million consisted primarily of net payments of debt (\$2.2 million). During fiscal 2017, the Company did not purchase any shares as part of its Board-authorized stock repurchase program. The Company has 315,000 shares remaining under its authorized stock repurchase plan.

The net cash used by financing activities in fiscal 2016 of \$8.1 million consisted primarily of dividends paid to shareholders (\$2.0 million) and net payments of debt (\$5.3 million). During fiscal 2016, the Company did not purchase any shares as part of its Board-authorized stock repurchase program. The Company has 315,000 shares remaining under its authorized stock repurchase plan.

In fiscal 2015, the net cash used by financing activities of \$9.2 million consisted primarily of dividends paid to shareholders of the Company of \$4.1 million and net payments of debt of \$4.6 million. During fiscal 2015, the Company did not purchase any shares as part of its Board-authorized stock repurchase program.

Future Liquidity and Capital Resources

On June 30, 2014, the Company entered into the Wells Fargo Agreement, which was subsequently amended on February 1, 2016. Prior to the February 1, 2016 amendment, it permitted the Company to enter into unsecured revolving credit loans up to the amount of \$60 million. This amendment provided for a borrowing base calculation to determine borrowing capacity, up to a maximum of \$40 million. This capacity was based upon eligible domestic inventory, eligible accounts receivable and machinery and equipment, subject to certain adjustments. The amended Wells Fargo Agreement also revised the definition of EBITDA for the four consecutive fiscal quarters ending on and including December 25, 2015 to and including September 30, 2016 to add \$0.5 million, reflective of the restructuring charge taken by the Company in the second quarter of the fiscal year ending June 30, 2016, and further adjusted the definition of EBITDA to add back non-cash stock based compensation expense and additional restructuring charges not to exceed \$0.3 million in the fiscal quarter ending March 25, 2016, and \$0.3 million in each subsequent fiscal quarter. The amended Wells Fargo Agreement also waived any events of default that may have occurred under the terms of the agreement prior to its February 1, 2016 amendment.

Borrowings under the amended Wells Fargo Agreement were secured by substantially all of the Company's personal property, including accounts receivable, inventory, certain machinery and equipment, and intellectual property, and the personal property of Mill-Log Equipment Co., Inc. ("Mill-Log"), a wholly-owned domestic subsidiary of the Company. The Company had also pledged 65% of its equity interests in certain foreign subsidiaries.

Loans under the Wells Fargo Agreement were generally charged interest at the LIBOR Rate plus (a) 1.00% if the Company's adjusted four-quarter EBITDA (as defined) was at least \$11 million, or (b) 1.50% if the Company's adjusted four-quarter EBITDA (as defined) was less than \$11 million.

On April 22, 2016, the Company entered into a revolving Credit Agreement (the "BMO Agreement") with Bank of Montreal ("BMO"). This agreement permits the Company to enter into loans up to \$40 million. This maximum may be increased under the BMO Agreement by an additional \$10 million so long as there exists no default and certain other

conditions specified in the BMO Agreement are satisfied. On the day of the closing of the BMO Agreement, the Company used proceeds to pay off the loan balance under the Wells Fargo Agreement.

In general, each revolving loan under the BMO Agreement will bear interest at a Eurodollar Rate, as defined. This rate as of June 30, 2017 was 2.80%. In addition to monthly interest payments, the Company will be responsible for paying a quarterly unused fee equal to 0.15% of the average daily unused portion of the revolving credit commitment. The Company may prepay loans subject to certain limitations. Borrowings under the BMO Agreement are secured by substantially all of the Company's personal property, including accounts receivable, inventory, certain machinery and equipment, and intellectual property, and the personal property of Mill-Log. The Company has also pledged 100% of its equity interests in certain domestic subsidiaries and 65% of its equity interests in certain foreign subsidiaries. The Company has entered into a security agreement, IP security agreement and pledge agreement with BMO, and Mill-Log has entered into a guaranty agreement, guarantor security agreement and pledge agreement with BMO, which collectively grant BMO a security interest in these assets and holdings as administrative agent for itself and other lenders that may enter into the BMO Agreement. The Company has also entered into a negative pledge agreement with BMO, pursuant to which it has agreed not to sell, lease or otherwise encumber real estate that it owns except as permitted by the BMO Agreement and the negative pledge agreement. Within thirty days upon the occurrence of an event of default (as defined) that is not cured within the prescribed cure period, or if availability under the BMO Agreement is less than the greater of 15% of the aggregate revolving credit commitments and \$6.0 million, the Company and Mill-Log will execute and deliver mortgages to BMO on all real estate owned by them at such time to further secure borrowings under the BMO Agreement.

A private shelf agreement (“the Prudential Agreement”) was entered into on June 30, 2014. Among other things, the Prudential Agreement: (a) amended and restated the note agreement between the Company and purchasers dated as of April 10, 2006, as it had been amended from time to time; and (b) set forth the terms of the potential sale and purchase of up to \$50 million in shelf notes by the Company to the Prudential group of companies, the lender. The notes bear interest on the outstanding principal balance at a fixed rate of 6.05% per annum, payable quarterly. The principal was payable in annual installments of \$3.6 million, and matured and became due and payable in full on April 10, 2016.

The Prudential Agreement included financial covenants regarding minimum net worth, minimum EBITDA and a maximum total funded debt to EBITDA ratio. It also included certain covenants that limit, among other things, certain indebtedness, acquisitions, investments, capital expenditures and dividends. The amendment to the Prudential Agreement waived any events of default that may have occurred under the terms of the agreement prior to its February 1, 2016 amendment.

The final payment of \$3.6 million was made on April 11, 2016. In addition, the shelf notes arrangement under the Prudential Agreement was terminated on April 21, 2016.

The Company’s balance sheet remains very strong, there are no material off-balance-sheet arrangements, and we continue to have sufficient liquidity for near-term needs. The Company had approximately \$21.4 million of available borrowings under the BMO Agreement as of June 30, 2017. The Company expects to continue to generate enough cash from operations, as well as its credit facilities, to meet its operating and investing needs. As of June 30, 2017, the Company also had cash of \$16.4 million, primarily at its overseas operations. These funds, with some restrictions and tax implications, are available for repatriation as deemed necessary by the Company. In fiscal 2018, the Company expects to contribute \$2.3 million to its defined benefit pension plans, the minimum contribution required.

Net working capital decreased \$4.0 million, or 4.5%, during fiscal 2017, and the current ratio (calculated as total current assets divided by total current liabilities) decreased from 3.5 at June 30, 2016 to 2.9 at June 30, 2017. The decrease in net working capital was primarily driven by an increase in accounts payable (volume driven) and accrued expenses (bonus accrual), and a decrease in cash (foreign repatriation). These favorable movements were partially offset by a volume driven increase in accounts receivable.

The Company expects capital expenditures to be approximately \$7 million - \$9 million in fiscal 2018. These anticipated expenditures reflect the Company’s plans to invest in modern equipment to drive productivity improvements, its global sourcing program and new products.

Management believes that available cash, the BMO credit facility, cash generated from future operations, and potential access to debt markets will be adequate to fund the Company’s capital requirements for the foreseeable future

Off Balance Sheet Arrangements and Contractual Obligations

The Company had no off-balance sheet arrangements, other than operating leases, as of June 30, 2017 and 2016.

The Company has obligations under non-cancelable operating lease contracts and loan and senior note agreements for certain future payments. A summary of those commitments follows (in thousands):

Contractual Obligations	Total	Less than 1 Year	1-3 Years	3-5 Years	After 5 Years
Revolving loan borrowing	\$6,285	\$-	\$-	\$6,285	\$-
Long-term debt, including current maturities	\$38	\$2	\$6	\$6	\$24
Operating leases	\$5,128	\$2,435	\$1,456	\$999	\$238

The table above does not include tax liabilities for unrecognized tax benefits totaling \$0.8 million, excluding related interest and penalties, as the timing of their resolution cannot be estimated. See Note N of the Notes to the consolidated financial statements for disclosures surrounding uncertain income tax positions.

The Company maintains defined benefit pension plans for some of its operations in the United States and Europe. The Company has established the Benefits Committee (a non-board management committee) to oversee the operations and administration of the defined benefit plans. The Company estimates that fiscal 2018 contributions to all defined benefit plans will total \$2.3 million.

Other Matters

Critical Accounting Policies

The preparation of this Annual Report requires management's judgment to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the dates of the financial statements, and the reported amounts of revenues and expenses during the reporting period. There can be no assurance that actual results will not differ from those estimates.

The Company's significant accounting policies are described in Note A to the consolidated financial statements. Not all of these significant accounting policies require management to make difficult, subjective, or complex judgments or estimates. However, the policies management considers most critical to understanding and evaluating its reported financial results are the following:

Accounts Receivable

The Company performs ongoing credit evaluations of our customers and adjusts credit limits based on payment history and the customer's credit-worthiness as determined by review of current credit information. We continuously monitor collections and payments from our customers and maintain a provision for estimated credit losses based upon our historical experience and any specific customer-collection issues. In addition, senior management reviews the accounts receivable aging on a monthly basis to determine if any receivable balances may be uncollectible. Although our accounts receivable are dispersed among a large customer base, a significant change in the liquidity or financial position of any one of our largest customers could have a material adverse impact on the collectability of our accounts receivable and future operating results.

Inventory

Inventories are valued at the lower of cost or market. Cost has been determined by the last-in, first-out (LIFO) method for the majority of the inventories located in the United States, and by the first-in, first-out (FIFO) method for all other inventories. Management specifically identifies obsolete products and analyzes historical usage, forecasted production based on future orders, demand forecasts, and economic trends when evaluating the adequacy of the reserve for excess and obsolete inventory. The adjustments to the reserve are estimates that could vary significantly, either favorably or unfavorably, from the actual requirements if future economic conditions, customer demand or competitive conditions differ from expectations.

Goodwill

Goodwill is tested for impairment annually or more frequently if events or changes in circumstances indicate that an impairment might exist. The Company performs impairment reviews for its reporting units using a fair-value method based on management's judgments and assumptions or third party valuations.

In determining the fair value of our reporting units, management is required to make estimates of future operating results, including growth rates, and a weighted-average cost of capital that reflects current market conditions, among others. The development of future operating results incorporates management's best estimates of current and future economic and market conditions which are derived from a review of past results, current results and approved business plans. Many of the factors used in assessing fair value are outside the control of management, and these assumptions and estimates can change in future periods. While the Company believes its judgments and assumptions were reasonable, different assumptions, economic factors and/or market indicators could materially change the estimated fair values of the Company's reporting units.

The following are key assumptions to the Company's discounted cash flow model:

Business Projections – The Company makes assumptions about the level of sales for each fiscal year including expected growth, if any. This assumption drives its planning for volumes, mix, and pricing. The Company also makes assumptions about its cost levels (e.g., capacity utilization, cost performance, etc.). These assumptions are key inputs for developing its cash flow projections. These projections are derived using the Company's internal business plans that are reviewed during the annual budget process.

Discount Rates – When measuring a possible impairment, future cash flows are discounted at a rate that is consistent with a weighted average cost of capital for a potential market participant. The weighted average cost of capital is an estimate of the overall after-tax rate of return required by equity and debt holders of a business enterprise. There are a number of assumptions that management makes when calculating the appropriate discount rate, including the targeted leverage ratio.

The Company is subject to financial statement risk to the extent the carrying amount of a reporting unit exceeds its fair value. Based upon the goodwill impairment review completed at the end of the third quarter of fiscal 2017, the Company recorded a non-cash impairment charge of \$2.5 million. In 2016, the Company recorded a non-cash impairment charge of \$7.6 million. See discussion in Note D in the Notes to the Consolidated Financial Statements.

Long-lived Assets

The Company reviews long-lived assets for impairment whenever events or changes in business circumstances indicate that the carrying amount of the assets may not be fully recoverable. For property, plant and equipment and other long-lived assets, excluding indefinite-lived intangible assets, the Company performs undiscounted operating cash flow analyses to determine if an impairment exists. If an impairment is determined to exist, any related impairment loss is calculated based on fair value. Fair value is primarily determined using discounted cash flow analyses; however, other methods may be used to substantiate the discounted cash flow analyses, including third party

valuations when necessary. In fiscal 2017, the Company recorded \$0.1 million asset impairment charge related to its India restructuring activities. See discussion in Note P in the Notes to the Consolidated Financial Statements.

Warranty

The Company engages in extensive product quality programs and processes, including actively monitoring and evaluating the quality of its suppliers. However, its warranty obligation is affected by product failure rates, the extent of the market affected by the failure and the expense involved in satisfactorily addressing the situation. The warranty reserve is established based on our best estimate of the amounts necessary to settle future and existing claims on products sold as of the balance sheet date. When evaluating the adequacy of the reserve for warranty costs, management takes into consideration the term of the warranty coverage, historical claim rates and costs of repair, knowledge of the type and volume of new products and economic trends. While we believe the warranty reserve is adequate and that the judgment applied is appropriate, such amounts estimated to be due and payable in the future could differ materially from what actually transpires.

Pension and Other Postretirement Benefit Plans

The Company provides a wide range of benefits to employees and retired employees, including pensions and postretirement health care coverage. Plan assets and obligations are recorded annually based on the Company's measurement date utilizing various actuarial assumptions such as discount rates, expected return on plan assets, compensation increases, retirement and mortality tables, and health care cost trend rates as of that date. The approach used to determine the annual assumptions are as follows:

Discount Rate – based on the Willis Towers Watson BOND:Link model at June 30, 2017 as applied to the expected payouts from the pension plans. This yield curve is made up of Corporate Bonds rated AA or better.

Expected Return on Plan Assets – based on the expected long-term average rate of return on assets in the pension funds, which is reflective of the current and projected asset mix of the funds and considers historical returns earned on the funds.

Compensation Increase – reflect the long-term actual experience, the near-term outlook and assumed inflation.

Retirement and Mortality Rates – based upon the Society of Actuaries RP-2014 base tables for annuitants and non-annuitants, adjusted for generational mortality improvement based on the Society of Actuaries MP-2016 projection scale.

Health Care Cost Trend Rates – developed based upon historical cost data, near-term outlook and an assessment of likely long-term trends.

Measurements of net periodic benefit cost are based on the assumptions used for the previous year-end measurements of assets and obligations. The Company reviews its actuarial assumptions on an annual basis and makes modifications to the assumptions when appropriate. The effects of the modifications are recorded currently or amortized over future periods. Based on information provided by its independent actuaries and other relevant sources, the Company believes that the assumptions used are reasonable; however, changes in these assumptions could impact the Company's financial position, results of operations or cash flows.

Income Taxes

Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The Company maintains valuation allowances when it is more likely than not that all or a portion of a deferred tax asset will not be realized. In determining whether a valuation allowance is required, the Company takes into account such factors as prior earnings history, expected future earnings, carry-back and carry-forward periods, and tax strategies that could potentially enhance the likelihood of realization of a deferred tax asset.

Recently Issued Accounting Standards

See Note A, Significant Accounting Policies, to the consolidated financial statements for a discussion of recently issued accounting standards.

Item 7A. Quantitative and Qualitative Disclosure About Market Risk

The Company is exposed to market risks from changes in interest rates, commodities and foreign currency exchange rates. To reduce such risks, the Company selectively uses financial instruments and other proactive management techniques. All hedging transactions are authorized and executed pursuant to clearly defined policies and procedures, which prohibit the use of financial instruments for trading or speculative purposes. Discussion of the Company's accounting policies and further disclosure relating to financial instruments is included in Note A to the consolidated financial statements.

Interest rate risk - The Company's earnings exposure related to adverse movements of interest rates is primarily derived from outstanding floating rate debt instruments that are indexed to a Eurodollar rate. In accordance with BMO Agreement expiring April 22, 2021, the Company has the option of borrowing at a Eurodollar Rate plus an additional "Add-On" of 1.75%. Due to the relative stability of interest rates, the Company did not utilize any financial instruments at June 30, 2017 to manage interest rate risk exposure. A 10 percent increase or decrease in the applicable interest rate would result in a change in pretax interest expense of approximately \$18,000.

Commodity price risk - The Company is exposed to fluctuations in market prices for such commodities as steel and aluminum. The Company does not utilize commodity price hedges to manage commodity price risk exposure. Direct material cost as a percent of total cost of goods sold was 53.7% for fiscal 2017.

Currency risk - The Company has exposure to foreign currency exchange fluctuations. Approximately 29% of the Company's revenues in the year ended June 30, 2017 were denominated in currencies other than the U.S. dollar. Of that total, approximately 58% was denominated in euros with the balance comprised of Japanese yen, Indian rupee, Swiss franc and the Australian and Singapore dollars. The Company does not hedge the translation exposure represented by the net assets of its foreign subsidiaries. Foreign currency translation adjustments are recorded as a component of shareholders' equity. Forward foreign exchange contracts are used to hedge the currency fluctuations on significant transactions denominated in foreign currencies.

Derivative financial instruments - The Company has written policies and procedures that place all financial instruments under the direction of the Company's corporate treasury department and restrict derivative transactions to those intended for hedging purposes. The use of financial instruments for trading purposes is prohibited. The Company uses financial instruments to manage the market risk from changes in foreign exchange rates.

The Company primarily enters into forward exchange contracts to reduce the earnings and cash flow impact of non-functional currency denominated receivables and payables. These contracts are highly effective in hedging the cash flows attributable to changes in currency exchange rates. Gains and losses resulting from these contracts offset the foreign exchange gains or losses on the underlying assets and liabilities being hedged. The maturities of the forward exchange contracts generally coincide with the settlement dates of the related transactions. Gains and losses on these contracts are recorded in Other expense, net in the Condensed Consolidated Statement of Operations as the changes in the fair value of the contracts are recognized and generally offset the gains and losses on the hedged items in the same period. The primary currency to which the Company was exposed in fiscal 2017 and 2016 was the euro. At June 30, 2017, one of the Company's foreign subsidiaries had three outstanding forward exchange contracts to purchase U.S. dollars in the notional value of \$1,050,000 with a weighted average maturity of 53 days. The fair value of the Company's contract was a loss of \$29,000 at June 30, 2017. The Company had no outstanding forward exchange contracts at June 30, 2016.

Item 8. Financial Statements and Supplementary Data

See Consolidated Financial Statements and Financial Statement Schedule.

Sales and Earnings by Quarter - Unaudited (in thousands, except per share amounts)

2017	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	Year
Net sales	\$35,835	\$33,672	\$45,084	\$53,591	\$168,182
Gross profit	9,173	8,949	13,294	16,816	48,232
Restructuring expenses	258	816	293	424	1,791
Goodwill and other asset impairment charge	-	-	2,637	9	2,646
Net (loss) earnings	(2,671)	(2,892)	(1,728)	1,176	(6,115)
Net (loss) earnings attributable to Twin Disc	(2,696)	(2,912)	(1,849)	1,163	(6,294)
Basic (loss) earnings per share attributable to Twin Disc common shareholders	(0.24)	(0.26)	(0.16)	0.10	(0.56)
Diluted (loss) earnings per share attributable to Twin Disc common shareholders	(0.24)	(0.26)	(0.16)	0.10	(0.56)
Dividends per share	-	-	-	-	-
2016	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	Year
Net sales	\$37,373	\$44,829	\$41,434	\$42,646	\$166,282
Gross profit	8,190	11,606	9,618	11,181	40,595
Restructuring expenses	-	515	272	134	921
Goodwill impairment charge	-	-	-	7,602	7,602
Net loss	(4,275)	(2,289)	(931)	(5,518)	(13,013)
Net loss attributable to Twin Disc	(4,323)	(2,301)	(963)	(5,517)	(13,104)
Basic loss per share attributable to Twin Disc common shareholders	(0.39)	(0.21)	(0.09)	(0.48)	(1.17)
Diluted loss per share attributable to Twin Disc common shareholders	(0.39)	(0.21)	(0.09)	(0.48)	(1.17)
Dividends per share	0.09	0.09	-	-	0.18

Item 9. Change in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

Conclusion Regarding Disclosure Controls and Procedures

As required by Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934, as of the end of the period covered by this report and under the supervision and with the participation of management, including the Chief Executive Officer and the Chief Financial Officer, the Company has evaluated the effectiveness of the design and operation of its disclosure controls and procedures. Based on such evaluation, the Chief Executive Officer and Chief Financial Officer have concluded that such disclosure controls and procedures are effective to provide reasonable assurance that information required to be disclosed by the Company in the reports it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission rules and forms, and to provide reasonable assurance that information required to be disclosed by the Company in the reports it files or submits under the Exchange Act is accumulated and communicated to the Company's management, including its principal executive and principal financial officers, as appropriate, to allow timely decisions regarding disclosure.

Management's Report on Internal Control Over Financial Reporting

Management of the Company is responsible for establishing and maintaining adequate internal control over financial reporting. The Company's internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. The Company's internal control over financial reporting includes those policies and procedures that:

1. pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the Company, provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the
2. Company are being made only in accordance with authorizations of management and directors of the Company, and
3. provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of the effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies and procedures included in such controls may deteriorate.

The Company conducted an evaluation of the effectiveness of our internal control over financial reporting based upon the framework (2013 edition) in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based upon such evaluation, our management concluded that our internal control over financial reporting was effective as of June 30, 2017.

PricewaterhouseCoopers LLP, an independent registered public accounting firm, has audited the Company's internal control over financial reporting as of June 30, 2017, as stated in their report which appears herein.

Changes in Internal Control Over Financial Reporting

During the fourth quarter of fiscal 2017, there have not been any changes in the Company's internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

Item 9B. Other Information

Not applicable.

PART III

Item 10. Directors and Executive Officers of the Registrant

For information with respect to the executive officers of the Registrant, see "Executive Officers of the Registrant" at the end of Part I of this report.

For information with respect to the Directors of the Registrant, see "Election of Directors" in the Proxy Statement for the Annual Meeting of Shareholders to be held October 26, 2017, which is incorporated into this report by reference.

For information with respect to compliance with Section 16(a) of the Securities Exchange Act of 1934, see "Section 16(a) Beneficial Ownership Reporting Compliance" in the Proxy Statement for the Annual Meeting of Shareholders to be held October 26, 2017, which is incorporated into this report by reference.

For information with respect to the Company's Code of Ethics, see "Guidelines for Business Conduct and Ethics" in the Proxy Statement for the Annual Meeting of Shareholders to be held October 26, 2017, which is incorporated into this report by reference. The Company's Code of Ethics, entitled, "Guidelines for Business Conduct and Ethics," is included on the Company's website, www.twindisc.com. If the Company makes any substantive amendment to the Code of Ethics, or grants a waiver from a provision of the Code of Ethics for its Chief Executive Officer, Chief Financial Officer or Chief Accounting Officer (or any person performing similar functions), it intends to disclose the nature of such amendment on its website within four business days of the amendment or waiver in lieu of filing a Form 8-K with the SEC.

For information with respect to procedures by which shareholders may recommend nominees to the Company's Board of Directors, see "Director Committee Functions: Nominating and Governance Committee" in the Proxy Statement for the Annual Meeting of Shareholders to be held October 26, 2017, which is incorporated into this report by reference. There were no changes to these procedures since the Company's last disclosure relating to these procedures.

For information with respect to the Audit Committee Financial Expert, see "Director Committee Functions: Audit Committee" in the Proxy Statement for the Annual Meeting of Shareholders to be held October 26, 2017, which is incorporated into this report by reference.

For information with respect to the Audit Committee Disclosure, see “Director Committee Functions: Audit Committee” in the Proxy Statement for the Annual Meeting of Shareholders to be held October 26, 2017, which is incorporated into this report by reference.

For information with respect to the Audit Committee Membership, see “Director Committee Functions: Committee Membership” in the Proxy Statement for the Annual Meeting of Shareholders to be held October 26, 2017, which is incorporated into this report by reference.

Item 11. Executive Compensation

The information set forth under the captions "Executive Compensation," "Director Compensation," "Compensation Committee Interlocks and Insider Participation," and "Compensation and Executive Development Committee Report," in the Proxy Statement for the Annual Meeting of Shareholders to be held on October 26, 2017, is incorporated into this report by reference. Discussion in the Proxy Statement under the caption "Compensation and Executive Development Committee Report" is incorporated by reference but shall not be deemed "soliciting material" or to be "filed" as part of this report.

Item 12. Security Ownership of Certain Beneficial Owners and Management

Security ownership of certain beneficial owners and management is set forth in the Proxy Statement for the Annual Meeting of Shareholders to be held on October 26, 2017 under the captions "Principal Shareholders" and "Directors and Executive Officers" and incorporated into this report by reference.

For information regarding securities authorized for issuance under equity compensation plans of the Company, see "Equity Compensation Plan Information" in the Proxy Statement for the Annual Meeting of Shareholders to be held on October 26, 2017, which is incorporated into this report by reference.

There are no arrangements known to the Registrant, the operation of which may at a subsequent date result in a change in control of the Registrant.

Item 13. Certain Relationships and Related Transactions, Director Independence

For information with respect to transactions with related persons and policies for the review, approval or ratification of such transactions, see "Corporate Governance – Review, Approval or Ratification of Transactions with Related Persons" in the Proxy Statement for the Annual Meeting of Shareholders to be held October 26, 2017, which is incorporated into this report by reference.

For information with respect to director independence, see "Corporate Governance – Board Independence" in the Proxy Statement for the Annual Meeting of Shareholders to be held October 26, 2017, which is incorporated into this report by reference.

Item 14. Principal Accounting Fees and Services

The Company incorporates by reference the information contained in the Proxy Statement for the Annual Meeting of Shareholders to be held October 26, 2017 under the headings "Fees to Independent Registered Public Accounting Firm" and "Pre-approval Policies and Procedures."

PART IV

Item 15. Exhibits, Financial Statement Schedules

(a)(1) Consolidated Financial Statements

See Index to Consolidated Financial Statements and Financial Statement Schedule, the Report of Independent Registered Public Accounting Firm and the Consolidated Financial Statements, all of which are incorporated by reference.

(a)(2) Consolidated Financial Statement Schedule

See Index to Consolidated Financial Statements and Financial Statement Schedule, and the Consolidated Financial Statement Schedule, all of which are incorporated by reference.

(a)(3) Exhibits. See Exhibit Index included as the last page of this form, which is incorporated by reference.

**INDEX TO CONSOLIDATED FINANCIAL STATEMENTS AND
FINANCIAL STATEMENT SCHEDULE**

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Schedules, other than those listed, are omitted for the reason that they are inapplicable, are not required, or the information required is shown in the financial statements or the related notes.

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Twin Disc, Incorporated:

In our opinion, the consolidated financial statements listed in the accompanying index present fairly, in all material respects, the financial position of Twin Disc, Incorporated and its subsidiaries at June 30, 2017 and June 30, 2016, and the results of their operations and their cash flows for each of the three years in the period ended June 30, 2017 in conformity with accounting principles generally accepted in the United States of America. In addition, in our opinion, the financial statement schedule listed in the accompanying index presents fairly, in all material respects, the information set forth therein when read in conjunction with the related consolidated financial statements. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of June 30, 2017, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for these financial statements and financial statement schedule, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on these financial statements, on the financial statement schedule, and on the Company's internal control over financial reporting based on our integrated audits. We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ PricewaterhouseCoopers LLP

Milwaukee, Wisconsin

August 31, 2017

TWIN DISC, INCORPORATED AND SUBSIDIARIES**CONSOLIDATED BALANCE SHEETS**

June 30, 2017 and 2016

(In thousands, except share amounts)

	2017	2016
ASSETS		
Current assets:		
Cash	\$ 16,367	\$ 18,273
Accounts receivable, net	31,392	25,363
Inventories	66,193	66,569
Prepaid expenses	8,295	7,353
Other	7,187	7,477
Total current assets	129,434	125,035
Property, plant and equipment, net	48,212	51,665
Goodwill, net	2,585	5,120
Deferred income taxes	24,198	25,870
Intangible assets, net	2,009	2,164
Other assets	4,460	4,068
Total assets	\$ 210,898	\$ 213,922
LIABILITIES AND EQUITY		
Current liabilities:		
Accounts payable	\$ 21,301	\$ 14,716
Accrued liabilities	23,222	21,415
Total current liabilities	44,523	36,131
Long-term debt	6,323	8,501
Accrued retirement benefits	33,706	48,705
Deferred income taxes	1,011	827
Other long-term liabilities	1,768	2,705
Total liabilities	87,331	96,869
Commitments and contingencies (Note O)		
Equity:		
Twin Disc shareholders' equity:		

Preferred shares authorized: 200,000; issued: none; no par value	-	-
Common shares authorized: 30,000,000; issued: 13,099,468; no par value	10,429	11,761
Retained earnings	169,368	175,662
Accumulated other comprehensive loss	(32,671)	(44,143)
	147,126	143,280
Less treasury stock, at cost (1,580,335 and 1,749,294 shares, respectively)	24,205	26,790
Total Twin Disc shareholders' equity	122,921	116,490
Noncontrolling interest	646	563
Total equity	123,567	117,053
Total liabilities and equity	\$210,898	\$213,922

The notes to consolidated financial statements are an integral part of these statements.

TWIN DISC, INCORPORATED AND SUBSIDIARIES**CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME**

For the years ended June 30, 2017, 2016 and 2015

(In thousands, except share amounts)

	2017	2016	2015
Net sales	\$168,182	\$166,282	\$265,790
Cost of goods sold	119,950	125,687	182,758
Gross profit	48,232	40,595	83,032
Marketing, engineering and administrative expenses	52,773	57,113	64,264
Restructuring expenses	1,791	921	3,282
Goodwill and other asset impairment charge	2,646	7,602	-
Other operating expense (income)	-	(445)	-
(Loss) earnings from operations	(8,978)	(24,596)	15,486
Other income (expense):			
Interest income	72	147	124
Interest expense	(303)	(426)	(606)
Other income (expense), net	(320)	(420)	896
	(551)	(699)	414
(Loss) earnings before income taxes and noncontrolling interest	(9,529)	(25,295)	15,900
Income tax (benefit) expense	(3,414)	(12,282)	4,515
Net (loss) earnings	(6,115)	(13,013)	11,385
Less: Net earnings attributable to noncontrolling interest, net of tax	(179)	(91)	(212)
Net (loss) earnings attributable to Twin Disc	\$(6,294)	\$(13,104)	\$11,173
(Loss) earnings per share data:			
Basic (loss) earnings per share attributable to Twin Disc common shareholders	\$(0.56)	\$(1.17)	\$0.99
Diluted (loss) earnings per share attributable to Twin Disc common shareholders	\$(0.56)	\$(1.17)	\$0.99
Weighted average shares outstanding data:			
Basic shares outstanding	11,239	11,203	11,273
Dilutive stock awards	-	-	4

Diluted shares outstanding	11,239	11,203	11,277
Comprehensive income (loss):			
Net (loss) earnings	\$(6,115)	\$(13,013)	\$11,385
Foreign currency translation adjustment	985	(1,557)	(14,119)
Benefit plan adjustments, net of income taxes of \$6,149, (\$3,340) and (\$2,974), respectively	10,500	(7,080)	(5,499)
Comprehensive income (loss)	5,370	(21,650)	(8,233)
Less: Comprehensive income attributable to noncontrolling interest	(193)	(114)	(132)
Comprehensive income (loss) attributable to Twin Disc	\$5,177	\$(21,764)	\$(8,365)

The notes to consolidated financial statements are an integral part of these statements.

TWIN DISC, INCORPORATED AND SUBSIDIARIES**CONSOLIDATED STATEMENTS OF CASH FLOWS**

For the years ended June 30, 2017, 2016 and 2015

(In thousands)

	2017	2016	2015
Cash flows from operating activities:			
Net (loss) earnings	\$(6,115)	\$(13,013)	\$11,385
Adjustments to reconcile net (loss) earnings to net cash provided by operating activities:			
Depreciation and amortization	7,017	8,847	10,161
Goodwill and other asset impairment charge	2,646	7,602	-
Stock compensation expense	1,615	1,295	696
Restructuring of operations	92	354	3,282
Provision for deferred income taxes	(4,245)	(12,203)	(442)
Other, net	7	74	215
Changes in operating assets and liabilities			
Trade accounts receivable	(5,885)	18,422	(7,248)
Inventories	624	10,060	8,860
Other assets	(682)	938	(4,090)
Accounts payable	6,034	(6,285)	914
Accrued liabilities	983	(12,580)	380
Accrued/prepaid retirement benefits	1,087	(120)	(7,053)
Net cash provided by operating activities	3,178	3,391	17,060
Cash flows from investing activities:			
Proceeds from sale of business (see Note P)	-	3,500	-
Proceeds from life insurance policy	-	2,002	-
Proceeds from sale of plant assets	217	124	279
Capital expenditures	(3,133)	(4,214)	(9,049)
Other, net	(126)	(270)	1,934
Net cash (used) provided by investing activities	(3,042)	1,142	(6,836)
Cash flows from financing activities:			
Payments of senior notes	-	(3,571)	(3,600)
Borrowings under revolving loan agreement	53,920	89,473	83,681
Repayments under revolving loan agreement	(56,113)	(91,203)	(84,674)
Proceeds from exercise of stock options	-	12	15
Dividends paid to shareholders	-	(2,041)	(4,061)
Dividends paid to noncontrolling interest	(109)	(192)	(220)
Excess tax benefits (shortfall) from stock compensation	-	(349)	(26)

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Payments of withholding taxes on stock compensation	(140)	(190)	(313)
Net cash used by financing activities	(2,442)	(8,061)	(9,198)
Effect of exchange rate changes on cash	400	(1,135)	(2,847)
Net change in cash	(1,906)	(4,663)	(1,821)
Cash:			
Beginning of year	18,273	22,936	24,757
End of year	\$16,367	\$18,273	\$22,936
Supplemental cash flow information:			
Cash paid during the year for:			
Interest	\$300	\$474	\$569
Income taxes	27	1,758	5,061

The notes to consolidated financial statements are an integral part of these statements.

TWIN DISC, INCORPORATED AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

For the years ended June 30, 2017, 2016 and 2015

(In thousands)

	Twin Disc, Inc. Shareholders' Equity					
	Common Stock	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Treasury Stock	Non-Controlling Interest	Total Equity
Balance at June 30, 2014	\$11,973	\$183,695	\$ (15,943)	\$(28,141)	\$ 727	\$152,311
Net earnings		11,173			212	11,385
Translation adjustments			(14,039)		(80)	(14,119)
Benefit plan adjustments, net of tax			(5,499)			(5,499)
Cash dividends		(4,061)			(220)	(4,281)
Compensation expense and windfall tax benefits	668					668
Shares (acquired) issued, net	(382)			84		(298)
Balance at June 30, 2015	12,259	190,807	(35,481)	(28,057)	639	140,167
Net (loss) earnings		(13,104)			91	(13,013)
Translation adjustments			(1,582)		25	(1,557)
Benefit plan adjustments, net of tax			(7,080)			(7,080)
Cash dividends		(2,041)			(192)	(2,233)
Compensation expense and windfall tax benefits	946					946
Shares (acquired) issued, net	(1,444)			1,267		(177)
Balance at June 30, 2016	11,761	175,662	(44,143)	(26,790)	563	117,053
Net (loss) earnings		(6,294)			179	(6,115)
Translation adjustments			972		13	985
Benefit plan adjustments, net of tax			10,500			10,500
Cash dividends					(109)	(109)
Compensation expense and windfall tax benefits	1,393					1,393
Shares (acquired) issued, net	(2,725)			2,585		(140)
Balance at June 30, 2017	\$10,429	\$169,368	\$ (32,671)	\$(24,205)	\$ 646	\$123,567

The notes to consolidated financial statements are an integral part of these statements.

TWIN DISC, INCORPORATED AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(AMOUNTS IN THOUSANDS, EXCEPT SHARE AMOUNTS AND PER SHARE DATA)

A. SIGNIFICANT ACCOUNTING POLICIES

The following is a summary of the significant accounting policies followed in the preparation of these financial statements:

Consolidation Principles--The consolidated financial statements include the accounts of Twin Disc, Incorporated and its wholly and majority-owned domestic and foreign subsidiaries (the "Company"). Certain foreign subsidiaries are included based on fiscal years ending May 31, to facilitate prompt reporting of consolidated accounts. The Company also has a controlling interest in a Japanese joint venture, which is consolidated based upon a fiscal year ending March 31. All significant intercompany transactions have been eliminated.

Management Estimates--The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent liabilities at the dates of the financial statements and the reported amounts of revenues and expenses during the reporting periods. Actual amounts could differ from those estimates.

Translation of Foreign Currencies--The financial statements of the Company's non-U.S. subsidiaries are translated using the current exchange rate for assets and liabilities and the weighted-average exchange rate for the year for revenues and expenses. The resulting translation adjustments are recorded as a component of accumulated other comprehensive loss, which is included in equity. Gains and losses from foreign currency transactions are included in earnings. Included in other income (expense) are foreign currency transaction (losses) gains of (\$318), (\$320) and \$491 in fiscal 2017, 2016 and 2015, respectively.

Cash--The Company considers all highly liquid investments with original maturities of three months or less to be cash equivalent. Under the Company's cash management system, cash balances at certain banks are funded when checks are presented for payment. To the extent that checks issued, but not yet presented for payment, exceed the balance on hand at the specific bank against which they were written, the amount of those un-presented checks is included in accounts payable.

Accounts Receivable--These represent trade accounts receivable and are stated net of an allowance for doubtful accounts of \$1,519 and \$1,824 at June 30, 2017 and 2016, respectively. The Company records an allowance for doubtful accounts provision for certain customers where a risk of default has been specifically identified as well as provisions determined on a general basis when it is believed that some default is probable and estimable. The assessment of likelihood of customer default is based on a variety of factors, including the length of time the receivables are past due, the historical collection experience and existing economic conditions. Various factors may adversely impact our customer's ability to access sufficient liquidity and capital to fund their operations and render the Company's estimation of customer defaults inherently uncertain. While the Company believes current allowances for doubtful accounts are adequate, it is possible that these factors may cause higher levels of customer defaults and bad debt expense in future periods.

Fair Value of Financial Instruments--The carrying amount reported in the consolidated balance sheets for cash, trade accounts receivable and accounts payable approximate fair value because of the immediate short-term maturity of these financial instruments. If measured at fair value, cash would be classified as Level 1 and all other items listed above would be classified as Level 2 in the fair value hierarchy, as described in Note M. The Company's borrowings under the revolving loan agreement, which is classified as long-term debt and consists of loans that are routinely borrowed and repaid throughout the year, approximate fair value at June 30, 2017. If measured at fair value in the financial statements, long-term debt (including any current portion) would be classified as Level 2 in the fair value hierarchy, as described in Note M.

Derivative Financial Instruments--The Company has written policies and procedures that place all financial instruments under the direction of the Company's corporate treasury department and restrict all derivative transactions to those intended for hedging purposes. The use of financial instruments for trading purposes is prohibited. The Company uses financial instruments to manage the market risk from changes in foreign exchange rates.

Periodically, the Company enters into forward exchange contracts to reduce the earnings and cash flow impact of non-functional currency denominated receivables and payables. These contracts are highly effective in hedging the cash flows attributable to changes in currency exchange rates. Gains and losses resulting from these contracts offset the foreign exchange gains or losses on the underlying assets and liabilities being hedged. The maturities of the forward exchange contracts generally coincide with the settlement dates of the related transactions. Gains and losses on these contracts are recorded in other income (expense) as the changes in the fair value of the contracts are recognized and generally offset the gains and losses on the hedged items in the same period. The primary currency to which the Company was exposed in fiscal 2017 and 2016 was the euro. At June 30, 2017, one of the Company's foreign subsidiaries had three outstanding forward exchange contracts to purchase U.S. dollars in the notional value of \$1,050 with a weighted average maturity of 53 days. The fair value of the Company's contract was a loss of \$29 at June 30, 2017. The Company had no outstanding forward exchange contracts at June 30, 2016.

Inventories--Inventories are valued at the lower of cost or market. Cost has been determined by the last-in, first-out (LIFO) method for the majority of inventories located in the United States, and by the first-in, first-out (FIFO) method for all other inventories. Management specifically identifies obsolete products and analyzes historical usage, forecasted production based on future orders, demand forecasts, and economic trends, among others, when evaluating the adequacy of the reserve for excess and obsolete inventory.

Property, Plant and Equipment and Depreciation--Assets are stated at cost. Expenditures for maintenance, repairs and minor renewals are charged against earnings as incurred. Expenditures for major renewals and betterments are capitalized and depreciated. Depreciation is provided on the straight-line method over the estimated useful lives of the assets. The lives assigned to buildings and related improvements range from 10 to 40 years, and the lives assigned to machinery and equipment range from 5 to 15 years. Upon disposal of property, plant and equipment, the cost of the asset and the related accumulated depreciation are removed from the accounts and the resulting gain or loss is reflected in earnings. Fully depreciated assets are not removed from the accounts until physically disposed.

Impairment of Long-lived Assets--The Company reviews long-lived assets for impairment whenever events or changes in business circumstances indicate that the carrying amount of the assets may not be fully recoverable. For property, plant and equipment and other long-lived assets, excluding indefinite-lived intangible assets, the Company performs undiscounted operating cash flow analyses to determine if an impairment exists. If an impairment is determined to exist, any related impairment loss is calculated based on fair value. Fair value is primarily determined using discounted cash flow analyses; however, other methods may be used to determine the fair value, including third party valuations when necessary.

Goodwill and Other Intangibles--Goodwill and other indefinite-lived intangible assets, primarily tradenames, are tested for impairment at least annually on the last day of the Company's fiscal year and more frequently if an event occurs which indicates the asset may be impaired. If applicable, goodwill and other indefinite-lived intangible assets not subject to amortization have been assigned to reporting units for purposes of impairment testing based upon the relative fair value of the asset to each reporting unit.

A significant amount of judgment is involved in determining if an indicator of impairment has occurred. Such indicators may include, among others: a significant decline in expected future cash flows; a sustained, significant decline in the Company's stock price and market capitalization; a significant adverse change in legal factors or in the business climate; unanticipated competition; the testing for recoverability of a significant asset group within a reporting unit; and slower growth rates. Any adverse change in these factors could have a significant impact on the recoverability of these assets and could have a material impact on the Company's consolidated financial statements.

The Company early-adopted the new goodwill guidance, ASU 2017-04, during the third quarter of fiscal 2017. Under the new guidance, the goodwill impairment process has been simplified to a one-step approach. The fair value of a reporting unit, as defined, is compared to the carrying value of the reporting unit, including goodwill. The fair value is primarily determined using discounted cash flow analyses which is driven by projected growth rates, and which applies an appropriate market-participant discount rate; the fair value determined is also compared to the value obtained using a market approach from guideline public company multiples. If the carrying amount exceeds the fair value, that difference is recognized as an impairment loss.

The Company conducted interim qualitative assessments throughout the year, and its annual assessment for goodwill impairment as of June 30, 2017 and 2016 using updated inputs, including appropriate risk-based, country and company specific weighted average discount rates for the Company's reporting units. As further described in Note D, these assessments resulted in the Company recognizing goodwill impairment charges in fiscal 2017 and 2016.

The fair value of the Company's other intangible assets with indefinite lives, primarily tradenames, is estimated using the relief-from-royalty method, which requires assumptions related to projected revenues; assumed royalty rates that could be payable if the Company did not own the asset; and a discount rate. The Company completed the impairment testing of indefinite-lived intangibles as of June 30, 2017 and concluded there were no impairments.

Changes in circumstances, existing at the measurement date or at other times in the future, or in the numerous estimates associated with management's judgments, assumptions and estimates made in assessing the fair value of goodwill and other indefinite-lived intangibles, could result in an impairment charge in the future. The Company will continue to monitor all significant estimates and impairment indicators, and will perform interim impairment reviews as necessary.

Any cost incurred to extend or renew the term of an indefinite lived intangible asset are expensed as incurred.

Deferred Taxes--The Company recognizes deferred tax liabilities and assets for the expected future income tax consequences of events that have been recognized in the Company's financial statements. Under this method, deferred tax liabilities and assets are determined based on the temporary differences between the financial statement carrying amounts and the tax bases of assets and liabilities using enacted tax rates in effect in the years in which temporary differences are expected to reverse. Valuation allowances are provided for deferred tax assets where it is considered more likely than not that the Company will not realize the benefit of such assets.

Revenue Recognition--Revenue is recognized by the Company when all of the following criteria are met: persuasive evidence of an arrangement exists; delivery has occurred and ownership has transferred to the customer; the price to the customer is fixed or determinable; and collectability is reasonably assured. Revenue is recognized at the time product is shipped to the customer, except for certain domestic shipments to overseas customers where revenue is recognized upon receipt by the customer. A significant portion of our consolidated net sales is transacted through a third party distribution network. Sales to third party distributors are subject to the revenue recognition criteria described above. Goods sold to third party distributors are subject to an annual return policy, for which a provision is made at the time of shipment based upon historical experience.

As more fully discussed in Recently Issued Accounting Standards, the Company expects to adopt ASU 2014-09 in fiscal 2019. Under the new guidance, the Company's timing of recognizing revenue may change.

Shipping and Handling Fees and Costs--The Company records revenue from shipping and handling costs in net sales. The cost associated with shipping and handling of products is reflected in cost of goods sold.

Out-of-Period Adjustments--During the third quarter of fiscal 2015, the Company recorded an out-of-period adjustment for the correction of an error related to tax expense. More specifically, the Company understated tax expense by \$175 for the year ended June 30, 2014. The impact of the correction of this error was to decrease net earnings by \$175 for the fiscal year ended June 30, 2015. The Company does not believe this error is material to its financial statements for any prior period, nor that the correction of these errors was material to the year ended June 30, 2015, or any of the quarters therein.

During the fourth quarter of fiscal 2015, the Company recorded an out-of-period adjustment to correct an error related to an understatement of its accrued retirement benefits for certain of its international benefit plans that contain minimum return guarantees of approximately \$470. The impact of this correction was to increase comprehensive loss by \$470. The Company does not believe this error is material to its financial statements for any prior period, nor that the correction of this error is material to the year ended June 30, 2015.

Recently Issued Accounting Standards

In March 2017, the Financial Accounting Standards Board (“FASB”) issued guidance (ASU 2017-07) intended to improve the presentation of net periodic pension cost and net periodic postretirement cost. This guidance requires that an employer report the service costs component in the same line item as other compensation costs arising from services rendered by the pertinent employees during the period. The other components of net benefit cost are required to be presented in the statement of operations separately from the service cost component and outside the subtotal of income from operations. The amendments in this guidance are effective for annual periods, and interim periods within those annual periods, beginning after December 15, 2017, (the Company’s fiscal 2019), with early adoption permitted. The Company is currently evaluating the potential impact of this guidance on the Company’s financial statements and disclosures.

In October 2016, the FASB issued updated guidance (ASU 2016-16) that changes the recognition of income tax consequences of an intra-entity transfer of an asset other than inventory. The amendments in this guidance are effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2017 (the Company's fiscal 2019), with early adoption permitted. The Company is currently evaluating the potential impact of this guidance on the Company's financial statements and disclosures.

In August 2016, the FASB issued updated guidance (ASU 2016-15) that addresses eight specific cash flow issues with the objective of reducing the existing diversity in practice. The amendments in this guidance are effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2017 (the Company's fiscal 2019), with early adoption permitted. The Company is currently evaluating the potential impact of this guidance on the Company's financial statements and disclosures.

In March 2016, the FASB issued updated guidance (ASU 2016-09) intended to simplify several aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. The amendments in this guidance are effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2016 (the Company's fiscal 2018), with early adoption permitted. The Company is currently evaluating the potential impact of this guidance on the Company's financial statements and disclosures.

In February 2016, the FASB issued guidance (ASU 2016-02) which replaces the existing guidance for leases. The new standard establishes a right-of-use (ROU) model that requires a lessee to record a ROU asset and a lease liability on the balance sheet for all leases with terms longer than 12 months. Leases will be classified as either finance or operating, with classification affecting the pattern of expense recognition in the income statement. The guidance is effective for fiscal years beginning after December 15, 2018 (the Company's fiscal 2020), including interim periods within those fiscal years and requires retrospective application.

In preparation for the adoption of this guidance, the Company gathered all active lease contracts from all its locations to assess whether or not they meet the definition of a lease under the new guidance, specifically, whether there is an identified asset in the contract, and whether or not control thereof lies with the Company. The Company assessed the practical expedients that are allowed under the guidance, including the exclusion of lease contracts with terms of twelve months or less. It assessed each contract for the appropriate lease payment components, discount rate, lease terms (dependent on renewal options) and compiled a preliminary calculation of the right-of-use assets and operating lease liability amounts that would be recognized on the Company's balance sheet upon adoption of the guidance.

The Company is continuing its assessment, including the potential operational process changes as a result of the new guidance. It plans to early-adopt the guidance, using the modified retrospective approach, to coincide with its adoption of the new revenue recognition guidance, which is the first quarter of fiscal 2019.

In July 2015, the FASB issued guidance (ASU 2015-11) intended to simplify the measurement of inventory and to closely align with International Financial Reporting Standards. Current guidance requires inventories to be measured at the lower of cost or market. Under this new guidance, inventories other than those measured under last in first out (“LIFO”) are to be measured at the lower of cost and net realizable value. Net realizable value is the estimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal, and transportation. This guidance is to be applied prospectively, and is effective for fiscal years beginning after December 15, 2016 (the Company’s fiscal 2018). The adoption of this guidance is not expected to have a material impact on the Company’s financial statements and disclosures.

In August 2014, the FASB issued updated guidance (ASU 2014-15) intended to define management’s responsibility to evaluate whether there is substantial doubt about an organization’s ability to continue as a going concern. The amendments in this guidance are effective for annual periods ending after December 15, 2016 (the Company’s fiscal 2017), and for annual periods and interim periods thereafter. The Company adopted this guidance as of June 30, 2017 and it did not have an impact on the Company’s financial statements and disclosures.

In May 2014, the FASB issued updated guidance (ASU 2014-09) on revenue from contracts with customers. This revenue recognition guidance supersedes existing guidance, including industry-specific guidance. The core principle is that an entity should recognize revenue to depict the transfer of control over promised 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. The guidance identifies steps to apply in achieving this principle. This updated guidance is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2017 (the Company's first quarter of fiscal 2019).

In preparation for the adoption of this guidance, the Company gathered customer contracts and customer purchase orders of its various locations to assess whether there are separate and distinct performance obligations, as defined by ASU 2014-09, within these agreements. The assessment has included interviews with various functions, including sales, engineering, customer service, and finance, to further analyze those performance obligations, both explicit and implicit (particularly as they relate to services). Under this ASU, revenue is recognized when or as each performance obligation is satisfied. Based upon the preliminary findings, the Company has identified indicators that suggest a deferral of revenue may be required for certain agreements where the performance of services after product delivery may be required. In certain agreements where the products are built to customer specifications, revenue may need to be accelerated. The Company is continuing its assessment, including whether or not these obligations are perfunctory or material to the financial statements. It plans to adopt the guidance on the effective date applicable to the Company, which is the first quarter of fiscal 2019. There are two transition methods available under the new standard, either full retrospective or modified retrospective. The Company has not yet determined which transition method it will use.

B. INVENTORIES

The major classes of inventories at June 30 were as follows:

	2017	2016
Finished parts	\$45,829	\$45,622
Work in process	8,358	8,020
Raw materials	12,006	12,927
	\$66,193	\$66,569

Inventories stated on a LIFO basis represent approximately 36% and 33% of total inventories at June 30, 2017 and 2016, respectively. The approximate current cost of the LIFO inventories exceeded the LIFO cost by \$26,422 and \$26,451 at June 30, 2017 and 2016, respectively. The Company had reserves for inventory obsolescence of \$9,068 and \$8,823 at June 30, 2017 and 2016, respectively.

C. PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment at June 30 were as follows:

	2017	2016
Land	\$6,556	\$6,497
Buildings	46,479	45,808
Machinery and equipment	134,039	132,969
	187,074	185,274
Less: accumulated depreciation	(138,862)	(133,609)
	\$48,212	\$51,665

Depreciation expense for the years ended June 30, 2017, 2016 and 2015 was \$6,849, \$8,682 and \$9,922, respectively.

D. GOODWILL AND OTHER INTANGIBLES

Goodwill

The Company reviews goodwill for impairment on a reporting unit basis annually as of the end of the fiscal year, and whenever events or changes in circumstances (“triggering events”) indicate that the carrying value of goodwill may not be recoverable.

As of June 30, 2016, the goodwill impairment test involved a two-step process. In step one, the fair value of each of the reporting units is compared to its carrying value, including the goodwill allocated to the reporting unit. If the fair value of the reporting unit exceeds its carrying value, there is no indication of impairment and no further testing is required. If the fair value of the reporting unit is less than the carrying value, step two of the impairment test is performed to measure the amount of impairment loss, if any. In step two of the test, the fair value of the reporting unit’s assets and liabilities (both recognized and unrecognized intangible assets) are measured in accordance with ASC 805, “Business Combinations”, in a hypothetical purchase transaction and compared to the fair value of the reporting unit in order to calculate the implied fair value of goodwill in the same manner as if the reporting unit was being acquired in a business combination. If the implied fair value of the reporting unit’s goodwill is less than the carrying value, the difference is recorded as an impairment loss.

The fair value of reporting units is primarily driven by projected growth rates and operating results under the income approach using a discounted cash flow model, which applies an appropriate market-participant discount rate, and consideration of other market approach data from guideline public companies.

The Company experienced sustained declines in operating results across the business during fiscal 2016, which resulted from weak market trends in the Company’s global oil and gas and commercial marine markets, an underperforming European economy, and few signs of significant near-term recovery in the markets served by these reporting units. The Company conducted its annual assessment for goodwill impairment as of June 30, 2016 using updated inputs, including appropriate risk-based, country and company specific weighted average discount rates for all of the Company’s reporting units, which had increased from the prior year to 13.1% for the U.S. Industrial business as a result of the macroeconomic trends and the Company’s forecasted cash flows. The assessment resulted in the U.S. Industrial and European Propulsion reporting units failing step one of the impairment test. The Company then performed step two testing for each of the reporting units. The conclusions were that the U.S. Industrial reporting unit required an impairment charge of \$6,391, and the European Propulsion reporting unit required a full impairment charge of \$1,211. The fair value of the European Industrial reporting unit exceeded its carrying value by 31% and therefore no impairment charge was required for this reporting unit.

During the third quarter of fiscal 2017, the Company early-adopted the new goodwill guidance, ASU 2017-04. Under the new guidance, the goodwill impairment process has been simplified to a one-step approach. The fair value of a reporting unit, as defined, is compared to the carrying value of the reporting unit, including goodwill. The fair value is primarily determined using discounted cash flow analyses which is driven by projected growth rates, and which applies an appropriate market-participant discount rate; this fair value determined under the income approach is also compared to the value obtained using a market approach from guideline public company multiples. If the carrying amount exceeds the fair value, that difference is recognized as an impairment loss.

The fair value of reporting units is primarily driven by projected growth rates and operating results under the income approach using a discounted cash flow model, which applies an appropriate market-participant discount rate, and consideration of other market approach data from guideline public companies. If declining actual operating results or future operating results become indicative that the fair value of the Company's reporting units has declined below their carrying values, an interim goodwill impairment test may need to be performed and may result in a non-cash goodwill impairment charge. If the Company's market capitalization falls below the Company's carrying value for a sustained period of time or if such a decline becomes indicative that the fair value of the Company's reporting units has declined to below their carrying values, an interim goodwill impairment test may need to be performed and may result in a non-cash goodwill impairment charge.

For the quarter ended March 31, 2017, the Company performed a review of potential triggering events, and concluded there were no triggering events that indicated that the fair value of its European Industrial reporting unit had declined to below its carrying value at March 31, 2017. However, as the review pertained to its U.S. Industrial reporting unit, the Company concluded that events have occurred during the quarter that were indicative that the fair value of the U.S. Industrial reporting unit had more likely than not declined to below its carrying value at March 31, 2017. Such events included the decline in the industry outlook, as well as the underperformance of this reporting unit relative to its forecasted sales and prior period performance.

In accordance with ASU 2017-04, the Company performed an impairment test using current assumptions, including updated forecasted cash flows and a company specific discount rate of 13.1%, for the U.S. Industrial reporting unit and concluded that it required an impairment charge of \$2,550 to fully write off its remaining goodwill balance.

The changes in the carrying amount of goodwill are summarized as follows:

	Net Book Value Rollforward			Net Book Value By Reporting Unit			
	Gross		Net	U.S.	European	European	Other
	Carrying	Accumulated	Book	Industrial	Industrial	Propulsion	
Amount	Impairment	Value					
Balance at June 30, 2015	\$16,459	\$ (3,670)	\$12,789	\$8,941	\$ 2,542	\$ 1,281	\$ 25
Sale of business	(25)	-	(25)	-	-	-	(25)
Impairment	-	(7,602)	(7,602)	(6,391)	-	(1,211)	-
Translation adjustment	(42)	-	(42)	-	28	(70)	-
Balance at June 30, 2016	16,392	(11,272)	5,120	2,550	2,570	-	-
Impairment	-	(2,550)	(2,550)	(2,550)	-	-	-
Translation adjustment	15	-	15	-	15	-	-
Balance at June 30, 2017	\$16,407	\$ (13,822)	\$2,585	\$-	\$ 2,585	\$ -	\$ -

The total non-cash impairment charges of \$2,550 and \$7,602 in fiscal 2017 and 2016, respectively, do not result in any future cash expenditures, impact liquidity, affect the ongoing business or financial performance of the Company, impact compliance with our lending arrangements, or reduce borrowing capacity.

As at June 30, 2017, the balance of goodwill of \$2,585 is carried in the European Industrial reporting unit. The fair value of the European Industrial reporting unit exceeded its carrying value by 57% and therefore no impairment charge was required for this reporting unit.

Other Intangibles

At June 30, the following acquired intangible assets have definite useful lives and are subject to amortization:

Net Book Value Rollforward	Gross	Accumulated	Net	Net Book Value By		
				Asset Type	Trade	Other
	Amortization	Book	Licensing	Agreements	Patents	

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	Carrying / Impairment		Value			
	Amount					
Balance at June 30, 2015	\$13,272	\$ (11,299)	\$1,973	\$510	\$1,459	\$4
Addition	138		138			138
Amortization		(164)	(164)	(60)	(81)	(23)
Translation adjustment	16		16		15	1
Balance at June 30, 2016	13,426	(11,463)	1,963	450	1,393	120
Amortization		(168)	(168)	(60)	(80)	(28)
Translation adjustment	10	(1)	9		6	3
Balance at June 30, 2017	\$13,436	\$ (11,632)	\$1,804	\$390	\$1,319	\$95

Other intangibles consist of certain amortizable acquisition costs, proprietary technology, computer software and certain customer relationships.

The weighted average remaining useful life of the intangible assets included in the table above is approximately 13 years.

Intangible amortization expense for the years ended June 30, 2017, 2016 and 2015 was \$168, \$165 and \$239, respectively. Estimated intangible amortization expense for each of the next five fiscal years is as follows:

<u>Fiscal Year</u>	
2018	\$180
2019	177
2020	156
2021	150
2022	143
Thereafter	997

The gross carrying amount of the Company's intangible assets that have indefinite lives and are not subject to amortization as of June 30, 2017 and 2016 are \$205 and \$201, respectively. These assets are comprised of acquired tradenames.

E. ACCRUED LIABILITIES

Accrued liabilities at June 30 were as follows:

	2017	2016
Salaries and wages	\$6,714	\$4,851
Retirement benefits	3,027	3,550
Customer advances/deferred revenue	2,423	2,372
Distributor rebate	2,183	2,538
Warranty	1,708	2,532
Other	7,167	5,572
	\$23,222	\$21,415

F. WARRANTY

The Company warrants all assembled products, parts (except component products or parts on which written warranties are issued by the respective manufacturers thereof and are furnished to the original customer, as to which the Company makes no warranty and assumes no liability) and service against defective materials or workmanship. Such warranty generally extends from periods ranging from 12 months to 24 months. The Company engages in extensive product quality programs and processes, including actively monitoring and evaluating the quality of its suppliers. However, its warranty obligation is affected by product failure rates, the number of units affected by the failure and the expense involved in satisfactorily addressing the situation. The warranty reserve is established based on our best estimate of the amounts necessary to settle future and existing claims on products sold as of the balance sheet date. When evaluating the adequacy of the reserve for warranty costs, management takes into consideration the term of the warranty coverage, historical claim rates and costs of repair, knowledge of the type and volume of new products and economic trends. While we believe the warranty reserve is adequate and that the judgment applied is appropriate, such amounts estimated to be due and payable in the future could differ materially from what actually transpires. The following is a listing of the activity in the warranty reserve during the years ended June 30:

	2017	2016
Reserve balance, July 1	\$3,607	\$5,245
Current period expense	615	646

Payments or credits to customers	(2,179)	(2,278)
Translation adjustment	19	(6)
Reserve balance, June 30	\$2,062	\$3,607

The current portion of the warranty accrual (\$1,708 and \$2,532 for fiscal 2017 and 2016, respectively) is reflected in accrued liabilities, while the long-term portion (\$354 and \$1,075 for fiscal 2017 and 2016, respectively) is included in other long-term liabilities on the Consolidated Balance Sheets.

G. DEBT

Long-term Debt:

Long-term debt consisted of the following at June 30:

	2017	2016
Revolving loan agreement	\$6,285	\$8,478
Other	38	23
Subtotal	6,323	8,501
Less: current maturities	-	-
Total long-term debt	\$6,323	\$8,501

The revolving loan agreement as of June 30, 2017 pertains to the revolving loan facility which the Company entered into on April 22, 2016 with Bank of Montreal (the “BMO Agreement”). The BMO Agreement is secured by substantially all of the Company’s personal property, including accounts receivable, inventory, and certain machinery and equipment of its primary manufacturing facility in Racine, Wisconsin, and the personal property of Mill-Log Equipment Co., Inc., a wholly-owned domestic subsidiary of the Company. The BMO Agreement provides for a borrowing base calculation to determine borrowing capacity. This capacity will be based upon eligible domestic inventory, eligible accounts receivable and machinery and equipment, subject to certain adjustments. As of June 30, 2017, the Company’s borrowing capacity under the terms of the BMO Agreement was approximately \$28,580, and the Company had approximately \$21,365 of available borrowings. As of June 30, 2017, the interest rate under this agreement was 2.80%.

The aggregate scheduled maturities of outstanding long-term debt obligations in subsequent years are as follows:

<u>Fiscal Year</u>	
2018	\$2
2019	3
2020	3
2021	6,288
2022	3
Thereafter	24
	\$6,323

Other lines of credit:

The Company has established unsecured lines of credit, which may be withdrawn at the option of the banks. Under these arrangements, the Company has unused and available credit lines of \$1,472 with a weighted average interest rate of 4.9% as of June 30, 2017, and \$1,470 with a weighted average interest rate of 5.4% as of June 30, 2016.

H. LEASE COMMITMENTS

The Company leases certain office and warehouse space, as well as production and office equipment. Approximate future minimum rental commitments under noncancellable operating leases are as follows:

<u>Fiscal Year</u>	
2018	\$2,435

2019	859
2020	597
2021	515
2022	484
Thereafter	238
	\$5,128

Total rent expense for operating leases approximated \$2,982, \$3,240 and \$3,550 in fiscal 2017, 2016 and 2015, respectively.

I. SHAREHOLDERS' EQUITY

The total number of shares of common stock outstanding at June 30, 2017, 2016 and 2015 was 11,519,133, 11,350,174 and 11,267,347, respectively. At June 30, 2017, 2016 and 2015, treasury stock consisted of 1,580,335, 1,749,294 and 1,832,121 shares of common stock, respectively. The Company issued 168,959, 83,377 and 49,314 shares of treasury stock in fiscal 2017, 2016 and 2015, respectively, to fulfill its obligations under the stock option plans and restricted stock grants. The Company also recorded forfeitures of 0 and 1,750 shares of previously issued restricted stock in fiscal 2017 and 2016, respectively. The difference between the cost of treasury shares and the option price is recorded in common stock.

Under an authorization given by the Board of Directors on July 27, 2012, the Company is permitted to make open market purchases of its common stock. The Company did not make any open market purchases during the three most recent fiscal years. As of June 30, 2017, 2016, and 2015, 315,000 shares remain authorized for purchase.

Cash dividends per share were \$0.00, \$0.18 and \$0.36 in fiscal 2017, 2016 and 2015, respectively.

Effective June 30, 2008, the Company's Board of Directors established a Shareholder Rights Plan and distributed to shareholders one preferred stock purchase right (a "Right") for each outstanding share of common stock. This Shareholder Rights Plan was amended on May 1, 2012. Under certain circumstances, a Right can be exercised to purchase one four-hundredth of a share of Series A Junior Preferred Stock at an exercise price of \$125, subject to certain anti-dilution adjustments. The Rights will become exercisable on the earlier of: (i) ten business days following a public announcement that a person or group of affiliated or associated persons (an "Acquiring Person") has acquired, or obtained the right to acquire from shareholders, beneficial ownership of 20% or more of the outstanding Company's common stock (or 30% or more in the case of any person or group which currently owns 20% or more of the shares or who shall become the beneficial owner of 20% or more of the shares as a result of any transfer by reason of the death of or by gift from any other person who is an affiliate or an associate of such existing holder or by succeeding such a person as trustee of a trust existing on the Record Date ("Existing Holder")) or (ii) ten business days following the commencement of a tender offer or exchange offer that would result in a person or group beneficially owning 20% or more of such outstanding Common Stock (or 30% or more for an Existing Holder), as such periods may be extended pursuant to the Rights Agreement. In the event that any person or group becomes an Acquiring Person, each holder of a Right shall thereafter have the right to receive, upon exercise, in lieu of Preferred Stock, common stock of the Company having a value equal to two times the exercise price of the Right. However, Rights are not exercisable as described in this paragraph until such time as the Rights are no longer redeemable by the Company as set forth below. Notwithstanding any of the foregoing, if any person becomes an Acquiring Person all Rights that are, or (under certain circumstances specified in the Rights Agreement) were, beneficially owned by an Acquiring Person will become null and void.

The Rights will expire at the close of business on June 30, 2018, unless earlier redeemed or exchanged by the Company. At any time before a person becomes an Acquiring Person, the Company may redeem the Rights in whole, but not in part, at a price of \$.01 per Right, appropriately adjusted to reflect any stock split, stock dividend or similar transaction occurring after the date hereof. Immediately upon the action of the Board of Directors ordering redemption of the Rights, the Rights will terminate and the only right of the holders of Rights will be to receive the \$.01 redemption price.

The Company is authorized to issue 200,000 shares of preferred stock, none of which have been issued. The Company has designated 150,000 shares of the preferred stock for the purpose of the Shareholder Rights Plan.

The components of accumulated other comprehensive loss included in equity as of June 30, 2017 and 2016 are as follows:

	2017	2016
Translation adjustments	\$6,130	\$5,158

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Benefit plan adjustments, net of income taxes of \$21,601 and \$27,750 respectively	(38,801)	(49,301)
Accumulated other comprehensive loss	\$(32,671)	\$(44,143)

A reconciliation for the changes in accumulated other comprehensive income (loss), net of tax, by component for the years ended June 30, 2015, June 30, 2016 and June 30, 2017 is as follows:

	Translation Adjustment	Benefit Plan Adjustment
Balance at June 30, 2014	\$ 20,779	\$ (36,722)
Other comprehensive loss before reclassifications	(14,039)	(7,518)
Amounts reclassified from accumulated other comprehensive income	-	2,019
Net current period other comprehensive loss	(14,039)	(5,499)
Balance at June 30, 2015	\$ 6,740	\$ (42,221)

	Translation Adjustment	Benefit Plan Adjustment
Balance at June 30, 2015	\$ 6,740	\$ (42,221)
Other comprehensive loss before reclassifications	(1,582)	(10,101)
Amounts reclassified from accumulated other comprehensive income	-	3,021
Net current period other comprehensive loss	(1,582)	(7,080)
Balance at June 30, 2016	\$ 5,158	\$ (49,301)

	Translation Adjustment	Benefit Plan Adjustment
Balance at June 30, 2016	\$ 5,158	\$ (49,301)
Other comprehensive income before reclassifications	972	8,025
Amounts reclassified from accumulated other comprehensive income	-	2,475
Net current period other comprehensive income	972	10,500
Balance at June 30, 2017	\$ 6,130	\$ (38,801)

A reconciliation for the reclassifications out of accumulated other comprehensive income (loss), net of tax for the year ended June 30, 2015 is as follows:

	Amount Reclassified
Amortization of benefit plan items	
Actuarial losses	\$ (3,074)
Transition asset and prior service benefit	(36)
Total before tax benefit	(3,110)
Tax benefit	1,091
Total reclassification net of tax	\$ (2,019)

A reconciliation for the reclassifications out of accumulated other comprehensive income (loss), net of tax for the year ended June 30, 2016 is as follows:

	Amount Reclassified
Amortization of benefit plan items	
Actuarial losses	\$ (4,355)
Transition asset and prior service benefit	(92)
Total before tax benefit	(4,447)
Tax benefit	1,426
Total reclassification net of tax	\$ (3,021)

A reconciliation for the reclassifications out of accumulated other comprehensive income (loss), net of tax for the year ended June 30, 2017 is as follows:

	Amount Reclassified
Amortization of benefit plan items	
Actuarial losses	\$ (3,821)
Transition asset and prior service benefit	(101)
Total before tax benefit	(3,922)
Tax benefit	1,447
Total reclassification net of tax	\$ (2,475)

J. BUSINESS SEGMENTS AND FOREIGN OPERATIONS

The Company and its subsidiaries are engaged in the manufacture and sale of marine and heavy duty off-highway power transmission equipment. Principal products include marine transmissions, surface drives, propellers and boat management systems, as well as power-shift transmissions, hydraulic torque converters, power take-offs, industrial clutches and controls systems. The Company sells to both domestic and foreign customers in a variety of market areas, principally pleasure craft, commercial and military marine markets, energy and natural resources, government, and industrial markets.

Net sales by product group is summarized as follows:

	2017	2016	2015
Industrial	\$28,769	\$32,437	\$42,078
Land based transmissions	42,386	29,028	76,450
Marine and propulsion systems	91,629	98,925	141,137
Other	5,398	5,892	6,125
Total	\$168,182	\$166,282	\$265,790

Industrial products include clutches, power take-offs and pump drives sold to the agriculture, recycling, construction and oil and gas markets. The land based transmission products include applications for oilfield and natural gas, military and airport rescue and fire fighting. The marine and propulsion systems include marine transmission, controls, surface drives, propellers and boat management systems for the global commercial, pleasure craft and patrol boat markets. Other products includes non-Twin Disc manufactured product sold through Company-owned distribution entities.

The Company has two reportable segments: manufacturing and distribution. Its segment structure reflects the way management makes operating decisions and manages the growth and profitability of the business. It also corresponds with management's approach of allocating resources and assessing the performance of its segments. The accounting practices of the segments are the same as those described in the summary of significant accounting policies. Transfers among segments are at established inter-company selling prices. Management evaluates the performance of its segments based on net earnings.

Information about the Company's segments is summarized as follows:

2017	Manufacturing	Distribution	Total
Net Sales	\$ 146,491	\$ 67,804	\$214,295
Intra-segment sales	13,146	7,296	20,442
Inter-segment sales	22,921	2,750	25,671
Interest income	42	32	74
Interest expense	301	-	301
Income taxes	1,684	784	2,468
Depreciation and amortization	6,125	425	6,550
Net earnings attributable to Twin Disc	629	2,438	3,067
Assets	222,136	50,418	272,554
Expenditures for segment assets	2,674	290	2,964

2016	Manufacturing	Distribution	Total
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Net Sales	\$ 140,965	\$ 74,199	\$215,164
Intra-segment sales	11,476	7,854	19,330
Inter-segment sales	26,883	2,669	29,552
Interest income	117	25	142
Interest expense	397	1	398
Income taxes	(2,554)	108	(2,446)
Depreciation and amortization	7,536	471	8,007
Net (loss) earnings attributable to Twin Disc	(12,694)	762	(11,932)
Assets	221,590	52,719	274,309
Expenditures for segment assets	3,850	188	4,038

2015	Manufacturing	Distribution	Total
Net Sales	\$ 232,545	\$ 120,594	\$ 353,139
Intra-segment sales	19,541	9,584	29,125
Inter-segment sales	54,947	3,277	58,224
Interest income	171	33	204
Interest expense	946	-	946
Income taxes	7,125	1,646	8,771
Depreciation and amortization	8,103	502	8,605
Net earnings attributable to Twin Disc	12,861	6,350	19,211
Assets	246,374	62,134	308,508
Expenditures for segment assets	7,335	1,271	8,606

The following is a reconciliation of reportable segment net sales and net (loss) earnings to the Company's consolidated totals:

	2017	2016	2015
Net sales:			
Total net sales from reportable segments	\$214,295	\$215,164	\$353,139
Elimination of inter-company sales	(46,113)	(48,882)	(87,349)
Total consolidated net sales	\$168,182	\$166,282	\$265,790
Net (loss) earnings attributable to Twin Disc:			
Total net earnings (loss) from reportable segments	\$3,067	\$(11,932)	\$19,211
Other adjustments and corporate expenses	(9,361)	(1,172)	(8,038)
Total consolidated net (loss) earnings attributable to Twin Disc	\$(6,294)	\$(13,104)	\$11,173

Corporate expenses pertain to certain costs that are not allocated to the reportable segments, primarily consisting of unallocated corporate overhead costs, including administrative functions and global functional expenses.

Other significant items:

	Segment Totals	Adjustments	Consolidated Totals
2017			
Interest income	\$74	\$ (2) \$ 72
Interest expense	301	2	303
Income taxes	2,468	(5,882) (3,414)
Depreciation and amortization	6,550	467	7,017
Assets	272,554	(61,656) 210,898
Expenditures for segment assets	2,964	169	3,133
2016			
Interest income	\$142	\$ 5	\$ 147
Interest expense	398	28	426
Income taxes	(2,446)	(9,836) (12,282)
Depreciation and amortization	8,007	840	8,847
Assets	274,309	(60,387) 213,922
Expenditures for segment assets	4,038	176	4,214
2015			
Interest income	\$204	\$ (80) \$ 124
Interest expense	946	(340) 606
Income taxes	8,771	(4,256) 4,515
Depreciation and amortization	8,605	1,556	10,161
Assets	308,508	(58,646) 249,862
Expenditures for segment assets	8,606	443	9,049

All adjustments represent inter-company eliminations and corporate amounts.

Geographic information about the Company is summarized as follows:

	2017	2016	2015
Net sales			
United States	\$82,730	\$77,147	\$131,198
Italy	12,176	13,294	14,457
Australia	10,913	9,943	10,454
Canada	9,962	8,699	13,661
China	7,936	9,019	19,712
Other countries	44,465	48,180	76,308
Total	\$168,182	\$166,282	\$265,790

Net sales by geographic region are based on product shipment destination.

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Long-lived assets primarily pertain to property, plant and equipment and exclude goodwill and other intangibles. They are summarized as follows:

Long-lived assets	2017	2016
United States	\$34,310	\$37,319
Belgium	7,399	7,154
Switzerland	7,324	7,145
Italy	1,829	1,638
Other countries	1,810	2,477
Total	\$52,672	\$55,733

The Company has one distributor customer, primarily of our manufacturing segment, that accounted for 11% and 12% of total Company sales for fiscal 2017 and fiscal 2016, respectively. Another distributor customer accounted for 12% and 11% of total Company sales in fiscal 2016 and fiscal 2015, respectively.

K. STOCK-BASED COMPENSATION

In fiscal 2011, the Company adopted the Twin Disc, Incorporated 2010 Stock Incentive Plan for Non-Employee Directors (the “2010 Directors’ Plan”), a plan to grant non-employee directors equity-based awards up to 250,000 shares of common stock, and the Twin Disc, Incorporated 2010 Long-Term Incentive Compensation Plan (the “2010 Employee Incentive Plan”), a plan under which officers and key employees may be granted equity-based awards up to 650,000 shares of common stock. Equity-based awards granted under these plans include performance shares, performance units, and restricted stock.

Shares available for future awards as of June 30 were as follows:

	2017	2016
2010 Employee Incentive Plan	97,609	333,054
2010 Directors' Plan	100,426	144,656

Performance Stock Awards (“PSA”)

In fiscal 2017, 2016 and 2015, the Company granted a target number of 109,598, 60,466 and 16,261 PSAs, respectively, to various employees of the Company, including executive officers. The PSAs granted in fiscal 2017 will

vest if the Company achieves performance-based target objectives relating to average return on invested capital, average annual sales and average annual Earnings Per Share (“EPS”) (as defined in the PSA Grant Agreement), in the cumulative three fiscal year period ending June 30, 2019. These PSAs are subject to adjustment if the Company’s return on invested capital, net sales, and EPS for the period falls below or exceeds the specified target objective, and the maximum number of performance shares that can be awarded if the target objective is exceeded is 164,397. Based upon actual results to date and the low probability of achieving the threshold performance levels, the Company is currently not accruing compensation expense for these PSAs. The PSAs granted in fiscal 2016 will vest if the Company achieves (a) performance-based target objectives relating to average annual sales and consolidated economic profit, and (b) relative Total Shareholder Return (“TSR”) (as defined in the PSA Grant Agreement), in the cumulative three fiscal year period ending June 30, 2018. These PSAs are subject to adjustment if the Company’s net sales, economic profit and relative TSR for the period falls below or exceeds the specified target objective, and the maximum number of performance shares that can be awarded if the target objective is exceeded is 90,699. Based upon actual results to date and the low probability of achieving the threshold performance levels, the Company is currently not accruing as compensation expense for the portion of the PSAs relating to the average annual sales and economic profit measures. The Company is currently accruing compensation expense for the TSR measure. Compensation expense relating to the relative TSR portion is recognized based on the grant date fair value over the vesting period. The PSAs granted in fiscal 2015 expired on June 30, 2017. No compensation expense was recognized on these PSAs in fiscal 2017, 2016, and 2015, because the economic profit target performance level was not met. There were 170,064, 72,217 and 25,949 unvested PSAs outstanding at June 30, 2017, 2016 and 2015, respectively. The fair value of the PSAs (on the date of grant) is expensed over the performance period for the shares that are expected to ultimately vest. The compensation expense for the year ended June 30, 2017, 2016 and 2015, related PSAs, approximated \$59, \$54 and \$0, respectively. The weighted average grant date fair value of the unvested awards at June 30, 2017 was \$12.32. At June 30, 2017, the Company had \$1,981 of unrecognized compensation expense related to the unvested shares that would vest if the specified target objective was achieved for the fiscal 2017 and 2016 awards. The total fair value of performance stock awards vested in fiscal 2017, 2016 and 2015 was \$0.

Performance Stock Unit Awards (“PSU”)

There were no grants of PSUs during fiscal 2017 and fiscal 2016. In fiscal 2015, the Company granted a target number of 15,861 PSUs to various employees of the Company, including executive officers. These PSUs expired unvested on June 30, 2017. No compensation expense was recognized on these PSUs in 2017, 2016, and 2015 because the economic profit target performance level was not met. There were no unvested PSUs outstanding at June 30, 2017, and there were 11,351 and 29,855 unvested PSUs outstanding at 2016 and 2015, respectively. At June 30, 2017, the Company had no unrecognized compensation expense related to PSUs. The total fair value of PSUs vested in fiscal 2017, 2016 and 2015 was \$0. The PSUs are cash settled liability awards; as of June 30, 2017 and June 30, 2016, there were no awards included in liabilities.

Restricted Stock Awards (“RS”)

The Company has unvested RS outstanding that will vest if certain service conditions are fulfilled. The fair value of the RS grants is recorded as compensation over the vesting period, which is generally 1 to 3 years. During fiscal 2017, 2016 and 2015, the Company granted 181,828, 95,738 and 59,494 service based restricted shares, respectively, to employees and non-employee directors in each year. A total of 0, 1,750 and 46,240 shares of restricted stock were forfeited during fiscal 2017, 2016 and 2015, respectively. There were 269,584, 142,971 and 94,183 unvested shares outstanding at June 30, 2017, 2016 and 2015, respectively. Compensation expense of \$1,555, \$1,241 and \$696 was recognized during the year ended June 30, 2017, 2016 and 2015, respectively, related to these service-based awards. The total fair value of restricted stock grants vested in fiscal 2017, 2016 and 2015 was \$587, \$681 and \$993, respectively. As of June 30, 2017, the Company had \$1,569 of unrecognized compensation expense related to restricted stock which will be recognized over the next three years.

Stock Options

The 2010 Directors’ Plan may grant options to purchase shares of common stock, at the discretion of the Board of Directors, to non-employee directors who are elected or reelected to the board, or who continue to serve on the board. Such options carry an exercise price equal to the fair market value of the Company’s common stock as of the date of grant, vest immediately, and expire ten years after the date of grant. Options granted under the 2010 Employee Incentive Plan are determined to be non-qualified or incentive stock options as of the date of grant, and may carry a vesting schedule. For options under the 2010 Employee Incentive Plan that are intended to qualify as incentive stock options, if the optionee owns more than 10% of the total combined voting power of the Company’s stock, the price will not be less than 110% of the grant date fair market value and the options expire five years after the date of grant. There were no incentive options granted to a greater than 10% shareholder during the years presented. There were no options outstanding under the 2010 Directors’ Plan and the 2010 Employee Incentive Plan as of June 30, 2017 and 2016.

2004 Plans

The Company has 13,200 non-qualified stock options outstanding as of June 30, 2017 under the 2004 Twin Disc, Incorporated Plan for Non-Employee Directors and 2004 Twin Disc, Incorporated Stock Incentive Plan. The 2004 plans were terminated during 2011, except options then outstanding will remain so until exercised or until they expire.

Stock option transactions under the 2004 plans during 2017 were as follows:

	2017	Weighted Average Price	Weighted Average Remaining Contractual Life (years)	Aggregate Intrinsic Value
Non-qualified stock options:				
Options outstanding at beginning of year	16,800	\$ 16.80		
Granted	-	-		
Canceled/expired	(3,600)	18.01		
Exercised	-	-		
Options outstanding at June 30	13,200	\$ 16.47	2.09	\$ 35.5

Options price range (\$10.01 - \$27.55)

In addition, the Company computes its windfall tax pool using the shortcut method. ASC 718, “Compensation – Stock Compensation”, requires the Company to expense the cost of employee services received in exchange for an award of equity instruments using the fair-value-based method. All options were 100% vested at the adoption of this statement.

During fiscal 2017, 2016 and 2015 the Company granted no non-qualified stock options and all non-qualified stock options from prior periods have fully vested. As a result, no compensation cost has been recognized in the Consolidated Statements of Operations and Comprehensive Income for fiscal 2017, 2016 and 2015, respectively.

The total intrinsic value of options exercised during the years ended June 30, 2017, 2016 and 2015 was approximately \$0, \$4 and \$55, respectively.

L. ENGINEERING AND DEVELOPMENT COSTS

Engineering and development costs include research and development expenses for new products, development and major improvements to existing products, and other costs for ongoing efforts to refine existing products. Research and development costs charged to operations totaled \$1,547, \$1,805 and \$2,288 in fiscal 2017, 2016 and 2015, respectively. Total engineering and development costs were \$8,888, \$9,481 and \$11,091 in fiscal 2017, 2016 and 2015, respectively.

M. PENSION AND OTHER POSTRETIREMENT BENEFIT PLANS

The Company has non-contributory, qualified defined benefit pension plans covering substantially all domestic employees hired prior to October 1, 2003, and certain foreign employees. Domestic plan benefits are based on years of service, and, for salaried employees, on average compensation for benefits earned prior to January 1, 1997, and on a cash balance plan for benefits earned from January 1, 1997 through July 31, 2009, at which time the Company froze future accruals under domestic defined benefit pension plans. The Company's funding policy for the plans covering domestic employees is to contribute an actuarially determined amount which falls between the minimum and maximum amount that can be deducted for federal income tax purposes.

In addition, the Company has unfunded, non-qualified retirement plans for certain management employees and Directors. In the case of management employees, benefits are based on an annual credit to a bookkeeping account, intended to restore the benefits that would have been earned under the qualified plans, but for the earnings limitations under the Internal Revenue Code. In the case of Directors, benefits are based on years of service on the Board. All benefits vest upon retirement from the Company.

In addition to providing pension benefits, the Company provides other postretirement benefits, including healthcare and life insurance benefits for certain domestic retirees. All employees retiring after December 31, 1992, and electing to continue healthcare coverage through the Company's group plan, are required to pay 100% of the premium cost.

The measurement date for the Company's pension and postretirement benefit plans in fiscal 2017 and 2016 was June 30.

Obligations and Funded Status

The following table sets forth the Company's defined benefit pension plans' and other postretirement benefit plans' funded status and the amounts recognized in the Company's balance sheets and statement of operations and comprehensive income as of June 30:

	Pension Benefits		Other Postretirement Benefits	
	2017	2016	2017	2016
Change in benefit obligation:				
Benefit obligation, beginning of year	\$129,056	\$127,733	\$15,933	\$16,372
Service cost	1,009	770	20	28
Interest cost	4,213	4,968	420	604
Actuarial (gain) loss	(6,980)	7,043	(3,380)	496
Contributions by plan participants	139	143	472	519
Benefits paid	(9,267)	(11,601)	(1,891)	(2,086)
Benefit obligation, end of year	\$118,170	\$129,056	\$11,574	\$15,933
Change in plan assets:				
Fair value of assets, beginning of year	\$94,164	\$104,681	\$-	\$-
Actual return on plan assets	7,967	(1,442)	-	-
Employer contribution	1,369	2,383	1,419	1,567
Contributions by plan participants	139	143	472	519
Benefits paid	(9,267)	(11,601)	(1,891)	(2,086)
Fair value of assets, end of year	\$94,372			