

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 December 31, 2018

Commission file number: 001-13337



**STONERIDGE, INC.**

(Exact name of registrant as specified in its charter)

**Ohio**

(State or other jurisdiction of  
incorporation or organization)

**34-1598949**

(I.R.S. Employer  
Identification No.)

**39675 MacKenzie Drive, Suite 400, Novi, Michigan**

(Address of principal executive offices)

**48377**

(Zip Code)

**(248) 489-9300**

Registrant's telephone number, including area code

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

Title of each class	Name of each exchange on which registered
Common Shares, without par value	New York Stock Exchange

Securities registered pursuant to section 12(g) of the Act: **None**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. ☐ Yes ☒ No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the 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 every Interactive Data File required to be submitted 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 such files). ☒

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of 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 definition of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer ☒

Accelerated filer ☐

Non-accelerated filer ☐

Smaller reporting company ☐

Emerging growth company ☐

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

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). ☐ Yes ☒ No

As of June 30, 2018, the aggregate market value of the registrant's Common Shares held by non-affiliates of the registrant was approximately \$961.3 million. The closing price of the Common Shares on June 30, 2018 as reported on the New York Stock Exchange was \$35.14 per share. As of June 30, 2018, the number of Common Shares outstanding was 28,481,728.

The number of Common Shares outstanding as of February 20, 2019 was 28,488,935.

**DOCUMENTS INCORPORATED BY REFERENCE**

Definitive Proxy Statement for the Annual Meeting of Shareholders to be held on May 14, 2019, into Part III, Items 10, 11, 12, 13 and 14.

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## Forward-Looking Statements

Portions of this report on Form 10-K contain “forward-looking statements” under the Private Securities Litigation Reform Act of 1995. These statements appear in a number of places in this report and may include statements regarding the intent, belief or current expectations of the Company, with respect to, among other things, our (i) future product and facility expansion, (ii) acquisition strategy, (iii) investments and new product development, (iv) growth opportunities related to awarded business and (v) operational expectations. Forward-looking statements may be identified by the words “will,” “may,” “should,” “designed to,” “believes,” “plans,” “projects,” “intends,” “expects,” “estimates,” “anticipates,” “continue,” and similar words and expressions. The forward-looking statements are subject to risks and uncertainties that could cause actual events or results to differ materially from those expressed in or implied by the statements. Important factors that could cause actual results to differ materially from those in the forward-looking statements include, among other factors:

- the reduced purchases, loss or bankruptcy of a major customer or supplier;
- the costs and timing of business realignment, facility closures or similar actions;
- a significant change in automotive, commercial, off-highway, motorcycle or agricultural vehicle production;
- competitive market conditions and resulting effects on sales and pricing;
- the impact on changes in foreign currency exchange rates on sales, costs and results, particularly the Argentinian peso, Brazilian real, Chinese renminbi, euro, Mexican peso and Swedish krona;
- our ability to achieve cost reductions that offset or exceed customer-mandated selling price reductions;
- customer acceptance of new products;
- our ability to successfully launch/produce products for awarded business;
- adverse changes in laws, government regulations or market conditions, including tariffs, affecting our products or our customers’ products;
- our ability to protect our intellectual property and successfully defend against assertions made against us;
- liabilities arising from warranty claims, product recall or field actions, product liability and legal proceedings to which we are or may become a party, or the impact of product recall or field actions on our customers;
- labor disruptions at our facilities or at any of our significant customers or suppliers;
- the ability of our suppliers to supply us with parts and components at competitive prices on a timely basis, including the impact of potential tariffs and trade considerations on their operations and output;
- the amount of our indebtedness and the restrictive covenants contained in the agreements governing our indebtedness, including our revolving credit facility;
- capital availability or costs, including changes in interest rates or market perceptions;
- the failure to achieve the successful integration of any acquired company or business;
- risks related to a failure of our information technology systems and networks, and risks associated with current and emerging technology threats and damage from computer viruses, unauthorized access, cyber attack and other similar disruptions; and
- the items described in Part I, Item 1A (“Risk Factors”).

The forward-looking statements contained herein represent our estimates only as of the date of this filing and should not be relied upon as representing our estimates as of any subsequent date. While we may elect to update these forward-looking statements at some point in the future, we specifically disclaim any obligation to do so, whether to reflect actual results, changes in assumptions, changes in other factors affecting such forward-looking statements or otherwise.

## PART I

### Item 1. Business.

#### *Overview*

Founded in 1965, Stoneridge, Inc. (the “Company”) is a global designer and manufacturer of highly engineered electrical and electronic components, modules and systems for the automotive, commercial, off-highway, motorcycle and agricultural vehicle markets. Our products and systems are critical elements in the management of mechanical and electrical systems to improve overall vehicle performance, convenience and monitoring in areas such as emissions control, fuel efficiency, safety, security and infotainment. Our extensive footprint encompasses 26 locations in 13 countries and enables us to supply global and regional automotive, commercial, off-highway, motorcycle and agricultural vehicle markets.

Our custom-engineered products and systems are used to activate equipment and accessories, monitor and display vehicle performance and control, distribute electrical power and signals and provide vehicle security and convenience. Our product offerings consist of (i) sensors, (ii) application-specific actuators, switches and valves, (iii) vehicle and driver information systems, (iv) vehicle management electronics, (v) power and switch distribution modules and telematics, (vi) camera-based vision systems and monitors, (vii) security alarms and vehicle tracking devices and monitoring services and (viii) convenience accessories. We supply the majority of our products, predominantly on a sole-source basis, to many of the world’s leading commercial vehicle and automotive original equipment manufacturers (“OEMs”) and select non-vehicle OEMs, as well as certain commercial vehicle and automotive Tier 1 suppliers. Our customers are increasingly utilizing electronic technology to comply with more stringent regulations (particularly emissions and safety) and to meet end-user demand for improved vehicle performance and greater convenience. As a result of this trend, per-vehicle electronic content has been increasing. Our technology and our partnership-oriented approach to product design and development enables us to develop next-generation products for this trend.

On January 31, 2017, the Company acquired Exploitiemaatschappij Berghaaf B.V. (“Orlaco”), an electronics business which designs, manufactures and sells camera-based vision systems, monitors and related products. The acquisition was accounted for as a business combination, and accordingly, the Company’s consolidated financial statements herein include the results of Orlaco from the acquisition date to December 31, 2018. See Note 2 to the consolidated financial statements for additional details regarding the Orlaco acquisition.

The Company had a 74% controlling interest in PST Eletronica Ltda. (“PST”) from December 31, 2011 through May 15, 2017. On May 16, 2017, the Company acquired the remaining 26% noncontrolling interest in PST, which was accounted for as an equity transaction. As such, PST is now a wholly owned subsidiary. See Note 4 to the consolidated financial statements for additional details regarding the acquisition of PST’s noncontrolling interest.

Beginning with the divestiture of our wiring business in 2014, we accelerated a shift in our product portfolio towards smart products, or those products which contain embedded electronics or logic. While the wiring business was our largest single business, based on revenues and employees, and the business that the Company was founded on, it was largely a commodity that did not provide a technology platform to drive our expected future growth. In addition to the divestiture of the wiring business, we deployed capital in 2017 to make strategic investments including the acquisition of Orlaco, our partner on the development of MirrorEye, our camera monitoring system, and the acquisition of 100 percent of our PST business in Brazil. These activities have acted as a catalyst for the advancement of our smart product portfolio, increasing our smart content from just over 50 percent of our sales in 2014 to almost 75% of our sales in 2018. Our product portfolio shift focuses on the megatrends driving the transportation industry.

## Segments and Products

We conduct our business in three reportable business segments which are the same as our operating segments: Control Devices, Electronics and PST.

**Control Devices.** Our Control Devices segment designs and manufactures products that monitor, measure or activate specific functions within a vehicle. This segment includes product lines such as sensors, actuators, valves and switches. Sensor products are employed in major vehicle systems such as the emissions, safety, powertrain, braking, climate control, steering and suspension systems. Actuator products enable OEMs to deploy power functions in a vehicle and can be designed to integrate switching and control functions including our park and shift by wire products. Switches transmit signals that activate specific functions. Our switch technology is principally used in two capacities, user-activated and hidden. User-activated switches are used by a vehicle's operator or passengers to manually activate in-vehicle accessories. Hidden switches are not typically visible to vehicle operators or passengers and are engaged to activate or deactivate selected functions as part of normal vehicle operations. We sell these products principally to the automotive market. To a lesser extent, we also sell these products to the commercial vehicle and agricultural markets.

**Electronics.** Our Electronics segment designs and manufactures electronic instrument clusters, electronic control units, driver information systems, camera-based vision systems, monitors and related products. These products collect, store and display vehicle information such as speed, pressure, maintenance data, trip information, operator performance, temperature, distance traveled and driver messages related to vehicle performance. In addition, power distribution modules and systems regulate, coordinate, monitor and direct the operation of the electrical system within a vehicle. These products use state-of-the-art hardware, software and multiplexing technology and are sold principally to the commercial vehicle market through both the OEM and aftermarket channels. The camera-based vision systems, monitors and related products are sold principally to the off-highway vehicle market.

**PST.** Our PST segment primarily serves the South American market and specializes in the design, manufacture and sale of in-vehicle audio and video devices, electronic vehicle security alarms, convenience accessories, vehicle tracking devices and monitoring services primarily for the automotive and motorcycle markets. This segment includes product lines such as alarms, convenience applications, vehicle monitoring and tracking devices and infotainment systems. These products improve the performance, safety and convenience features of our customers' vehicles. PST sells its products through the aftermarket distribution channel, to factory authorized dealer installers, also referred to as original equipment services, direct to OEMs and through mass merchandisers. In addition, monitoring services and tracking devices are sold directly to corporate and individual customers.

Segment	Product Category	2018	2017	2016
Control Devices	Sensors, switches, valves and actuators	51%	54%	59%
Electronics	Electronic instrument clusters, electronic control units driver information systems and camera-based vision systems	40	34	29
PST	Security alarms, vehicle tracking devices and monitoring services and convenience accessories	9	12	12

Our products and systems are sold to numerous OEM and Tier 1 customers, as well as aftermarket distributors and mass merchandisers, for use on many different vehicle platforms. We supply multiple parts to many of our principal OEM and Tier 1 customers under requirements contracts for a particular vehicle model. These contracts range in duration from one year to the production life of the model, which commonly extends for three to seven years.

The following table sets forth for the periods indicated, the percentage of net sales derived from our principal end markets for the years ended December 31:

<b>Principal End Markets</b>	<b>2018</b>	<b>2017</b>	<b>2016</b>
Automotive	<b>41%</b>	<b>46%</b>	<b>50%</b>
Commercial vehicle	<b>33</b>	<b>29</b>	<b>33</b>
Aftermarket distributors, mass merchandisers and monitoring services	<b>9</b>	<b>12</b>	<b>12</b>
Off-highway and other	<b>17</b>	<b>13</b>	<b>5</b>

For further information related to our reportable segments and financial information about geographic areas, see Note 14 to the consolidated financial statements.

### ***Production Materials***

The principal production materials used in the Company's manufacturing process are molded plastic components and resins, copper, steel, precious metals and certain electrical components such as printed circuit boards, semiconductors, microprocessors, memory devices, resistors, capacitors, fuses, relays, infotainment devices and cameras. We purchase production materials pursuant to both annual contract and spot purchasing methods. Such materials are available from multiple sources, but we generally establish collaborative relationships with a qualified supplier for each of our key production materials in order to lower costs and enhance service and quality. As global demand for our production materials increases, we may have difficulties obtaining adequate production materials from our suppliers to satisfy our customers. Any extended period of time for which we cannot obtain adequate production material or which we experience an increase in the price of production material would materially affect our results of operations and financial condition.

### ***Patents, Trademarks and Intellectual Property***

We maintain and have pending various U.S. and foreign patents, trademarks and other rights to intellectual property relating to the reportable segments of our business, which we believe are appropriate to protect the Company's interests in existing products, new inventions, manufacturing processes and product developments. We do not believe any single patent is material to our business, nor would the expiration or invalidity of any patent have a material adverse effect on our business or ability to compete.

### ***Industry Cyclicalities and Seasonality***

The markets for products in each of our reportable segments have been cyclical. Because these products are used principally in the production of vehicles for the automotive, commercial, off-highway, motorcycle and agricultural vehicle markets, revenues and therefore results of operations, are significantly dependent on the general state of the economy and other factors, like the impact of environmental regulations on our customers and end market consumers, which affect these markets. A significant decline in automotive, commercial, off-highway, motorcycle and agricultural vehicle production of our principal customers could adversely impact the Company. Our Electronics and Control Devices segments are typically not affected by seasonality, however the demand for our PST segment consumer products is typically higher in the second half of the year, the fourth quarter in particular.

### ***Customers***

We have several customers which account for a significant percentage of our sales. The loss of any significant portion of our sales to these customers, or the loss of a significant customer, would have a material adverse impact on our financial condition and results of operations. We supply numerous different products to each of our principal customers. Contracts with several of our customers provide for supplying their requirements for a particular model, rather than for manufacturing a specific quantity of products. Such contracts range from one year to the life of the model, which is generally three to

seven years. These contracts are subject to potential renegotiation from time to time, which may affect product pricing and generally may be terminated by our customers at any time. Therefore, the loss of a contract for a major model or a significant decrease in demand for certain key models or group of related models sold by any of our major customers would have a material adverse impact on the Company. We may enter into contracts to supply products, the introduction of which may then be delayed or cancelled. We also compete to supply products for successor models, and are therefore subject to the risk that the customer will not select the Company to produce products on any such model, which could have a material adverse impact on our financial condition and results of operations.

Due to the competitive nature of the markets we serve, we face pricing pressures from our customers in the ordinary course of business. In response to these pricing pressures we have been able to effectively manage our production costs by the combination of lowering certain costs and limiting the increase of others, the net impact of which has not been material. However, if we are unable to effectively manage production costs in the future to mitigate future pricing pressures, our results of operations would be adversely affected.

The following table presents our principal customers, as a percentage of net sales:

<b>Year ended December 31,</b>	<b>2018</b>	<b>2017</b>	<b>2016</b>
Ford Motor Company	<b>12%</b>	<b>14%</b>	<b>17%</b>
Volvo	<b>8</b>	<b>6</b>	<b>6</b>
Daimler	<b>6</b>	<b>6</b>	<b>6</b>
General Motors Company	<b>5</b>	<b>7</b>	<b>7</b>
MAN	<b>5</b>	<b>3</b>	<b>3</b>
Scania	<b>5</b>	<b>5</b>	<b>6</b>
Other	<b>59</b>	<b>59</b>	<b>55</b>

### ***Backlog***

The Company defines backlog as the cumulative remaining sales for awarded programs for the next five years. The Company's backlog was \$3.4 billion as of December 31, 2018, compared to \$3.3 billion as of December 31, 2017. The Company's estimated net sales may be impacted by various assumptions, including new program vehicle production levels, customer price reductions, currency exchange rates and program launch timing. In addition, the Company typically enters into customer agreements at the beginning of a vehicle life cycle with the intent to fulfill purchasing requirements for the entire vehicle production life cycle. These agreements may be terminated by customers at any time and, accordingly, expected net sales information does not represent firm orders or firm commitments.

### ***Competition***

The markets for our products in our reportable segments are highly competitive. We compete based on technological innovation, price, quality, performance, service and delivery. We compete for new business both at the beginning of the development of new models and upon the redesign of existing models for OEM customers. New model development generally begins two to five years before the marketing of such models to the public. Once a supplier has been selected to provide parts for a new program, an OEM customer will usually continue to purchase those parts from the selected supplier for the life of the program, although not necessarily for any model redesigns. We compete for aftermarket and mass merchandiser sales based on price, product functionality, quality and service.



Our diversity in products creates a wide range of competitors, which vary depending on both market and geographic location. We compete based on strong customer relations and a fast and flexible organization that develops technically effective solutions at or below target price. We compete against the following companies:

*Control Devices.* Our primary competitors include BorgWarner, Bosch, Continental AG, CTS Corporation, Delphi Technologies, Denso Corporation, ETO Magnetic Corp., GHSP, Kongsberg Automotive, Methode Electronics, NTK Technologies, Inc., Sensata, and ZF Friedrichshafen AG.

*Electronics.* Our primary competitors include Actia Group, Aptiv, Bosch, Continental AG, Dongfeng Electronic Technology Co., Ltd., Hella KGaA Hueck & Co., Magneti Marelli S.p.A., Mekra Lang GmbH and Visteon.

*PST.* Our primary competitors include Autotrak, CalAmp Corporation, Hinor, Ituran, Kostal, Lennox, MultiLaser, Onix, Pioneer Corporation, Sascar, Taramps and Tury.

### ***Product Development***

Our research and development efforts for our reportable segments are largely product design and development oriented and consist primarily of applying known technologies to customer requests. We work closely with our customers to solve customer requests using innovative approaches. The majority of our development expenses are related to customer-sponsored programs where we are involved in designing custom-engineered solutions for specific applications or for next generation technology. To further our vehicle platform penetration, we have also developed collaborative relationships with the design and engineering departments of key customers. These collaborative efforts have resulted in the development of new and complimentary products and the enhancement of existing products.

While our engineering and product development departments are organized by market, our segments interact and collaborate on new products. The product development operations are complimented by technology groups in Barneveld, Netherlands; Campinas, Brazil; Canton, Massachusetts; Juarez, Mexico; Lexington, Ohio; Pune, India and Stockholm, Sweden.

We use efficient and quality oriented work processes to address our customers' high standards. Our product development technical resources include a full complement of computer-aided design and engineering software systems, including (i) virtual three-dimensional modeling, (ii) functional simulation and analysis capabilities and (iii) data links for rapid prototyping. These systems enable us to expedite product design and the manufacturing process to shorten the development time and ultimately time to market.

We have further strengthened our electrical engineering competencies through investment in equipment such as (i) automotive electro-magnetic compliance test chambers, (ii) programmable automotive and commercial vehicle transient generators, (iii) circuit simulators and (iv) other environmental test equipment. Additional investment in 3-D printing product machining equipment has allowed us to fabricate new product samples in a fraction of the time required historically. Our product development and validation efforts are supported by full service, on-site test labs at most manufacturing facilities, thus enabling cross-functional engineering teams to optimize the product, process and system performance before tooling initiation.

We have invested, and will continue to invest heavily in technology to develop new products for our customers. Product development costs incurred in connection with the development of new products and manufacturing methods, to the extent not recoverable from the customer, are expensed as incurred. Such costs amounted to approximately \$51.1 million, \$48.9 million and \$40.2 million for 2018, 2017 and 2016, respectively, or 5.9%, 5.9% and 5.8% of net sales for these periods.

We will continue to prioritize investment spending toward the design and development of new products over sustaining existing product programs for specific customers, which allows us to sell our products to multiple customers. The typical product development process takes three to five years to show tangible results. As part of our effort to evaluate our investment spending, we review our current product portfolio and adjust our spending to either accelerate or eliminate our investment in these products based on our position in the market and the potential of the market and product.

### ***Environmental and Other Regulations***

Our operations are subject to various federal, state, local and foreign laws and regulations governing, among other things, emissions to air, discharge to water and the generation, handling, storage, transportation, treatment and disposal of waste and other materials. We believe that our business, operations and facilities have been and are being operated in compliance, in all material respects, with applicable environmental and health and safety laws and regulations, many of which provide for substantial fines and criminal sanctions for violations.

### ***Employees***

As of December 31, 2018, we had approximately 4,600 employees, approximately 76% of whom were located outside of the United States. Although we have no collective bargaining agreements covering U.S. employees, a significant number of employees located in Brazil, China, Estonia, Mexico, Netherlands, Sweden and the United Kingdom either (i) are represented by a union and are covered by a collective bargaining agreement, or (ii) are covered by a work council or other employment arrangements required by law. We believe that relations with our employees are good.

### ***Joint Ventures***

We form joint ventures in various global markets in order to achieve several strategic objectives including (i) diversifying our business by expanding in high-growth regions, (ii) employing complementary design processes, growth technologies and intellectual capital, and (iii) realizing cost savings from combined sourcing.

We have a 49% noncontrolling equity interest in Minda Stoneridge Instruments Ltd. ("MSIL"). Based in India, MSIL manufactures electromechanical/electronic instrumentation equipment and sensors primarily for the automotive, motorcycle and commercial vehicle markets. We leverage our investment in MSIL by sharing our knowledge and expertise in electrical components and systems and expanding MSIL's product offering through the joint development of our products designed for the market in India.

## ***Executive Officers of the Company***

Each executive officer of the Company serves the Board of Directors at its pleasure. The Board of Directors appoints corporate officers annually. The following table sets forth the names, ages, and positions of the executive officers of the Company:

<b>Name</b>	<b>Age</b>	<b>Position</b>
Jonathan B. DeGaynor	52	President, Chief Executive Officer and Director
Robert R. Krakowiak	48	Executive Vice President, Chief Financial Officer and Treasurer
Thomas A. Beaver	65	Vice President of the Company and President of Global Sales
Laurent Borne	43	President of the Electronics Division and Chief Technology Officer
Thomas M. Dono, Jr.	46	Chief Legal Officer
Caetano R. Ferraiolo	51	President of the PST Electronics Division
Robert J. Hartman Jr.	52	Chief Accounting Officer
Daniel M. Kusiak	49	Chief Procurement Officer
Anthony L. Moore	55	Vice President of Operations
Alisa A. Nagle	51	Chief Human Resources Officer
Robert Willig	56	President of the Control Devices Division

***Jonathan B. DeGaynor, President, Chief Executive Officer and Director.*** Mr. DeGaynor was appointed as President and Chief Executive Officer in March 2015. He has served as a director since May 2015. Prior to joining Stoneridge, Mr. DeGaynor served as the Vice President of Strategic Planning and Innovation of Guardian Industries Corp. ("Guardian"), from October 2014 until March 2015. Mr. DeGaynor served as Vice President of Business Development, Managing Director Asia for SRG Global, Inc., a Guardian company, from 2008 through September 2014. Mr. DeGaynor served as Chief Operating Officer, International for Autocam Corporation from 2005 to 2008. Prior to that, Mr. DeGaynor held positions of increasing responsibility with Delphi Corporation from 1993 to 2005.

***Robert R. Krakowiak, Executive Vice President, Chief Financial Officer and Treasurer.*** Mr. Krakowiak was appointed as Executive Vice President in October 2018 and Chief Financial Officer and Treasurer in August 2016. Prior to joining Stoneridge, Mr. Krakowiak served as Vice President, Treasurer and Investor Relations at Visteon Corporation from 2012 until August 2016. Prior to that, Mr. Krakowiak held the following positions at Owens Corning: from 2009 until 2012, Vice President of Finance (Composite Solutions Business); from 2008 until 2009, Vice President — Corporate Financial Planning and Analysis; from 2006 until 2008, Vice President and Controller (Roofing and Asphalt); and from 2005 until 2006, Assistant Treasurer.

***Thomas A. Beaver, Vice President of the Company and President of Global Sales.*** Mr. Beaver has served as Vice President of the Company and President of Global Sales since May 2012. Prior to that, Mr. Beaver served as Vice President of the Company and Vice President of Global Sales and Systems Engineering from January 2005 to May 2012. From January 2000 to January 2005, Mr. Beaver served as Vice President of Stoneridge Sales and Marketing.

***Laurent Borne, President of the Electronics Division and Chief Technology Officer.*** Mr. Borne was appointed as President of the Electronics Division in January 2019. Mr. Borne joined the Company in August 2018 and has been serving as the Company's Chief Technology Officer and will continue to serve in this role. Prior to joining Stoneridge, Mr. Borne served as Vice President of Product Development at Whirlpool Corporation from 2014 until August 2018.

***Thomas M. Dono, Jr., Chief Legal Officer.*** Mr. Dono was appointed as Chief Legal Officer in January 2018. Prior to joining Stoneridge, Mr. Dono served as Executive Vice President, General Counsel and Corporate Secretary at Metaldyne Performance Group, Inc. from July 2016 to April 2017. Prior to that, Mr. Dono served as Senior Vice President, Legal Affairs, General Counsel and Corporate Secretary at Key Safety Systems, Inc. from May 2009 to July 2016.

**Caetano R. Ferraiolo, President of the PST Electronics Division.** Mr. Ferraiolo was appointed to President of the PST Electronics Division in June 2017. Mr. Ferraiolo joined the Company in 2015 and previously served as the Chief Operating Officer of PST. From 2010 to 2015 he served as Vice President of Operations for Cannondale Sports Group in Brazil. Prior to that, Mr. Ferraiolo served as Director of European Commercial and Development, Autocam Corporation from 2005 to 2010.

**Robert J. Hartman Jr., Chief Accounting Officer.** Mr. Hartman was appointed as Chief Accounting Officer and to the role of principal accounting officer in July 2016. Prior to that, Mr. Hartman served as Corporate Controller of the Company since 2006 and prior to that as Stoneridge's Director of Internal Audit from 2003.

**Daniel M. Kusiak, Chief Procurement Officer.** Mr. Kusiak was appointed as Chief Procurement Officer in October 2018. Prior to that, Mr. Kusiak served as Vice President of Global Procurement since he joined Stoneridge in 2015. Prior to that, he served as head of Strategic Business Initiatives at Sypris Technologies, Inc. from 2013. Prior to that, Kusiak was employed at Meritor, Inc. where he held positions of increasing responsibility in the purchasing function over a 10-year tenure.

**Anthony L. Moore, Vice President of Operations.** Mr. Moore was appointed as Vice President of Operations in May 2016. Prior to joining the Company, he served as Global Vice President of Integrated Supply Chain and Operations at Ingersoll Rand, Compressed Air Systems from October 2015. Prior to that, Mr. Moore served as Chief Product Development and Supply Chain Officer at Remington Outdoor Company from May 2012 to September 2015. Before that, Mr. Moore was employed at Cooper Industries, Inc. where he held several leadership positions in the areas of supply chain, operations, and engineering from 2008.

**Alisa A. Nagle, Chief Human Resources Officer.** Ms. Nagle has served as Chief Human Resources Officer since joining the Company in November 2015. From 2007 until her employment with the Company, Ms. Nagle served as Vice President of Human Resources — Global Aftermarket and Original Equipment Groups and Global Central Functions at Johnson Controls, Inc.

**Robert Willig, President of the Control Devices Division.** Mr. Willig was appointed to President of the Control Devices Division in October 2017. Until his employment with the Company, Mr. Willig served as President and Chief Executive Officer of Plasan Carbon Composites from April 2017 to October 2017; President of Driveline Americas, GKN PLC from April 2013 to July 2016; and President of Sinter Americas, GKN PLC from September 2010 to April 2013. Prior to that, he served as President of the Power Transmission Division of Tomkins PLC from 2008.

### **Available Information**

We make available, free of charge through our website ([www.stoneridge.com](http://www.stoneridge.com)), our Annual Report on Form 10-K ("Annual Report"), Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, all amendments to those reports, and other filings with the U.S. Securities and Exchange Commission ("SEC"), as soon as reasonably practicable after they are filed with the SEC. Our Corporate Governance Guidelines, Code of Business Conduct and Ethics, Code of Ethics for Senior Financial Officers, Whistleblower Policy and Procedures and the charters of the Board of Director's Audit, Compensation and Nominating and Corporate Governance Committees are posted on our website as well. Copies of these documents will be available to any shareholder upon request. Requests should be directed in writing to Investor Relations at Stoneridge, Inc., 39675 MacKenzie Drive, Suite 400, Novi, Michigan 48377. The SEC maintains a website ([www.sec.gov](http://www.sec.gov)) that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC, including the Company.

## Item 1A. Risk Factors.

***Our business is cyclical and a downturn in the automotive, commercial, off-highway, motorcycle and agricultural vehicle markets as well as overall economic conditions could reduce the sales and profitability of our business.***

The demand for products is largely dependent on the domestic and foreign production of automotive, commercial, off-highway, motorcycle and agricultural vehicles. The markets for our products have been cyclical, because new vehicle demand is dependent on, among other things, consumer spending and is tied closely to the overall strength of the economy. Because the majority of our products are used principally in the production of vehicles for the automotive, commercial, off-highway, motorcycle and agricultural vehicle markets, our net sales, and therefore our results of operations, are significantly dependent on the general state of the economy and other factors which affect these markets. A decline in automotive, commercial, off-highway, motorcycle or agricultural vehicle production, or a material decline in market share by our significant customers, could adversely affect our results of operations and financial condition.

In 2018, approximately 91% of our net sales were derived from automotive, commercial, off-highway, motorcycle and agricultural vehicle markets while approximately 9% were derived from aftermarket distributors, mass merchandisers and monitoring services markets.

***We have foreign currency translation and transaction risks that may materially adversely affect our operating results, financial condition and liquidity.***

The financial position and results of operations of our international subsidiaries are initially recorded in various foreign currencies and then translated into U.S. dollars at the applicable exchange rate for inclusion in our consolidated financial statements. The strengthening of the U.S. dollar against these foreign currencies ordinarily has a negative effect on our reported sales and operating margin (and conversely, the weakening of the U.S. dollar against these foreign currencies has a positive impact). The volatility of currency exchange rates may materially adversely affect our operating results.

***We are subject to risks related to our international operations.***

Approximately 45% of our net sales in 2018 were derived from sales outside of North America. At December 31, 2018, significant concentrations of net assets outside of North America included \$33.5 million in South America and \$203.2 million in Europe and Other. Non-current assets outside of North America accounted for approximately 64% of our non-current assets as of December 31, 2018. International sales and operations are subject to significant risks, including, among others:

- political and economic instability;
- restrictive trade policies;
- economic conditions in local markets;
- currency exchange controls;
- labor unrest;
- difficulty in obtaining distribution support and potentially adverse tax consequences; and
- the imposition of product tariffs and the burden of complying with a wide variety of international and U.S. export laws.

***Significant changes in U.S. administrative policy, including changes to existing trade agreements and resulting changes in international relations, could adversely affect our financial performance.***

As a result of changes to U.S. administrative policy, among other possible changes, there may be changes to existing trade agreements and greater restrictions on free trade generally, particularly for products

manufactured in China, Mexico, and Canada. In November 2018, the United States, Mexico and Canada signed the United States-Mexico-Canada Agreement ("USMCA"), the successor agreement to the North American Free Trade Agreement ("NAFTA"). The USMCA has been ratified by the Mexico Congress. The U.S. Congress is not expected to vote on the agreement until the third quarter of 2019, and approval by the Canadian Parliament is expected to follow U.S. approval. It remains unclear what the U.S. administration or foreign governments will or will not do with respect to NAFTA, USMCA or other international trade agreements and policies. Reflective of the automotive industry, our vehicle parts manufacturing facilities in the United States, Mexico and Canada are highly dependent on duty-free trade within the USMCA region. Our facility in Mexico represents a critical component of our supply chain and that of our customers. We have significant imports into the United States, and the imposition of customs duties on these imports could negatively impact our financial performance. If such customs duties are implemented, Mexico and Canada may take retaliatory actions with respect to U.S. imports or U.S. investments in their countries. Any such potential actions could adversely affect our business, financial condition or results of operations.

***We may not realize sales represented by awarded business.***

We base our growth projections, in part, on business awards made by our customers. These business awards generally renew annually during a program life cycle. Failure of actual production orders from our customers to approximate these business awards could have a material adverse effect on our business, financial condition or results of operations.

***The prices that we can charge some of our customers are predetermined and we bear the risk of costs in excess of our estimates, in addition to the risk of adverse effects resulting from general customer demands for cost reductions and quality improvements.***

Our supply agreements with some of our customers require us to provide our products at predetermined prices. In some cases, these prices decline over the course of the contract and may require us to meet certain productivity and cost reduction targets. In addition, our customers may require us to share productivity savings in excess of our cost reduction targets. The costs that we incur in fulfilling these contracts may vary substantially from our initial estimates. Unanticipated cost increases or the inability to meet certain cost reduction targets may occur as a result of several factors, including increases in the costs of labor, components or materials. In some cases, we are permitted to pass on to our customers the cost increases associated with specific materials. However, cost overruns that we cannot pass on to our customers could adversely affect our business, financial condition or results of operations.

OEM customers have exerted and continue to exert considerable pressure on component suppliers to reduce costs, improve quality and provide additional design and engineering capabilities and continue to demand and receive price reductions and measurable increases in quality through their use of competitive selection processes, rating programs and various other arrangements. We may be unable to generate sufficient production cost savings in the future to offset required price reductions. Additionally, OEMs have generally required component suppliers to provide more design engineering input at earlier stages of the product development process, the costs of which have, in some cases, been absorbed by the suppliers. Future price reductions, increased quality standards and additional engineering capabilities required by OEMs may reduce our profitability and have a material adverse effect on our business, financial condition or results of operations.

***We have limited or no redundancy for certain of our manufacturing facilities, and therefore damage or disruption to those facilities could interrupt our operations, increase our costs of doing business and impair our ability to deliver our products on a timely basis.***

If certain of our existing production facilities become incapable of manufacturing products for any reason, we may be unable to meet production requirements, we may lose revenue and we may not be able to maintain our relationships with our customers. Without operation of certain existing production facilities, we may be limited in our ability to deliver products until we restore the manufacturing



capability at the particular facility, find an alternative manufacturing facility or arrange an alternative source of supply. We carry business interruption insurance to cover lost revenue and profits in an amount we consider adequate, this insurance does not cover all possible situations and may be insufficient. Also, our business interruption insurance would not compensate us for the loss of opportunity and potential adverse impact on relations with our existing customers resulting from our inability to produce products for them.

***Our business is very competitive and increased competition could reduce our sales and profitability.***

The markets for our products are highly competitive. We compete based on technological innovation, price, quality, performance, service and delivery. Many of our competitors are more diversified and have greater financial and other resources than we do. In addition, with respect to certain products, some of our competitors are divisions of our OEM customers. We cannot assure that our business will not be adversely affected by competition or that we will be able to maintain our profitability if the competitive environment changes.

***The loss or insolvency of any of our principal customers would adversely affect our future results.***

We are dependent on several principal customers for a significant percentage of our net sales. In 2018, our top five customers were Ford Motor Company, Volvo, General Motors Company, Daimler and MAN which comprised 12%, 8%, 6%, 5% and 5% of our net sales, respectively. In 2018, our top ten customers accounted for 54% of our net sales. The loss of any significant portion of our sales to these customers would have a material adverse effect on our results of operations and financial condition. In addition, we have significant receivable balances related to these customers and other major customers that would be at risk in the event of their bankruptcy.

***The discontinuation of, loss of business or lack of commercial success, with respect to a particular vehicle model for which the Company is a significant supplier could reduce the Company's sales and harm its profitability.***

Although the Company has purchase orders from many of its customers, these purchase orders generally provide for the supply of a customer's annual requirements for a particular vehicle model and assembly plant, or in some cases, for the supply of a customer's requirements for the life of a particular vehicle model, rather than for the purchase of a specific quantity of products. In addition, it is possible that our customers could elect to manufacture components internally that are currently produced by outside suppliers, such as our Company. The discontinuation of, the loss of business with respect to or a lack of commercial success of a particular vehicle model for which the Company is a significant supplier, could reduce the Company's sales and have a material adverse effect on our business, financial condition or results of operations.

***Our inability to effectively manage the timing, quality and costs of new program launches could adversely affect our financial performance.***

In connection with the award of new business, we obligate ourselves to deliver new products and services that are subject to our customers' timing, performance and quality standards. Additionally, as a Tier 1 supplier, we must effectively coordinate the activities of numerous suppliers in order for the program launches of our products to be successful. Given the complexity of new program launches, we may experience difficulties managing product quality, timeliness and associated costs. In addition, new program launches require a significant ramp up of costs; however, our sales related to these new programs generally are dependent upon the timing and success of our customers' introduction of new vehicles. Our inability to effectively manage the timing, quality and costs of these new program launches could adversely affect our business, financial condition or results of operations.

***We are dependent on the availability and price of raw materials and other supplies.***

We require substantial amounts of raw materials and other supplies, and substantially all such materials we require are purchased from outside sources. The availability and prices of raw materials and other supplies may be subject to curtailment or change due to, among other things, new laws or regulations, suppliers' allocations to other purchasers and interruptions in production by suppliers, weather emergencies, natural disasters, commercial disputes, acts of terrorism or war, changes in exchange rates and worldwide price levels. If demand for raw materials we require increases, we may have difficulties obtaining adequate raw materials and other supplies from our suppliers to satisfy our customers. At times, we have experienced difficulty obtaining adequate supplies of semiconductors and memory chips. In addition, there have been challenges at times in obtaining timely supply of nylon and resins for our Control Devices segment and audio component parts for our PST segment. If we cannot obtain adequate raw materials and other supplies, or if we experience an increase in the price of raw materials and other supplies, our business, financial condition or results of operations could be materially adversely affected.

We use a variety of commodities, including copper, zinc, resins and certain other commodities. Increasing commodity costs could have a negative impact on our results. We have sought at times to alleviate the effect of increasing costs by selectively hedging a portion of our exposure. The inability to effectively hedge any commodity cost increase may have a material adverse effect on our business, financial condition or results of operations.

***We must implement and sustain a competitive technological advantage in producing our products to compete effectively.***

Our products are subject to changing technology, which could place us at a competitive disadvantage relative to alternative products introduced by competitors. Our success will depend on our ability to continue to meet customers' changing specifications with respect to technological innovation, price, quality, performance, service and delivery by implementing and sustaining competitive technological advances. Our business may, therefore, require significant recurring additional capital expenditures and investment in product development and manufacturing and management information systems. We cannot assure that we will be able to achieve technological advances or introduce new products that may be necessary to remain competitive. Our inability to continuously improve existing products, to develop new products and to achieve technological advances could have a material adverse effect on our business, financial condition or results of operations.

***We rely on independent dealers and distributors to sell certain products in the aftermarket sales channel and a disruption to this channel would harm our business.***

Because we sell certain products such as security accessories and driver information products to independent dealers and distributors, we are subject to many risks, including risks related to their inventory levels and support for our products. If dealers and distributors do not maintain sufficient inventory levels to meet customer demand, our sales could be negatively impacted.

Our dealer network also sells products offered by our competitors. If our competitors offer our dealers more favorable terms, those dealers may de-emphasize or decline to carry our products. In the future, we may not be able to retain or attract a sufficient number of qualified dealers and distributors. Our inability to maintain successful relationships with dealers and distributors, or to expand our distribution channels, could have a material adverse effect on our business, financial condition or results of operations.

***Our Global Positioning Systems ("GPS") products depend upon satellites maintained by the United States Department of Defense. If a significant number of these satellites become inoperable, unavailable or are not replaced, or if the policies of the United States government for the use of the GPS without charge are changed, our business will suffer.***

The GPS is a satellite-based navigation and positioning system consisting of a constellation of orbiting satellites. The satellites and their ground control and monitoring stations are maintained and operated by



the United States Department of Defense. The Department of Defense does not currently charge users for access to the satellite signals. These satellites and their ground support systems are complex electronic systems subject to electronic and mechanical failures and possible sabotage.

If a significant number of satellites were to become inoperable, unavailable or are not replaced, it would impair the current utility of our GPS products and the growth of market opportunities. In addition, there can be no assurance that the U.S. government will remain committed to the operation and maintenance of GPS satellites over a long period, or that the policies of the U.S. government that provide for the use of the GPS without charge and without accuracy degradation will remain unchanged. Because of the increasing commercial applications of the GPS, other U.S. government agencies may become involved in the administration or the regulation of the use of GPS signals. Any of the foregoing factors could affect the willingness of buyers of our products to select GPS-based products instead of products based on competing technologies, which could adversely affect our operational revenues, financial condition and results of operations.

***We may incur material product liability costs.***

We may be subject to product liability claims in the event that the failure of any of our products results in personal injury or death and we cannot assure that we will not experience material product liability losses in the future. We cannot assure that our product liability insurance will be adequate for liabilities ultimately incurred or that it will continue to be available on terms acceptable to us. In addition, if any of our products prove to be defective, we may be required to participate in government-imposed or customer OEM-instituted recalls involving such products. A successful claim brought against us that exceeds available insurance coverage or a requirement to participate in any product recall could have a material adverse effect on our business, financial condition or results of operations.

***Increased or unexpected product warranty claims could adversely affect us.***

We typically provide our customers a warranty covering workmanship, and in some cases materials, on products we manufacture. Our warranty generally provides that products will be free from defects and adhere to customer specifications. If a product fails to comply with the warranty, we may be obligated or compelled, at our expense, to correct any defect by repairing or replacing the defective product. Our customers are increasingly seeking to hold suppliers responsible for product warranties, which could negatively impact our exposure to these costs. We maintain warranty reserves in an amount based on historical trends of units sold and costs incurred, combined with our current understanding of the status of existing claims. To estimate the warranty reserves, we must forecast the resolution of existing claims, as well as expected future claims on products previously sold. The costs of claims estimated to be due and payable could differ materially from what we may ultimately be required to pay. An increase in the rate of warranty claims or the occurrence of unexpected warranty claims could have a material adverse effect on our customer relations, our business, our financial condition or results of operations.

***If we fail to protect our intellectual property rights or maintain our rights to use licensed intellectual property or are found liable for infringing the rights of others, our business could be adversely affected.***

Our intellectual property, including our patents, trademarks, copyrights, trade secrets and license agreements, are important in the operation of our businesses, and we rely on the patent, trademark, copyright and trade secret laws of the United States and other countries, as well as nondisclosure agreements, to protect our intellectual property rights. We may not, however, be able to prevent third parties from infringing, misappropriating or otherwise violating our intellectual property, breaching any nondisclosure agreements with us, or independently developing technology that is similar or superior to ours and not covered by our intellectual property. Any of the foregoing could reduce any competitive advantage we have developed, cause us to lose sales or otherwise harm our business. We cannot assure that any intellectual property will provide us with any competitive advantage or will not be challenged, rejected, cancelled, invalidated or declared unenforceable. In the case of pending patent applications, we

may not be successful in securing issued patents, or securing patents that provide us with a competitive advantage for our businesses. In addition, our competitors may design products around our patents that avoid infringement and violation of our intellectual property rights.

We cannot be certain that we have rights to all intellectual property currently used in the conduct of our businesses or that we have complied with the terms of agreements by which we acquire such rights, which could expose us to infringement, misappropriation or other claims alleging violations of third party intellectual property rights. Third parties have asserted and may assert or prosecute infringement claims against us in connection with the services and products that we offer, and we may or may not be able to successfully defend these claims. Litigation, either to enforce our intellectual property rights or to defend against claims regarding intellectual property rights of others, could result in substantial costs and a diversion of our resources. Any such claims and resulting litigation could require us to enter into licensing agreements (if available on acceptable terms or at all), pay damages and cease making or selling certain products and could result in a loss of our intellectual property protection. Moreover, we may need to redesign some of our products to avoid future infringement liability. We also may be required to indemnify customers or other third parties at significant expense in connection with such claims and actions. Recently, the Company has seen an increase in customer requests for indemnification in connection with third party patent claims related to connectivity-enabled products. These claims are being made by patent-holders seeking royalties and who may enter into litigation based on patent infringement allegations. Any of the foregoing could have a material adverse effect on our business, financial condition or results of operations.

***We may not be able to successfully integrate acquisitions into our business or may otherwise be unable to benefit from pursuing acquisitions.***

Failure to successfully identify, complete and/or integrate acquisitions could have a material adverse effect on us. A portion of our growth in sales and earnings has been generated from acquisitions and subsequent improvements in the performance of the businesses acquired. We expect to continue a strategy of selectively identifying and acquiring businesses with complementary products. We cannot assure you that any business acquired by us will be successfully integrated with our operations or prove to be profitable. We could incur substantial indebtedness in connection with our acquisition strategy, which could significantly increase our interest expense.

We anticipate that acquisitions could occur in foreign markets in which we do not currently operate. As a result, the process of integrating acquired operations into our existing operations may result in unforeseen operating difficulties and may require significant financial resources that would otherwise be available for the ongoing development or expansion of existing operations. Any failure to successfully integrate such acquisitions could have a material adverse effect on our business, financial condition or results of operations.

***Our debt obligations could limit our flexibility in managing our business and expose us to risks.***

As of December 31, 2018, there was \$96.0 million in borrowings outstanding on our revolving credit facility (the "Credit Facility"). In addition, we are permitted under our Credit Facility to incur additional debt, subject to specified limitations. Our leverage and the terms of our indebtedness may have important consequences including the following:

- we may have difficulty satisfying our obligations with respect to our indebtedness, and if we fail to comply with these requirements, an event of default could result;
- we may be required to dedicate a substantial portion of our cash flow from operations to required payments on indebtedness, thereby reducing the availability of cash flow for working capital, capital expenditures and other general corporate activities;

- covenants relating to our debt may limit our ability to obtain additional financing for working capital, capital expenditures and other general corporate activities;
- covenants relating to our debt may limit our flexibility in planning for, or reacting to, changes in our business and the industry in which we operate; and
- we may be placed at a competitive disadvantage against any less leveraged competitors.

These and other consequences of our leverage and the terms of our indebtedness could have a material adverse effect on our business, financial condition or results of operations.

***Covenants in our Credit Facility may limit our ability to pursue our business strategies.***

Our Credit Facility limits our ability to, among other things:

- incur additional debt and guarantees;
- pay dividends and repurchase our shares;
- make other restricted payments, including investments;
- create liens;
- sell or otherwise dispose of assets, including capital shares of subsidiaries;
- enter into agreements that restrict dividends from subsidiaries;
- consolidate, merge or sell or otherwise dispose of all or substantially all of our assets; and
- substantially change the nature of our business.

The agreement governing our Credit Facility requires us to maintain a maximum leverage ratio of 3.00 to 1.00, and a minimum interest coverage ratio of 3.50 to 1.00 and places a maximum annual limit on capital expenditures. Our ability to comply with these covenants as well as the negative covenants under the terms of our indebtedness, may be affected by events beyond our control.

A breach of any of the negative covenants under our indebtedness or our inability to comply with the leverage and interest ratio requirements in the Credit Facility could result in an event of default. If an event of default occurs, the lenders under the Credit Facility could elect to declare all outstanding borrowings, together with accrued interest and other fees, to be immediately due and payable and terminate any commitments they have to provide further borrowings, and the Credit Facility lenders could pursue foreclosure and other remedies against us and our assets.

***A failure of our information technology (IT) networks and systems, or the inability to successfully implement upgrades to our enterprise resource planning (ERP) systems, could adversely impact our business and operations.***

We rely upon information technology networks and systems to process, transmit and store electronic information, and to manage or support a variety of business processes and/or activities. The secure operation of these IT networks and systems and the proper processing and maintenance of this information are critical to our business operations. Despite the implementation of security measures, our IT networks and systems are at risk to damages from computer viruses, unauthorized access, cyber-attack and other similar disruptions. The occurrence of any of these events could compromise our IT networks and systems, and the information stored there could be accessed, publicly disclosed or lost. Any such access, disclosure, loss of information or disruption of our operations could cause significant damage to our reputation, affect our relationships with our customers, suppliers and employees, lead to claims against the Company and ultimately harm our business. We may be required to incur significant costs to protect against damage caused by these disruptions or security breaches in the future.

Also, we continually expand and update our IT networks and systems in response to the changing needs of our business and periodically upgrade our ERP systems. Should our networks or systems not be implemented successfully, or if the systems do not perform in a satisfactory manner once implementation is complete, our business and operations could be disrupted and our results of operations could be adversely affected, including our ability to report accurate and timely financial results.

***We may be subject to risks relating to our information technology systems and cybersecurity.***

We rely on information technology systems to process, transmit and store electronic information and manage and operate our business. A breach in security could expose us and our customers and suppliers to risks of misuse of confidential information, manipulation and destruction of data, production downtimes and operations disruptions, which in turn could adversely affect our reputation, competitive position, business or results of operations. While we have taken reasonable steps to protect the Company from cybersecurity risks and security breaches (including enhancing our firewall, workstation, email security and network monitoring and alerting capabilities, and training employees around phishing, malware and other cybersecurity risks), and we have policies and procedures to prevent or limit the impact of systems failures, interruptions, and security breaches, there can be no assurance that such events will not occur or that they will be adequately addressed if they do. Although we rely on commonly used security and processing systems to provide the security and authentication necessary to effect the secure transmission of data, these precautions may not protect our systems from all potential compromises or breaches of security.

***Privacy and security concerns relating to the Company's current or future products and services could damage its reputation and deter current and potential users from using them.***

We may gain access to sensitive, confidential or personal data or information that is subject to privacy and security laws, regulations and customer-imposed controls. Concerns about our practices with regard to the collection, use, disclosure, or security of personal information or other privacy related matters, even if unfounded, could damage our reputation and adversely affect our financial condition or operating results. Furthermore, regulatory authorities around the world are considering a number of legislative and regulatory proposals concerning cybersecurity and data protection. In addition, the interpretation and application of consumer and data protection laws in the U.S., Europe and elsewhere are often uncertain and in flux. Complying with these various laws could cause the Company to incur substantial costs.

***Compliance with environmental and other governmental regulations could be costly and require us to make significant expenditures.***

Our operations are subject to various federal, state, local and foreign laws and regulations governing, among other things:

- the discharge of pollutants into the air and water;
- the generation, handling, storage, transportation, treatment, and disposal of waste and other materials;
- the cleanup of contaminated properties; and
- the health and safety of our employees.

Our business, operations and facilities are subject to environmental and health and safety laws and regulations, many of which provide for substantial fines for violations. The operation of our manufacturing facilities entails risks and we cannot assure you that we will not incur material costs or liabilities in connection with these operations. In addition, potentially significant expenditures could be required in order to comply with evolving environmental, health and safety laws, regulations or requirements that may be adopted or imposed in the future. Changes in environmental, health and safety

laws, regulations and requirements or other governmental regulations could increase our cost of doing business or adversely affect the demand for our products.

***Our annual effective tax rate could be volatile and materially change as a result of changes in the mix of earnings and other factors including changes in the recognition and/or release of valuation allowances against deferred tax assets.***

Our overall effective tax rate is computed by dividing our total tax expense (benefit) by our total earnings (loss) before tax. However, tax expense and benefits are not recognized on a global basis, but rather on a jurisdictional or legal entity basis. Losses in certain jurisdictions may not provide a current financial statement tax benefit as a result of the need to maintain a valuation allowance against the associated deferred tax asset. Also, management periodically evaluates the realizability of our deferred tax assets which may result in the recognition and/or release of valuation allowances. As a result, changes in the mix of earnings between jurisdictions and changes in the recognition and/or release of valuation allowances, among other factors, could have a significant effect on our overall effective tax rate.

***The comprehensive U.S. tax reform bill that was enacted in 2017 could adversely affect our financial performance.***

In December 2017, the Tax Cuts and Jobs Act (the “Act”) was signed into law and significantly revised the Internal Revenue Code of 1986, as amended (the “IRC”). This legislation, among other things, contains significant changes to corporate taxation, including the reduction of the corporate income tax rate from 35% to 21% beginning in 2018, a one-time transition tax on offshore earnings at reduced tax rates regardless of whether the earnings are repatriated, the elimination of U.S. tax on foreign dividends (subject to certain important exceptions), new taxes on certain foreign earnings, a new minimum tax related to payments to foreign subsidiaries and affiliates, a deduction for foreign-derived intangible income (“FDII”), a significantly modified foreign tax credit regime, immediate deductions for certain new investments and the modification or repeal of many business deductions and credits. Notwithstanding the reduction in the corporate income tax rate, we are continuing to examine the long-term impact of the new federal tax law. During 2018, the Department of the Treasury issued certain guidance in the form of notices and proposed regulations with respect to several provisions of the Act. It is anticipated that final regulations or other guidance may be issued with respect to the Act in 2019 and subsequent years. We can provide no assurances that the final regulations will not adversely affect our financial performance. In addition, it is uncertain if, and to what extent, various states will conform to the new tax law and foreign countries will react to the new tax law by adopting tax legislation or taking other actions that could adversely affect our business financial condition or results of operations.

**Item 1B. Unresolved Staff Comments.**

None.

**Item 2. Properties.**

At December 31, 2018, the Company and its joint venture owned or leased 11 manufacturing facilities, which together contain approximately 1.2 million square feet of manufacturing space. Of these manufacturing facilities, five are used by our Control Devices reportable segment, three are used by our Electronics reportable segment, one is used by our PST reportable segment and two are used by our joint venture, MSIL. The following table provides information regarding our facilities:

<b>Location</b>	<b>Owned/ Leased</b>	<b>Use</b>	<b>Square Footage</b>
<b><i>Control Devices</i></b>			
Lexington, Ohio	Owned	Manufacturing/Engineering	219,612
Juarez, Mexico <sup>(A)</sup>	Owned	Manufacturing/Engineering	189,327
Suzhou, China <sup>(A)</sup>	Leased	Manufacturing/Engineering/Sales Office	145,033
Canton, Massachusetts	Owned	Manufacturing/Engineering	132,560
Suzhou, China <sup>(A)</sup>	Leased	Manufacturing	77,253
El Paso, Texas <sup>(A)</sup>	Leased	Warehouse	57,000
Lexington, Ohio	Leased	Warehouse	15,000
Lexington, Ohio	Leased	Warehouse	2,700
<b><i>Electronics</i></b>			
Tallinn, Estonia <sup>(B)</sup>	Leased	Manufacturing/Engineering	85,911
Orebro, Sweden	Leased	Manufacturing	77,472
Barneveld, Netherlands	Owned	Manufacturing/Engineering/Warehouse	62,700
Stockholm, Sweden	Leased	Engineering Office/Division Office	39,600
Dundee, Scotland	Leased	Engineering/Sales Office	34,605
Bayonne, France	Leased	Sales Office/Warehouse	9,655
Jasper, Georgia	Leased	Sales Office/Warehouse	6,250
Lomersheim, Germany	Leased	Sales Office/Warehouse	5,597
Shanghai, China <sup>(B)</sup>	Leased	Engineering Office/Sales Office	5,034
Ottobrunn, Germany	Leased	Sales Office	1,119
<b><i>PST</i></b>			
Manaus, Brazil	Owned	Manufacturing	102,247
Campinas, Brazil	Owned	Engineering/Division Office	45,467
Campinas, Brazil	Leased	Sales Office	9,246
Buenos Aires, Argentina	Leased	Sales Office	2,906
<b><i>Corporate and Other</i></b>			
Novi, Michigan <sup>(B)</sup>	Leased	Headquarters/Division Office	37,713
Stuttgart, Germany	Leased	Sales Office/Engineering	1,000
Cheonan, South Korea	Leased	Sales Office	427
<b><i>Joint Venture</i></b>			
Pune, India	Owned	Manufacturing/Engineering/Sales Office	80,000
Chennai, India	Leased	Manufacturing	25,629

(A) This facility is also used in the Electronics reportable segment.

(B) This facility is also used in the Control Devices reportable segment.

**Item 3. Legal Proceedings.**

From time to time we are subject to various legal actions and claims incidental to our business, including those arising out of breach of contracts, product warranties, product liability, patent infringement, regulatory matters, and employment-related matters. It is our opinion that the outcome of such matters will not have a material adverse impact on our consolidated financial position, results of operations, or cash flows. However, the final amounts required to resolve these matters could differ materially from our recorded estimates. See Note 11 to the consolidated financial statements.

**Item 4. Mine Safety Disclosure.**

Not Applicable.



## PART II

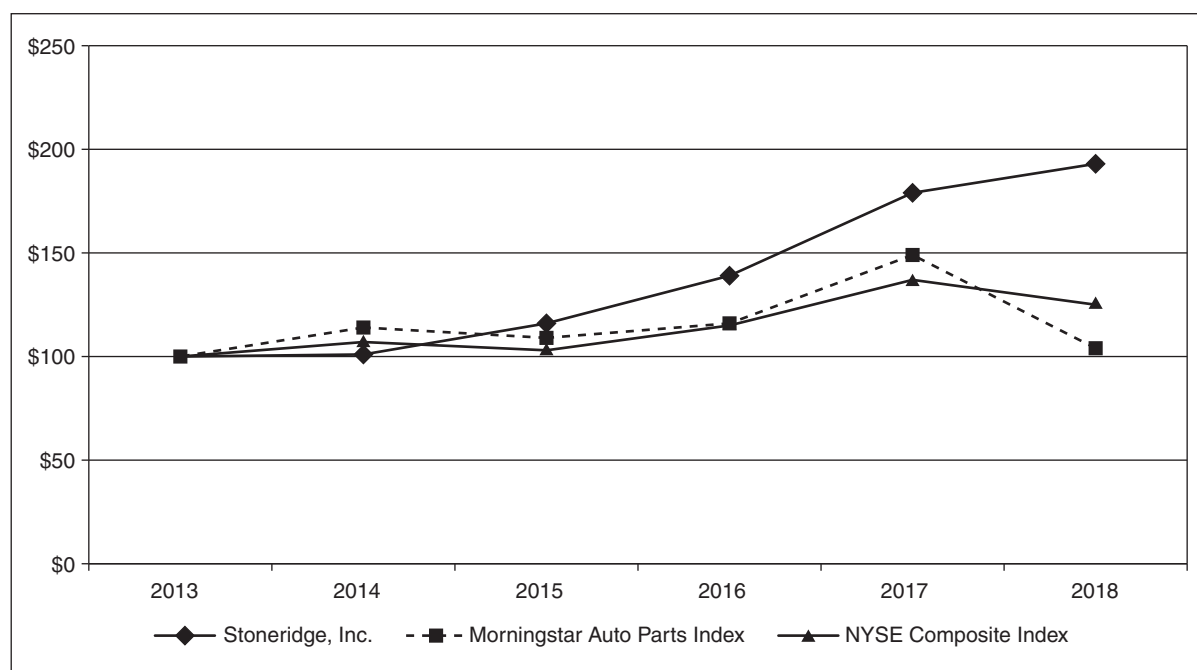
### Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

Our shares are listed on the New York Stock Exchange ("NYSE") under the symbol "SRI." As of February 20, 2019, we had 28,488,935 Common Shares, without par value, outstanding which were owned by approximately 160 shareholders of record. This does not include persons whose stock is in nominee or "street name" accounts held by brokers.

There were no repurchases of Common Shares made by us during the years ended December 31, 2018 or 2017, other than the repurchase of Common Shares of 153,397 and 132,211, respectively, to satisfy employee tax withholdings associated with the vesting of restricted Common Shares.

#### Performance Graph

Set forth below is a line graph comparing the cumulative total return of a hypothetical investment in our Common Shares with the cumulative total return of hypothetical investments in the Morningstar Auto Parts Industry Group Index and the NYSE Composite Index based on the respective market price of each investment as of December 31, 2013, 2014, 2015, 2016, 2017 and 2018 assuming in each case an initial investment of \$100 on December 31, 2013, and reinvestment of dividends.



	2013	2014	2015	2016	2017	2018
Stoneridge, Inc.	\$100	\$101	\$116	\$139	\$179	<b>\$193</b>
Morningstar Auto Parts Index	\$100	\$114	\$109	\$116	\$149	<b>\$104</b>
NYSE Composite Index	\$100	\$107	\$103	\$115	\$137	<b>\$125</b>

For information on "Related Stockholder Matters" required by Item 201(d) of Regulation S-K, refer to Item 12 of this report.



## Item 6. Selected Financial Data.

The following table sets forth selected historical financial data and should be read in conjunction with the consolidated financial statements and notes related thereto and other financial information included elsewhere herein. The selected historical data was derived from our consolidated financial statements.

Year ended December 31 (in thousands, except per share data)	2018	2017	2016	2015	2014
<b>Statement of Operations Data:</b>					
Net sales:					
Control Devices	\$441,297	\$447,528	\$408,132	\$333,010	\$306,658
Electronics <sup>(A)</sup>	344,727	282,383	205,256	216,544	214,141
PST	80,175	94,533	82,589	95,258	139,780
Total net sales	\$866,199	\$824,444	\$695,977	\$644,812	\$660,579
Gross profit	\$256,631	\$248,140	\$195,439	\$176,978	\$190,874
Operating income (loss):					
Control Devices	\$ 64,191	\$ 72,555	\$ 61,815	\$ 44,690	\$ 35,387
Electronics <sup>(A)</sup>	28,236	18,119	14,798	13,784	17,444
PST <sup>(E)</sup>	4,989	2,661	(3,462)	(7,542)	(59,587)
Unallocated Corporate <sup>(H)</sup>	(30,412)	(35,965)	(29,069)	(23,117)	(19,067)
Total operating income (loss)	\$ 67,004	\$ 57,370	\$ 44,082	\$ 27,815	\$ (25,823)
Equity in earnings of investees	\$ 2,038	\$ 1,636	\$ 1,233	\$ 608	\$ 815
Income (loss) before income taxes from continuing operations <sup>(F)</sup>	\$ 65,058	\$ 52,582	\$ 39,185	\$ 20,230	\$ (53,060)
Income (loss) from continuing operations <sup>(A)(B)(C)(D)(E)(F)</sup>	\$ 53,848	\$ 45,049	\$ 75,574	\$ 20,777	\$ (51,204)
Loss from discontinued operations <sup>(G)</sup>	—	—	—	(210)	(9,387)
Net income (loss) <sup>(A)(B)(C)(D)(E)(F)(G)</sup>	53,848	45,049	75,574	20,567	(60,591)
Net loss attributable to noncontrolling interest <sup>(D)(E)</sup>	—	(130)	(1,887)	(2,207)	(13,483)
Net income (loss) attributable to Stoneridge, Inc.	\$ 53,848	\$ 45,179	\$ 77,461	\$ 22,774	\$ (47,108)
Basic earnings (loss) per share from continuing operations attributable to Stoneridge, Inc.	\$ 1.90	\$ 1.61	\$ 2.79	\$ 0.84	\$ (1.40)
Diluted earnings (loss) per share from continuing operations attributable to Stoneridge, Inc.	\$ 1.85	\$ 1.57	\$ 2.74	\$ 0.82	\$ (1.40)
Basic loss per share attributable to discontinued operations	\$ —	\$ —	\$ —	\$ (0.01)	\$ (0.35)
Diluted loss per share attributable to discontinued operations	\$ —	\$ —	\$ —	\$ (0.01)	\$ (0.35)
Basic earnings (loss) per share attributable to Stoneridge, Inc.	\$ 1.90	\$ 1.61	\$ 2.79	\$ 0.83	\$ (1.75)
Diluted earnings (loss) per share attributable to Stoneridge, Inc.	\$ 1.85	\$ 1.57	\$ 2.74	\$ 0.81	\$ (1.75)
<b>Other Continuing Operations Data:</b>					
Design and development	\$ 51,074	\$ 48,877	\$ 40,212	\$ 38,792	\$ 41,609
Capital expenditures	\$ 29,027	\$ 32,170	\$ 24,476	\$ 28,735	\$ 23,516
Depreciation and amortization <sup>(I)</sup>	\$ 29,191	\$ 27,930	\$ 23,258	\$ 22,274	\$ 27,105
<b>Balance Sheet Data (as of December 31):</b>					
Working capital	\$172,870	\$167,245	\$128,184	\$123,859	\$125,197
Total assets	\$559,519	\$559,037	\$394,529	\$364,252	\$398,751
Long-term debt, net of current portion	\$ 96,983	\$124,852	\$ 75,060	\$104,458	\$110,651
Shareholders' equity	\$283,266	\$244,072	\$192,077	\$106,429	\$113,806

- (A) The amounts for 2018 and 2017 include the Orlaco business as of the acquisition date which is included within our Electronics operating segment and is disclosed in Note 2 to the Company's consolidation financial statements.
- (B) The amounts for 2017 include the impact of the Tax Legislation, a net tax benefit of \$(9,062), consisting of an increase in tax expense of \$6,207 due to the one-time deemed repatriation tax, offset by the favorable impact of the reduced tax rate on the Company's net deferred tax liabilities and other deferred tax adjustments of \$(15,269) related to certain earnings included in the one-time transition tax.
- (C) The Company recorded a release of a valuation allowance associated with its U.S. federal, certain state and foreign deferred tax assets of \$48.5 million for the year ended December 31, 2016.
- (D) The Company recorded a full valuation allowance on PST's net deferred tax assets of \$1,237 for the year ended December 31, 2016 of which \$322 was attributable to noncontrolling interest.
- (E) The Company recorded a goodwill impairment of \$51,458 related to PST during the year ended December 31, 2014 of which \$11,304 was attributable to noncontrolling interest.
- (F) The Company recorded a loss on extinguishment of debt of \$10,607 related to the redemption of the 9.5% senior notes during the year ended December 31, 2014.
- (G) The Company sold its Wiring business during the year ended December 31, 2014. As such, for all periods presented the Company reported this business as discontinued operations in the Company's consolidated financial statements.
- (H) Unallocated corporate expenses include, among other items, accounting/finance, human resources, information technology and legal costs as well as share-based compensation.
- (I) These amounts represent depreciation and amortization on fixed and certain finite-lived intangible assets.

## **Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.**

We are a global designer and manufacturer of highly engineered electrical and electronic components, modules and systems primarily for the automotive, commercial, off-highway, motorcycle and agricultural vehicle markets.

On January 31, 2017, the Company acquired Exploitiemaatschappij Berghaaf B.V. ("Orlaco"). As such, the Company's consolidated financial statements herein include the results of Orlaco from the date of acquisition. On May 16, 2017, the Company also acquired the remaining 26% noncontrolling interest in PST.

The following discussion and analysis should be read in conjunction with the consolidated financial statements and notes related thereto and other financial information included elsewhere herein.

### ***Segments***

We are organized by products produced and markets served. Under this structure, our operations have been reported using the following segments:

***Control Devices.*** This segment includes results of operations that manufacture sensors, switches, valves and actuators.

***Electronics.*** This segment includes results of operations from the production of electronic instrument clusters, electronic control units, driver information systems, camera-based vision systems, monitors and related products.

***PST.*** This segment includes results of operations that design and manufacture electronic vehicle alarms, convenience accessories, vehicle tracking devices and monitoring services and in-vehicle audio and video devices.

### ***Overview***

The Company had net income attributable to Stoneridge, Inc. of \$53.8 million, or \$1.85 per diluted share, for the year ended December 31, 2018.

Net income attributable to Stoneridge, Inc. in 2018 increased by \$8.7 million, or \$0.28 per diluted share, from \$45.2 million, or \$1.57 per diluted share, for the year ended December 31, 2017 primarily due to increased sales and operating profit in our Electronics segment.

In 2018, our net sales increased by \$41.8 million, or 5.1%, while our operating income increased \$9.6 million, or 16.8%.

Our Control Devices segment net sales decreased by 1.4% primarily as a result of decreased sales volume in the North American automotive market as a result of certain program volume reductions partially offset by increased sales volume in our commercial vehicle and China automotive markets. Segment gross margin decreased slightly due to lower sales and higher direct material costs as a percentage of sales, adversely affected by tariffs, partially offset by lower overhead costs from a reduction in warranty costs. Segment operating income decreased by 11.5% relative to 2017.

Our Electronics segment net sales increased by 22.1% primarily due to an increase in European and North American commercial vehicle and off-highway product sales. Segment gross margin increased due to higher sales offset and favorable product mix offset by the adverse affect of U.S. denominated material purchases at non-U.S. based operations. Operating income for the segment increased by 55.8% relative to 2017.

Our PST segment net sales decreased by 15.2% primarily due to unfavorable foreign currency translation of \$11.9 million, or 12.6%, as well as lower volumes for our audio products and our Argentina aftermarket channel. Segment gross margin improved slightly due to a favorable sales mix related to lower audio products that resulted in lower direct material costs as a percentage of sales. Operating income increased by 87.5% compared to 2017 primarily due to a decrease in selling, general and administrative expenses ("SG&A").

In 2018, SG&A expenses were favorably impacted by a decrease in expense for the fair value of Orlaco and PST earn-out consideration of \$7.3 million offset by an increase in restructuring and business realignment costs of \$1.8 million.

At December 31, 2018 and 2017, we had cash and cash equivalents of \$81.1 million and \$66.0 million, respectively. Cash and cash equivalents increased during 2018 primarily due to cash paid for business acquisitions in 2017 and higher capital expenditures in 2017 offset by net debt financing. Net cash flows from operations in 2018 increased slightly over 2017. At December 31, 2018 and 2017 we had \$96.0 million and \$121.0 million, respectively, in borrowings outstanding on our \$300.0 million Credit Facility. The decrease in the Credit Facility balance during 2018 was the result of voluntary principal repayments.

### **Outlook**

The Company continues to drive financial performance through top-line growth in our Electronics segment. The Company continues to implement operating efficiency improvements in order to create sustainable long-term margins. The Company believes that focusing on products that address industry megatrends will have a positive impact on both our top-line growth and underlying margins. In 2019, we believe that we will be favorably impacted by North American retrofit sales of our MirrorEye camera monitor system.

The North American automotive vehicle market is expected to remain consistent with 2018 at 17.0 million units in 2019. Based on our product mix, the Company expects sales volumes in our Control Devices segment to be consistent with the prior year.

The North American commercial vehicle market increased in 2018 and we expect it to increase slightly in 2019. We expect the European commercial vehicle market in 2019 to remain at approximately the same level with 2018.

Our PST segment revenues and operating performance decreased compared to 2017, mostly due to the decline in audio product demand as well as the decline in the Argentinian economy. In January 2019, the International Monetary Fund ("IMF") forecasted the Brazil gross domestic product to grow 2.5% in 2019

and 2.2% in 2020. As the Brazilian economy improves, we expect our served market channels to improve including audio products which have had lower demand in 2018 compared to the prior year. Our financial performance in our PST segment is also subject to uncertainty from movements in the Brazilian Real and Argentina Peso foreign currencies.

Trade actions initiated by the U.S. imposing tariffs on imports have been met with retaliatory tariffs by other countries, adding a level of uncertainty to the global economic environment. These and other actions are likely to impact trade policies with other countries and the overall global economy which could adversely impact our results of operations.

In January 2019, we committed to a restructuring plan that will result in the closure of our Canton, Massachusetts facility ("Canton Facility") by the end of 2019 and the consolidation of manufacturing operations at that site into other Company locations ("Canton Restructuring"). Company management informed employees at the Canton Facility of this restructuring decision on January 11, 2019. This restructuring action will result in the closure of the Canton facility and the termination of the employment of Canton Facility employees. The estimated costs for the Canton Restructuring include employee severance and termination costs, contract terminations costs, professional fees, the non-cash write-off of impaired fixed assets and transition costs. The estimated total cost of the Canton Facility restructuring plan, that will impact our Control Devices segment, is between \$8.5 million and \$9.5 million and will be incurred through 2020.

### ***Other Matters***

A significant portion of our sales are outside of the United States. These sales are generated by our non-U.S. based operations, and therefore, movements in foreign currency exchange rates can have a significant effect on our results of operations, which are presented in U.S. dollars. Our Electronics and PST segments have non-U.S. based operations that purchase a significant portion of raw materials denominated in U.S. dollars and therefore our results of operations are subject to fluctuations in foreign currency rates. The U.S. dollar weakened against the Swedish krona, euro and Brazilian real in 2017 favorably impacting our material costs and our reported results. The U.S. Dollar strengthened against the Swedish krona, euro, Brazilian real and Argentinian peso in 2018, unfavorably impacting our material costs and reported results.

In the fourth quarter of 2018, we undertook business realignment actions for our Electronics segment affecting our European Aftermarket business and China operations. We recognized expense of \$3.6 million as a result of these actions for severance, contract termination costs, excess and obsolete inventory write-offs and the non-cash write-off of intangible assets and impaired fixed assets. In addition, we regularly evaluate the performance of our businesses and their cost structures, including personnel, and make necessary changes thereto in order to optimize our results. We also evaluate the required skill sets of our personnel and periodically make strategic changes. As a consequence of these actions, we incur severance related costs which we refer to as business realignment charges.

Because of the competitive nature of the markets we serve, we face pricing pressures from our customers in the ordinary course of business. In response to these pricing pressures we have been able to effectively manage our production costs by the combination of lowering certain costs and limiting the increase of others, the net impact of which to date has not been material. However, if we are unable to effectively manage production costs in the future to mitigate future pricing pressures, our results of operations would be adversely affected.

**Year Ended December 31, 2018 Compared To Year Ended December 31, 2017**

Consolidated statements of operations as a percentage of net sales are presented in the following table (in thousands):

Year ended December 31,		2018		2017	Dollar increase/ (decrease)
Net sales	\$866,199	100.0%	\$824,444	100.0%	\$41,755
Costs and expenses:					
Cost of goods sold	609,568	70.4	576,304	69.9	33,264
Selling, general and administrative	138,553	16.0	141,893	17.2	(3,340)
Design and development	51,074	5.9	48,877	5.9	2,197
Operating income	67,004	7.7	57,370	7.0	9,634
Interest expense, net	4,720	0.5	5,783	0.7	(1,063)
Equity in earnings of investee	(2,038)	(0.2)	(1,636)	(0.2)	(402)
Other expense (income), net	(736)	(0.1)	641	0.1	(1,377)
Income before income taxes	65,058	7.5	52,582	6.4	12,476
Provision for income taxes	11,210	1.3	7,533	0.9	3,677
Net income	53,848	6.2	45,049	5.5	8,799
Net loss attributable to noncontrolling interest	—	—	(130)	—	130
Net income attributable to Stoneridge, Inc.	\$ 53,848	6.2%	\$ 45,179	5.5%	\$ 8,669

*Net Sales.* Net sales for our reportable segments, excluding inter-segment sales are summarized in the following table (in thousands):

Year ended December 31,		2018		2017	Dollar increase/ (decrease)	Percent increase/ (decrease)
Control Devices	\$441,297	50.9%	\$447,528	54.3%	\$ (6,231)	(1.4)%
Electronics	344,727	39.8	282,383	34.2	62,344	22.1%
PST	80,175	9.3	94,533	11.5	(14,358)	(15.2)%
Total net sales	\$866,199	100.0%	\$824,444	100.0%	\$ 41,755	5.1%

Our Control Devices segment net sales decreased primarily as a result of decreased sales volume in the North American automotive market of \$24.4 million as a result of certain program volume reductions partially offset by an increase in sales volume in our commercial vehicle and China automotive markets of \$15.9 million and \$1.3 million, respectively, and favorable foreign currency translation of \$0.5 million.

Our Electronics segment net sales increased primarily due to an increase in sales volume in our European and North American commercial vehicle products of \$20.2 million and \$19.6 million, respectively, and increased sales of European and North American off-highway vehicle products of \$15.9 million and \$4.6 million, respectively, as well as favorable foreign currency translation of \$1.6 million.

Our PST segment net sales decreased primarily due to unfavorable foreign currency translation that decreased sales by \$11.9 million, or 12.6%, as well as lower volumes for our audio products and our Argentina aftermarket channel. This reduction was partially offset by an increase in sales of new products to our factory authorized dealer installers and higher sales of monitoring products and services.

Net sales by geographic location are summarized in the following table (in thousands):

Year ended December 31,	2018		2017		Dollar increase/ (decrease)	Percent increase/ (decrease)
North America	\$480,511	55.5%	\$471,770	57.2%	\$ 8,741	1.9%
South America	80,175	9.3	94,533	11.5	(14,358)	(15.2)%
Europe and Other	305,513	35.2	258,141	31.3	47,372	18.4%
Total net sales	\$866,199	100.0%	\$824,444	100.0%	\$ 41,755	5.1%

The increase in North American net sales was primarily attributable to increased sales volume in our North American commercial vehicle and off-highway markets of \$28.4 million and \$4.6 million, respectively, which was offset by a decrease in sales volume in our North American automotive of \$24.4 million resulting from certain program volume reductions. The decrease in net sales in South America was primarily due to an unfavorable foreign currency translation that decreased sales by \$11.9 million, or 12.6%, as well as lower sales volume for our audio products and our Argentina aftermarket channel partially offset by an increase in sales of new products to our factory authorized dealer installers and higher sales of monitoring products and services. The increase in net sales in Europe and Other was primarily due to the increase in our European commercial vehicle and off-highway markets of \$27.1 million and \$15.9 million, respectively, as well as an increase in sales volume in our China automotive market of \$1.3 million. Additionally, Europe and Other sales were favorably impacted by foreign currency translation of \$2.1 million.

*Cost of Goods Sold and Gross Margin.* Cost of goods sold increased by 5.8% and our gross margin decreased from 30.1% in 2017 to 29.7%. Our material cost as a percentage of net sales increased by 0.9% to 51.5% during 2018 compared to 50.6% for 2017. The higher direct material costs in our Control Devices segment resulted from the adverse affects of tariffs while our Electronics and PST segments were negatively impacted by U.S. denominated material purchases at non-U.S. based operations offset by favorable product mix. Overhead as a percentage of net sales decreased by 0.4% to 13.9% during 2018 compared to 14.3% for 2017.

Our Control Devices segment gross margin decreased slightly due to lower sales and higher direct material costs due to tariffs, partially offset by a decrease in overhead costs primarily from a reduction in warranty costs.

Our Electronics segment gross margin increased primarily due to higher sales offset and favorable product mix offset by the adverse affect of U.S denominated material purchases at non-U.S. based operations.

Our PST segment gross margin improved slightly due to a favorable sales mix related to lower sales of audio products that resulted in lower direct material costs as a percentage of sales which was partially offset by lower sales primarily due to unfavorable foreign currency translation.

*Selling, General and Administrative ("SG&A").* SG&A expenses decreased by \$3.3 million compared to 2017 primarily due to a decrease in expense for the fair value of the Orlaco and PST earn-out consideration of \$4.5 million and \$2.8 million in our Electronics and PST segments, respectively, offset by our Electronics segment 2018 restructuring actions for its aftermarket business and China operations of \$2.7 million. Control Devices and Electronics SG&A costs increased due to higher wages and fringe benefits as well as higher direct support charges for procurement support. PST SG&A costs decreased during the current period due to lower wage and fringe benefits, professional service costs and selling costs. Unallocated corporate SG&A costs decreased primarily due to higher allocation of direct support costs to operating segments for procurement and manufacturing support due to the centralization of these activities as well as lower incentive compensation costs which were partially offset by higher professional service fees.



*Design and Development (“D&D”).* D&D costs increased by \$2.2 million primarily due to higher D&D costs in our Electronics and Control Devices segments related to program launches and investment in development activities. Customer reimbursement for development projects increased \$1.6 million in 2018.

*Operating Income.* Operating income (loss) is summarized in the following table by reportable segment (in thousands):

Year ended December 31,	2018	2017	Dollar increase/ (decrease)	Percent increase/ (decrease)
Control Devices	\$ 64,191	\$ 72,555	\$ (8,364)	(11.5)%
Electronics	28,236	18,119	10,117	55.8%
PST	4,989	2,661	2,328	87.5%
Unallocated corporate	(30,412)	(35,965)	5,553	15.4%
Operating income	\$ 67,004	\$ 57,370	\$ 9,634	16.8%

Our Control Devices segment operating income decreased primarily due to lower sales and higher SG&A and D&D costs partially related to program launches.

Our Electronics segment operating income increased primarily due to higher sales and gross margin partially offset by higher SG&A including restructuring expenses as well as higher D&D related to product launch and development activities.

Our PST segment operating income increased primarily due to lower SG&A, including the decrease in expense for the fair value of earn-out consideration of \$2.8 million during 2018, partially offset by a decrease in sales.

Our unallocated corporate operating loss decreased primarily due to higher allocations of direct support costs to operating segments for procurement and manufacturing activities due to the centralization of these activities as well as lower incentive compensation costs which were offset by higher professional service fees.

Operating income by geographic location is summarized in the following table (in thousands):

Year ended December 31,	2018	2017	Dollar increase/ (decrease)	Percent increase/ (decrease)
North America	\$33,219	\$37,937	\$ (4,718)	(12.4)%
South America	4,989	2,661	2,328	87.5%
Europe and Other	28,796	16,772	12,024	71.7%
Operating income	\$67,004	\$57,370	\$ 9,634	16.8%

Our North American operating results decreased primarily due to lower sales volume in the North American automotive market as well as higher D&D costs, which were partially offset by increased sales volume in the commercial vehicle and off-highway markets. The increase in operating income in South America was primarily due to a decrease in expense for the fair value of PST earn-out consideration. Our operating results in Europe and Other increased due to higher sales in our European commercial vehicle and off-highway markets which were partially offset by higher SG&A and D&D costs.

*Interest Expense, net.* Interest expense, net decreased by \$1.1 million compared to the prior year primarily due to lower interest expense at our unallocated corporate and PST segments as a result of the decrease in outstanding credit facility and debt balances, respectively, from voluntary principal prepayments of our credit facility.

*Equity in Earnings of Investee.* Equity earnings for MSIL were \$2.0 million and \$1.6 million for the years ended December 31, 2018 and 2017, respectively. The increase compared to the prior period was due to higher sales which was offset by an unfavorable change in foreign currency exchange rates.

*Other Expense (Income), net.* We record certain foreign currency transaction and forward currency hedge contract (gains) losses as a component of other expense (income), net on the consolidated statement of operations. Other expense (income), net decreased by \$1.4 million to other income of \$0.7 million in 2018 compared to other expense of \$0.6 million for 2017 primarily due to the favorable impact of foreign currency exchange rates of non-functional currency denominated cash balances in our Electronics segment.

*Provision for Income Taxes.* We recognized income tax expense of \$11.2 million and \$7.5 million for federal, state and foreign income taxes for 2018 and 2017, respectively. The change in tax expense for the year ended December 31, 2018 compared to the same period for 2017 was predominantly due to the impact of the enactment of the Tax Cuts and Jobs Act ("Tax Legislation") in the United States on December 22, 2017. The change in the effective tax rate to 17.2% in 2018 from 14.3% in 2017, was predominantly due to impact of the Tax Legislation in 2017.

### **Year Ended December 31, 2017 Compared To Year Ended December 31, 2016**

Consolidated statements of operations as a percentage of net sales are presented in the following table (in thousands):

Year ended December 31,		2017		2016	Dollar increase/ (decrease)
Net sales	\$824,444	100.0%	\$695,977	100.0%	\$128,467
Costs and expenses:					
Cost of goods sold	576,304	69.9	500,538	71.9	75,766
Selling, general and administrative	141,893	17.2	111,145	16.0	30,748
Design and development	48,877	5.9	40,212	5.8	8,665
Operating income	57,370	7.0	44,082	6.3	13,288
Interest expense, net	5,783	0.7	6,277	0.9	(494)
Equity in earnings of investee	(1,636)	(0.2)	(1,233)	(0.2)	(403)
Other expense (income), net	641	0.1	(147)	—	788
Income before income taxes	52,582	6.4	39,185	5.6	13,397
Provision (benefit) for income taxes	7,533	0.9	(36,389)	(5.2)	43,922
Net income	45,049	5.5	75,574	10.8	(30,525)
Net loss attributable to noncontrolling interest	(130)	—	(1,887)	(0.3)	1,757
Net income attributable to Stoneridge, Inc.	\$ 45,179	5.5%	\$ 77,461	11.1%	\$ (32,282)

*Net Sales.* Net sales for our reportable segments, excluding inter-segment sales are summarized in the following table (in thousands):

Year ended December 31,		2017		2016	Dollar increase	Percent increase
Control Devices	\$447,528	54.3%	\$408,132	58.6%	\$ 39,396	9.7%
Electronics	282,383	34.2	205,256	29.5	77,127	37.6%
PST	94,533	11.5	82,589	11.9	11,944	14.5%
Total net sales	\$824,444	100.0%	\$695,977	100.0%	\$128,467	18.5%



Our Control Devices segment net sales increased primarily as a result of new product sales and increased sales volume in the North American automotive market of \$23.5 million and increased sales volume in the China automotive, commercial vehicle and various other markets of \$8.9 million, \$4.2 million and \$2.8 million, respectively, which were offset by an unfavorable foreign currency translation of \$0.3 million.

Our Electronics segment net sales increased primarily due to an increase in European and North American off-highway vehicle product sales of \$54.9 million and \$11.6 million, respectively, primarily related to the acquired Orlaco business as well as an increase in sales volume in our European and North American commercial vehicle products of \$6.7 million and \$5.6 million, respectively. These increases were partially offset by an unfavorable foreign currency translation of \$1.4 million and unfavorable pricing of \$2.6 million on products nearing the end of program life.

Our PST segment net sales increased primarily due to an increase in monitoring service revenues as well as a favorable foreign currency translation that increased sales by \$6.2 million, or 7.5%.

Net sales by geographic location are summarized in the following table (in thousands):

Year ended December 31,	2017		2016		Dollar increase	Percent increase
North America	\$471,770	57.2%	\$428,046	61.5%	\$ 43,724	10.2%
South America	94,533	11.5	82,589	11.9	11,944	14.5%
Europe and Other	258,141	31.3	185,342	26.6	72,799	39.3%
Total net sales	\$824,444	100.0%	\$695,977	100.0%	\$128,467	18.5%

The increase in North American net sales was primarily attributable to new product sales and increased sales volumes in our North American automotive market of \$23.4 million and an increase in sales volumes in North American off-highway, commercial vehicle and various other markets of \$11.6 million, \$4.3 million and \$2.8 million, respectively. The increase in net sales in South America was primarily due to an increase in monitoring service revenues as well as favorable foreign currency translation that increased sales by \$6.2 million. The increase in net sales in Europe and Other was primarily due to the increase in European off-highway vehicle products of \$54.9 million substantially related to Orlaco as well as an increase in sales volume in our European commercial vehicle products and in the China automotive market of \$14.3 million and \$8.9 million, respectively. These increases were partially offset by an unfavorable foreign currency translation of \$1.7 million and unfavorable pricing of \$2.5 million on products nearing the end of program life.

*Cost of Goods Sold and Gross Margin.* Cost of goods sold increased by 15.1% primarily related to an increase in net sales. Our gross margin improved by 2.0% to 30.1% in 2017 compared to 28.1% for 2016. Our material cost as a percentage of net sales decreased by 0.9% to 50.6% in 2017 compared to 51.5% for 2016. Our direct material costs as a percentage of sales in our Control Devices segment remained consistent with 2016 while the lower direct material costs as a percentage of sales in our Electronics and PST segments resulted from favorable foreign currency movements associated with U.S. dollar denominated purchases, which were partially offset by the expense from the step up of the Orlaco inventory to fair value of \$1.6 million in our Electronics segment. Also, our Electronics segment was benefited by lower overhead costs as a percentage of sales associated with the acquired Orlaco business. Our Electronics segment overhead as a percentage of net sales decreased by 1.2% to 12.2% in 2017 compared to 13.4% for 2016.

Our Control Devices segment gross margin improved due to an increase in sales offset by higher warranty costs.

Our Electronics segment gross margin improved primarily due to lower material and overhead costs as a percentage of sales resulting from favorable movement in foreign currency exchange rates and a favorable mix related to Orlaco product sales.

Our PST segment gross margin improved due to lower direct material costs related to a favorable movement in foreign currency exchange rates and a favorable sales mix related to higher monitoring service revenues.

*Selling, General and Administrative.* SG&A expenses increased by \$30.7 million compared to 2016 primarily due to higher costs in our Electronics segment substantially related to the acquisition of Orlaco of \$19.1 million, which includes expense of \$4.9 million for the increase in fair value of earn-out consideration. Our Electronics segment also experienced higher business realignment charges of \$1.0 million compared to 2016. Our unallocated corporate and PST segments' SG&A costs also increased, which were partially offset by slightly lower SG&A costs in our Control Devices segment. Unallocated corporate SG&A costs increased due to higher wages, incentive compensation and professional fees as well as Orlaco transaction costs of \$1.3 million. Additionally, unallocated corporate SG&A included grant income of \$0.3 million (see Note 12 to our consolidated financial statements) in 2017 compared to headquarter relocation expense of \$1.8 million for 2016. PST SG&A costs increased during the current period due to expense for the fair value of earn-out consideration of \$2.6 million, unfavorable movements in foreign currency exchange rates and higher incentive compensation, which were partially offset by lower business realignment charges of \$0.7 million. Control Devices SG&A costs decreased slightly due to other income from a cancellation claim partially offset by higher wages, benefits and legal fees.

*Design and Development.* D&D costs increased by \$8.7 million primarily due to higher D&D costs in our Electronics segment substantially related to the acquired Orlaco business and new product design and development in our Control Devices and PST segments, which were partially offset by a \$1.1 million decrease in business realignment charges primarily related to our Electronics segment.

*Operating Income.* Operating income (loss) is summarized in the following table by reportable segment (in thousands):

Year ended December 31,	2017	2016	Dollar increase/ (decrease)	Percent increase/ (decrease)
Control Devices	\$ 72,555	\$ 61,815	\$10,740	17.4%
Electronics	18,119	14,798	3,321	22.4%
PST	2,661	(3,462)	6,123	NM
Unallocated corporate	(35,965)	(29,069)	(6,896)	(23.7)%
Operating income	\$ 57,370	\$ 44,082	\$13,288	30.1%

NM — not meaningful

Our Control Devices segment operating income increased primarily due to an increase in sales, which was partially offset by higher warranty and D&D costs.

Our Electronics segment operating income increased due to the acquisition of Orlaco. Excluding the impact of the acquired Orlaco business, operating income decreased primarily due to higher D&D costs.

Our PST segment operating performance improved primarily due to higher sales related to monitoring services, higher gross profit resulting from a favorable sales mix of higher monitoring service revenues and a \$0.8 million decrease in business realignment costs. This was partially offset by expense for the fair value of earn-out consideration of \$2.6 million.

Our unallocated corporate operating loss increased primarily due to higher wages, incentive compensation and professional fees as well as Orlaco transaction costs of \$1.3 million.

Operating income (loss) by geographic location is summarized in the following table (in thousands):

Year ended December 31,	2017	2016	Dollar increase	Percent increase
North America	\$37,937	\$34,220	\$ 3,717	10.9%
South America	2,661	(3,462)	6,123	NM
Europe and Other	16,772	13,324	3,448	25.9%
Operating income	\$57,370	\$44,082	\$13,288	30.1%

Our North American operating results improved due to increased sales in the North American automotive market, which were partially offset by higher wages, incentive compensation, professional fees, warranty and Orlaco transaction costs. The improved performance in South America was primarily due to higher sales, higher gross profit resulting from a favorable sales mix of higher monitoring service revenues and a decrease in business realignment costs. Our operating results in Europe and Other improved primarily due to higher sales of European off-highway, China automotive and European commercial vehicle products and lower material and overhead costs resulting from a favorable movement in foreign currency exchange rates.

*Interest Expense, net.* Interest expense, net decreased by \$0.5 million compared to the prior year primarily due to lower PST interest expense which was partially offset by higher interest expense related to our Credit Facility resulting from the additional borrowings to fund the Orlaco acquisition.

*Equity in Earnings of Investee.* Equity earnings for Minda were \$1.6 million and \$1.2 million for 2017 and 2016, respectively. The increase compared to the prior period was due to higher sales and a favorable change in foreign currency exchange rates.

*Other Expense (Income), net.* We record certain foreign currency transaction and forward currency hedge contract (gains) losses as a component of other expense (income), net on the consolidated statement of operations. Other expense (income), net increased by \$0.8 million in 2017 compared to 2016 primarily due to an unfavorable change in foreign currency exchange rates in our Electronics segment partially offset by favorable foreign currency movements in our PST segment.

*Provision (Benefit) for Income Taxes.* We recognized income tax expense (benefit) of \$7.5 million and \$(36.4) million for federal, state and foreign income taxes for 2017 and 2016, respectively. The change in tax expense for the year ended December 31, 2017 compared to the same period for 2016 was predominantly due to the release of U.S. federal, certain state and foreign valuation allowances in 2016 and the impact of the enactment of the Tax Cuts and Jobs Act ("Tax Legislation") in the United States on December 22, 2017. The effective tax rate increased to 14.3% in 2017 from (92.8)% in 2016, primarily due to the release of U.S. federal, certain state and foreign valuation allowances in 2016 and the impact of the Tax Legislation in 2017.

The Tax Legislation significantly revises the U.S. corporate income tax by, among other things, lowering corporate income tax rates and imposing a one-time transition tax on deemed repatriated earnings of foreign subsidiaries. The impact to 2017 of the Tax Legislation was an increase in tax expense of \$6.2 million due to the one-time deemed repatriation tax, offset by the favorable impacts of the reduced tax rate on the Company's net deferred tax liabilities and other deferred tax adjustments of \$(15.3) million related to certain earnings included in the one-time transition tax. Pursuant to the guidance within SEC Staff Accounting Bulletin No. 118 ("SAB 118"), as of December 31, 2017, the Company recognized the provisional effects of the enactment of the Tax Legislation for which measurement could be reasonably estimated. Although the Company continues to analyze certain aspects of the Tax Legislation and refine its assessment, the ultimate impact of the Tax Legislation may differ from these estimates due to continued analysis or further regulatory guidance that may be issued as a result of the Tax Legislation. Pursuant to SAB 118, adjustments to the provisional amounts recorded by the Company as of December 31, 2017 that are identified within a subsequent measurement period of up to

one year from the enactment date will be included as an adjustment to tax expense from continuing operations in the period the amounts are determined.

### ***Liquidity and Capital Resources***

#### ***Summary of Cash Flows for the years ended December 31, 2018 and 2017 (in thousands):***

<b>Year ended December 31</b>	<b>2018</b>	<b>2017</b>	<b>Dollar increase/ (decrease)</b>
Net cash provided by (used for):			
Operating activities	\$ 80,772	\$ 78,908	\$ 1,864
Investing activities	(27,950)	(108,640)	80,690
Financing activities	(33,870)	40,785	(74,655)
Effect of exchange rate changes on cash and cash equivalents	(3,863)	4,561	(8,424)
Net change in cash and cash equivalents	\$ 15,089	\$ 15,614	\$ (525)

Cash provided by operating activities increased compared to 2017 primarily due to an increase in net income and lower cash used to support working capital levels offset by cash outflows for income taxes and incentive compensation. Our receivable terms and collections rates have remained consistent between periods presented.

Net cash used for investing activities decreased primarily due to the business acquisition of Orlaco and insurance proceeds received in 2017 as well as lower capital expenditures in 2018.

Net cash provided by (used for) financing activities decreased primarily due to the significant decrease in borrowing activity on our Credit Facility as we borrowed \$77.3 million to fund the acquisition of the Orlaco business in the first quarter of 2017 and an increase in voluntary principal repayments of our Credit Facility and PST debt obligations in 2018.

#### ***Summary of Cash Flows for the years ended December 31, 2017 and 2016 (in thousands):***

<b>Year ended December 31</b>	<b>2017</b>	<b>2016</b>	<b>Dollar increase/ (decrease)</b>
Net cash provided by (used for):			
Operating activities	\$ 78,908	\$ 65,277	\$ 13,631
Investing activities	(108,640)	(23,824)	(84,816)
Financing activities	40,785	(43,371)	84,156
Effect of exchange rate changes on cash and cash equivalents	4,561	(2,054)	6,615
Net change in cash and cash equivalents	\$ 15,614	\$ (3,972)	\$ 19,586

Cash provided by operating activities increased primarily due to an increase in non-cash items including deferred income taxes, change in fair value of the PST and Orlaco earn-out considerations and amortization of Orlaco intangible assets. Our receivable terms and collections rates have remained consistent between periods presented.

Net cash used for investing activities increased primarily due to payments made for the acquisition of the Orlaco business of \$77.3 million as well as higher capital expenditures.

Net cash provided by financing activities increased primarily due to increased borrowings on the Credit Facility to fund the acquisition of the Orlaco business, which was partially offset by unscheduled partial repayments of our Credit Facility of \$41.0 million and the payment for the remaining noncontrolling interest in PST.

### Summary of Future Cash Flows

The following table summarizes our future cash outflows resulting from financial contracts and commitments, as of December 31, 2018 (in thousands):

	Total	Less than 1 year	2 – 3 years	4 – 5 years	After 5 years
Credit Facility	\$ 96,000	\$ —	\$ 96,000	\$ —	\$ —
Debt	2,516	1,533	983	—	—
Operating leases	21,091	5,055	7,008	4,922	4,106
Total contractual obligations	\$119,607	\$6,588	\$103,991	\$4,922	\$4,106

Management will continue to focus on efficiently managing its weighted-average cost of capital and believes that cash flows from operations and the availability of funds from our Credit Facility provides sufficient liquidity to meet our future growth and operating needs.

As outlined in Note 5 to our consolidated financial statements, our Credit Facility permits borrowing up to a maximum level of \$300.0 million which includes an accordion feature which allows the Company to increase the availability by up to \$80.0 million upon the satisfaction of certain conditions. This variable rate facility provides the flexibility to refinance other outstanding debt or finance acquisitions through September 2021. The Credit Facility contains certain financial covenants that require the Company to maintain less than a maximum leverage ratio and more than a minimum interest coverage ratio. The Credit Facility also contains affirmative and negative covenants and defines events of default that are customary for credit arrangements of this type including covenants which place restrictions and/or limitations on the Company's ability to borrow money, make capital expenditures and pay dividends. The Credit Facility had an outstanding balance of \$96.0 million at December 31, 2018. The Company was in compliance with all covenants at December 31, 2018. The covenants included in our Credit Facility to date have not and are not expected to limit our financing flexibility. The Company expects to make additional repayments on the Credit Facility when cash exceeds the amount needed for operations.

PST maintains short-term obligations and long-term loans used for working capital purposes. At December 31, 2018, there was \$2.5 million outstanding on the PST term loans. The PST loans at December 31, 2018 mature as follows: \$1.5 million in 2019, \$0.5 million in 2020 and \$0.5 million in 2021.

The Company's wholly owned subsidiary located in Stockholm, Sweden, has an overdraft credit line which allows overdrafts on the subsidiary's bank account up to a maximum level of 20.0 million Swedish krona, or \$2.3 million, at December 31, 2018. At December 31, 2018, there was no balance outstanding on this overdraft credit line.

Although the Company's credit facilities and loans contain various covenants, the Company has not experienced a violation which would limit or preclude their use or accelerate the maturity and does not expect these covenants to restrict our financing flexibility. The Company has been and expects to continue to remain in compliance with these covenants during the term of the credit facilities and loans.

On October 26, 2018, the Board of Directors of Stoneridge, Inc. authorized the repurchase of \$50.0 million of the Company's outstanding Common Shares over the next 18 months. The repurchases may be made from time to time in either open market transactions or in privately negotiated transactions. Repurchases may also be made under Rule 10b5-1 plans, which permit common shares to be repurchased through pre-determined criteria. The timing, volume and nature of common share repurchases will be at the discretion of management, dependent on market conditions, other priorities of cash investment, applicable securities laws and other factors. The Company's Common Share repurchase program does not obligate the Company to acquire any particular amount of our Common Shares, and it may be suspended or discontinued at any time.

On January 10, 2019, the Company committed to a restructuring plan that will result in the closure of our Canton, Massachusetts facility ("Canton Facility") by the end of 2019 and the consolidation of manufacturing operations at that site into other Company locations ("Canton Restructuring"). This restructuring action will result in the closure of the Canton facility and the termination of the employment of Canton Facility employees. The estimated costs for the Canton Restructuring include employee severance and termination costs, contract terminations costs, professional fees, the non-cash write-off of impaired fixed assets and transition costs and the estimated total cost of the Canton Facility restructuring plan is between \$8.5 million and \$9.5 million and will be incurred through 2020.

In December 2018, the Company entered into an agreement to make a \$10.0 million investment in a fund managed by Autotech Ventures ("Autotech"), a venture capital firm focused on ground transportation technology. The Company's \$10.0 million investment in the Autotech fund will be contributed over the expected ten year life of the fund.

Our future results could also be adversely affected by unfavorable changes in foreign currency exchange rates. We have significant foreign denominated transaction exposure in certain locations, especially in Brazil, Argentina, Mexico, Sweden, Estonia, the Netherlands, United Kingdom and China. We have entered into foreign currency forward contracts to reduce our exposure related to certain foreign currency fluctuations. See Note 10 to the consolidated financial statements for additional details. Our future results could also be unfavorably affected by increased commodity prices as commodity fluctuations impact the cost of our raw material purchases.

At December 31, 2018, we had cash and cash equivalents of approximately \$81.1 million, of which \$13.9 million as held in the United States and \$67.2 million was held in foreign locations. The Company has not provided deferred taxes related to the earnings of certain foreign subsidiaries that are not considered indefinitely reinvested, however, it has recognized a deferred tax asset related to the expected foreign currency impact upon repatriation. Any foreign tax on repatriation of earnings not considered to be indefinitely reinvested is expected to be immaterial. The increase in cash and cash equivalents from \$66.0 million at December 31, 2017 was primarily due to the business acquisitions that occurred during 2017 and capital expenditures partially offset by voluntary principal repayments of outstanding debt during 2018.

### ***Commitments and Contingencies***

See Note 11 to the consolidated financial statements for disclosures of the Company's commitments and contingencies.

### ***Seasonality***

Our Control Devices and Electronics segments are not typically materially affected by seasonality, however the demand for our PST segment consumer products is generally higher in the second half of the year, the fourth quarter in particular.

### ***Inflation and International Presence***

By operating internationally, we are affected by foreign currency exchange rates and the economic conditions of certain countries. Furthermore, given the current economic climate and recent fluctuations in certain commodity prices, we believe that an increase in such items could significantly affect our profitability. See Note 10 to the consolidated financial statements for additional details on the Company's commodity price and foreign currency exchange rate risks.

### ***Off-balance Sheet Arrangements***

At December 31, 2018, we do not have any off-balance sheet arrangements that have, or are, in the opinion of management, reasonably likely to have, a current or future material effect on our financial condition or results of operations.



## ***Critical Accounting Policies and Estimates***

The preparation of financial statements in conformity with U.S. Generally Accepted Accounting Principles ("GAAP") requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent liabilities at the date of the consolidated financial statements, and the reported amounts of revenues and expenses during the reporting period.

On an ongoing basis, we evaluate estimates and assumptions used in our consolidated financial statements. We base our estimates on historical experience and on various other factors that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results could differ from these estimates.

Our critical accounting policies, those most important to the financial presentation and those that are the most complex, subjective or require significant judgment, are as follows.

***Revenue Recognition and Sales Commitments.*** We recognize revenue when obligations under the terms of a contract with our customer are satisfied; generally this occurs with the transfer of control of our products and services, which is usually when the parts are shipped or delivered to the customer's premises. Revenue is measured as the amount of consideration we expect to receive in exchange for transferring goods or providing services. The transaction price will include estimates of variable consideration to the extent it is probable that a significant reversal of revenue recognized will not occur. Incidental items that are not significant in the context of the contract are recognized as expense. Revenue for OEM and Tier 1 supplier customers and aftermarket products are recognized at the point in time it satisfies a performance obligation by transferring control of a part to the customer. A small portion of our sales are comprised of monitoring services of which the revenue is recognized over the life of the contract. See Note 3 for additional information on our revenue recognition policies, including recognizing revenue based on satisfying performance obligations.

***Warranties.*** Our warranty liability is established based on our best estimate of the amounts necessary to settle existing and future claims on products sold as of the balance sheet dates. This estimate is based on historical trends of units sold and payment amounts, combined with our current understanding of the status of existing claims. To estimate the warranty liability, we are required to forecast the resolution of existing claims as well as expected future claims on products previously sold. Although we believe that our warranty liability is adequate and that the judgment applied is appropriate, such amounts estimated to be due and payable could differ materially from what will actually transpire in the future.

***Allowance for Doubtful Accounts.*** We have concentrations of sales and trade receivable balances with key customers. Therefore, it is critical that we evaluate the collectability of accounts receivable based on a combination of factors. In circumstances where we are aware of a specific customer's inability to meet their financial obligations, a specific allowance for doubtful accounts is recorded against amounts due to reduce the net recognized receivable to the amount we reasonably believe will be collected. In addition, we review historical trends for collectability in determining an estimate for our allowance for doubtful accounts. If economic circumstances change substantially, estimates of the recoverability of amounts due to the Company could be reduced by a material amount. We do not have collateral requirements with our customers.

***Contingencies.*** We are subject to legal proceedings and claims, including product liability claims, commercial or contractual disputes, environmental enforcement actions and other claims that arise in the normal course of business. We routinely assess the likelihood of any adverse judgments or outcomes to these matters, as well as ranges of probable losses, by consulting with internal personnel principally involved with such matters and with our outside legal counsel handling such matters.

We have accrued for estimated losses when it is probable that a liability or loss has been incurred and the amount can be reasonably estimated. Contingencies by their nature relate to uncertainties that require

the exercise of judgment both in assessing whether or not a liability or loss has been incurred and estimating that amount of probable loss. The liabilities may change in the future due to new developments or changes in circumstances. The inherent uncertainty related to the outcome of these matters can result in amounts materially different from any provisions made with respect to their resolution.

*Inventory Valuation.* Inventories are valued at the lower of cost or net realizable value using either the FIFO method or average cost method. Where appropriate, standard cost systems are utilized for purposes of determining cost and the standards are adjusted as necessary to approximate actual costs. Estimates of the lower of cost or net realizable value of inventory are determined based upon current economic conditions, historical sales quantities and patterns and, in some cases, the specific risk of loss on specifically identified inventories. We adjust our excess and obsolescence reserve at least on a quarterly basis. Excess inventories are quantities of items that exceed anticipated sales or usage for a reasonable period.

*Long-Lived and Finite-Lived Assets.* We review the carrying value of our long-lived assets and finite-lived intangible assets for impairment when events or circumstances indicate that their carrying value may not be recoverable. Factors that we consider important that could trigger our testing of the related asset groups for an impairment include current period operating or cash flow losses combined with a history of operating or cash flow losses, a projection or forecast that demonstrates continuing losses, significant adverse changes in the business climate within a particular business or current expectations that a long-lived asset will be sold or otherwise disposed of significantly before the end of its estimated useful life. To test for impairment, the estimated undiscounted cash flows expected to be generated from the use and disposal of the asset or asset group is compared to its carrying value. An asset group is established by identifying the lowest level of cash flows generated by the group of assets that are largely independent of cash flows of other assets. If cash flows cannot be separately and independently identified for a single asset, we will determine whether an impairment has occurred for the group of assets for which we can identify projected cash flows. If these undiscounted cash flows are less than their respective carrying values, an impairment charge would be recognized to the extent that the carrying values exceed estimated fair values. The estimation of undiscounted cash flows and fair value requires us to make assumptions regarding future operating results. The results of the impairment testing are dependent on these estimates which require judgment. The occurrence of certain events, including changes in economic and competitive conditions, could impact cash flows eventually realized and management's ability to accurately assess whether an asset is impaired.

*Goodwill.* Goodwill is tested for impairment at least annually and whenever events or changes in circumstances indicate that the carrying value may not be recoverable. In conducting our annual impairment assessment testing, we first perform a qualitative assessment of whether it is more likely than not that a reporting unit's fair value is less than its carrying amount. If not, no further goodwill impairment testing is performed. If it is more likely than not that a reporting unit's fair value is less than its carrying amount, or if we elect not to perform a qualitative assessment of a reporting unit, we then compare the fair value of the reporting unit to the related net book value. If the net book value of a reporting unit exceeds its fair value, an impairment loss is measured and recognized.

The Company utilizes an income statement approach to estimate the fair value of a reporting unit and a market valuation approach to further support this analysis. The income approach is based on projected debt-free cash flow which is discounted to the present value using discount factors that consider the timing and risk of cash flows. We believe that this approach is appropriate because it provides a fair value estimate based on the reporting unit's expected long-term operating cash flow performance. This approach also mitigates the impact of cyclical trends that occur in the industry. Fair value is estimated using internally developed forecasts, as well as commercial and discount rate assumptions. The discount rate used is the value-weighted average of our estimated cost of equity and of debt ("cost of capital") derived using both known and estimated customary market metrics. Our weighted average cost of capital



is adjusted to reflect a risk factor, if necessary. Other significant assumptions include terminal value growth rates, terminal value margin rates, future capital expenditures and changes in future working capital requirements. While there are inherent uncertainties related to the assumptions used and to management's application of these assumptions to this analysis, we believe that the income statement approach provides a reasonable estimate of the fair value of a reporting unit. The market valuation approach is used to further support our analysis.

**Share-Based Compensation.** The estimate for our share-based compensation expense involves a number of assumptions. We believe each assumption used in the determination of share-based compensation expense is reasonable because it takes into account the experience of the plan and reasonable expectations associated with performance and market based conditions. We estimate volatility and forfeitures based on historical data, future expectations and the expected term of the share-based compensation awards. The assumptions, however, involve inherent uncertainties. As a result, if other assumptions had been used, share-based compensation expense could have varied.

**Income Taxes.** Deferred income taxes are provided for temporary differences between the amount of assets and liabilities for financial reporting purposes and the basis of such assets and liabilities as measured by tax laws and regulations. Our deferred tax assets include, among other items, net operating loss carryforwards and tax credits that can be used to offset taxable income in future periods and reduce income taxes payable in those future periods. Our U.S. state net operating losses expire at various times and the foreign net operating losses expire at various times or have indefinite expiration dates. Our U.S. federal general business credits, if unused, begin to expire in 2024, and the state and foreign tax credits expire at various times.

Accounting standards require that deferred tax assets be reduced by a valuation allowance if, based on all available evidence, it is considered more likely than not that some portion or all of the recorded deferred tax assets will not be realized in future periods. This assessment requires significant judgment, and in making this evaluation, the Company considers available positive and negative evidence, including the potential to carryback net operating losses and credits, the future release of certain taxable temporary differences, actual and forecasted results, and tax planning strategies that are both prudent and feasible. Risk factors include U.S. and foreign economic conditions that affect the automotive and commercial vehicle markets of which the Company has significant operations.

The Company has not provided deferred taxes related to the earnings of certain foreign subsidiaries that are not considered indefinitely reinvested, however, it has recognized a deferred tax asset related to the expected foreign currency impact upon repatriation. Any foreign tax on repatriation of earnings not considered to be indefinitely reinvested is expected to be immaterial.

The Tax Legislation also created a provision known as Global Intangible Low-Taxed Income ("GILTI") that imposes a tax on certain earnings of foreign subsidiaries. The Company has made an accounting policy election to reflect GILTI taxes, if any, as a current income tax expense in the period incurred.

### ***Recently Adopted Accounting Standards***

In March 2018, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2018-05, "Income Taxes — Amendments to SEC Paragraphs Pursuant to SEC Staff Accounting Bulletin No. 118." The standard provides for a provisional one-year measurement period for entities to finalize their accounting for certain tax effects of the Tax Legislation. The Company adopted this standard as of January 1, 2018, which did not have a material impact on its consolidated financial statements. The Company has completed its accounting for SAB 118 as of December 31, 2018.

In January 2017, the FASB issued ASU 2017-01, "Clarifying the Definition of a Business (Topic 805)". It revises the definition of a business and provides a framework to evaluate when an input and a substantive process are present in an acquisition to be considered a business. This guidance was effective

for annual periods beginning after December 15, 2017. The Company adopted this standard on January 1, 2018, which did not have a material impact on its consolidated financial statements.

In October 2016, the FASB issued ASU 2016-16, "Accounting for Income Taxes: Intra-Entity Asset Transfers of Assets Other than Inventory (Topic 740)". This guidance requires that the tax effects of all intra-entity sales of assets other than inventory be recognized in the period in which the transaction occurs. The Company adopted this standard on January 1, 2018, which did not have a material impact on its consolidated financial statements.

In August 2016, the FASB issued ASU 2016-15, "Statement of Cash Flows - Classification of Certain Cash Receipts and Cash Payments (Topic 230)", which provides guidance on the presentation and classification of certain cash receipts and cash payments in the statement of cash flows in order to reduce diversity in practice. This ASU was effective for interim and annual periods beginning after December 15, 2017. The Company adopted this standard as of January 1, 2018, which did not have a material impact on its consolidated financial statements.

In January 2016, the FASB issued ASU 2016-01, "Financial Instruments — Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities." The standard requires equity investments and other ownership interests in unconsolidated entities (other than those accounted for using the equity method of accounting or those that result in consolidation of the investee) to be measured at fair value with changes in fair value recognized in net income. The Company adopted this standard as of January 1, 2018, which did not have a material impact on its consolidated financial statements.

In May 2014, the FASB issued ASU 2014-09, "Revenue from Contracts with Customers" and related amendments, which is the new comprehensive revenue recognition standard (collectively known as Accounting Standard Codification ("ASC") 606) that has superseded existing revenue recognition guidance under U.S. GAAP. The standard's core principle is that a company will recognize revenue when it transfers promised goods or services to a customer in an amount that reflects the consideration to which a company expects to be entitled in exchange for those goods or services. To achieve this principle, an entity identifies the contract with a customer, identifies the separate performance obligations in the contract, determines the transaction price, allocates the transaction price to the separate performance obligations and recognizes revenue when each separate performance obligation is satisfied. The Company adopted this standard on January 1, 2018 using the modified retrospective transition method. Under the modified retrospective method, the Company would have recognized the cumulative effect of initially applying the standard as an adjustment to opening retained earnings at the date of initial application; however, the Company did not have any material adjustments as of the date of the adoption. The Company has not experienced a material impact on its results of operations from the adoption of ASC 606; however, the Company has expanded its disclosures consistent with the requirements of the new standard and the Company will continue to evaluate new contracts to apply the framework of ASC 606. In particular, the Company will evaluate new contracts with customers analyzing the impact, if any, on revenue from the sale of production parts, particularly in regards to material rights, variable consideration and the impact of termination clauses on the timing of revenue recognition. The majority of our revenue continues to be recognized when products are shipped from our manufacturing facilities. The Company has not changed how it accounts for reimbursable pre-production costs, currently accounted for as a reduction of costs incurred. Refer to Note 3 for the expanded revenue disclosures.

#### ***Recently Issued Accounting Standards Not Yet Adopted as of December 31, 2018***

In January 2018, the FASB issued ASU 2018-02, "Income Statement — Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income." This guidance gives entities the option to reclassify to retained earnings the tax effects resulting from the enactment of Tax Cuts and Jobs Act related to items in accumulated other comprehensive income ("AOCI") that the FASB refers to as having been stranded in AOCI. The new guidance is effective for

fiscal years beginning after December 15, 2018 and interim periods within those fiscal years. Early adoption is permitted for periods for which financial statements have not yet been issued or made available for issuance, including the period the Tax Legislation was enacted. The Company will adopt this standard as of January 1, 2019, which is not expected to have a material impact on its consolidated financial statements.

In June 2016, the FASB issued ASU 2016-13, "Financial Instruments — Credit Losses (Topic 326) Measurement of Credit Losses on Financial Instruments", which requires measurement and recognition of expected credit losses for financial assets held and requires enhanced disclosures regarding significant estimates and judgments used in estimating credit losses. ASU 2016-13 is effective for public business entities for annual periods beginning after December 15, 2019, and early adoption is permitted for annual periods beginning after December 15, 2018. The Company is currently evaluating the impact of its pending adoption of ASU 2016-13 on the consolidated financial statements. The Company will adopt this standard as of January 1, 2020 and are still evaluating the impact on its consolidated financial statements.

In February 2016, the FASB issued ASU 2016-02, "Leases (Topic 842)", which will require that a lessee recognize assets and liabilities on the balance sheet for all leases with a lease term of more than twelve months, with the result being the recognition of a right of use asset and a lease liability. The new standard is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2018. The Company will adopt this standard as of January 1, 2019 using the modified retrospective approach and will elect the transition option to use the effective date January 1, 2019, as the date of initial application. The Company will not adjust its comparative period financial statements for effects of the ASU 2016-02, or make the new required lease disclosures for periods before the effective date. The Company will recognize its cumulative effect transition adjustment as of the effective date. In addition, the Company will elect the package of practical expedients permitted under the transition guidance within the new standard. The impact of adoption will result in the recognition of right of use assets estimated in the range of \$15.6 million to \$21.2 million, with corresponding lease liabilities of the same amount. The standard will not have a significant impact on the Company's consolidated results of operations and cash flows.

## **Item 7A. Quantitative and Qualitative Disclosures About Market Risk.**

### ***Interest Rates***

We are exposed to interest rate risk primarily from the effects of changes in interest rates. At December 31, 2018, approximately 97.8% of our outstanding debt was floating-rate and 2.2% was fixed-rate. We estimate that a 1.0% change in the interest costs of our floating-rate debt outstanding as of December 31, 2018 would change interest expense on an annual basis by approximately \$1.0 million.

### ***Currency Exchange Rates***

In addition to the United States, we have significant operations in Europe, South America, Mexico and China. As a result we are subject to translation risk because of the transactions of our foreign operations are in local currency (particularly the Brazilian real, Chinese renminbi, Mexican peso, euro, Swedish krona and Argentinian peso) and must be translated into U.S. dollars. As currency exchange rates fluctuate, the translation of our consolidated statements of operations into U.S. dollars affects the comparability of revenues, expenses, operating income (loss), net income (loss) and earnings (loss) per share between years.

We use derivative financial instruments, including foreign currency forward contracts, to mitigate our exposure to fluctuations in foreign currency exchange rates by reducing the effect of such fluctuations on foreign currency denominated intercompany transactions, inventory material purchases and other foreign currency exposures.

As discussed in detail in Note 10 to our consolidated financial statements, we entered into foreign currency forward contracts the purpose of which is to reduce exposure related to the Company's future Mexican peso-denominated purchases. These foreign currency contracts outstanding at December 31, 2018 expire throughout 2019. We estimate that a 10.0% unidirectional change in currency exchange rates would result in a change in fair value at December 31, 2018 by approximately \$1.0 million. It is important to note that the change in fair value of the foreign currency forward contracts would be partially offset by changes in the underlying exposures being hedged.

We estimate that a 10.0% unidirectional change in currency exchange rates relative to the U.S dollar would have changed our income before income taxes for the year ended December 31, 2018 by approximately \$3.0 million.

### ***Commodity Price Risk***

The competitive marketplace in which we operate may limit our ability to recover increased costs through higher prices. As such, we are subject to market risk with respect to commodity price fluctuations principally related to our purchases of purchase of copper, steel, zinc, resins and certain other commodities through a combination of fixed price agreements, staggered short-term contract maturities and commercial negotiations with our suppliers and customers. In the future, if we believe that the terms of a fixed price agreement become beneficial to us, we will enter into another such instrument. We may also consider pursuing alternative commodities or alternative suppliers to mitigate this risk over a period of time.

## Item 8. Financial Statements and Supplementary Data.

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

<b>Consolidated Financial Statements:</b>	<b>Page</b>
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## Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of Stoneridge, Inc.

### Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Stoneridge, Inc. and Subsidiaries (the Company) as of December 31, 2018 and 2017, the related consolidated statements of operations, comprehensive income, cash flows and shareholders' equity for each of the three years in the period ended December 31, 2018, and the related notes and schedule listed in the Index at Item 15(a) (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 27, 2019 expressed an unqualified opinion thereon.

### Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

The signature of Ernst & Young LLP is written in a cursive, handwritten style.

We have served as the Company's auditor since 2002  
Detroit, MI  
February 27, 2019



## CONSOLIDATED BALANCE SHEETS

As of December 31, (in thousands)	2018	2017
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$ 81,092	\$ 66,003
Accounts receivable, less reserves of \$1,243 and \$1,109, respectively	139,076	142,438
Inventories, net	79,278	73,471
Prepaid expenses and other current assets	20,731	21,457
Total current assets	320,177	303,369
Long-term assets:		
Property, plant and equipment, net	112,213	110,402
Intangible assets, net	62,032	75,243
Goodwill	36,717	38,419
Investments and other long-term assets, net	28,380	31,604
Total long-term assets	239,342	255,668
Total assets	\$559,519	\$559,037
<b>LIABILITIES AND SHAREHOLDERS' EQUITY</b>		
Current liabilities:		
Current portion of debt	\$ 1,533	\$ 4,192
Accounts payable	87,894	79,386
Accrued expenses and other current liabilities	57,880	52,546
Total current liabilities	147,307	136,124
Long-term liabilities:		
Revolving credit facility	96,000	121,000
Long-term debt, net	983	3,852
Deferred income taxes	14,895	18,874
Other long-term liabilities	17,068	35,115
Total long-term liabilities	128,946	178,841
Shareholders' equity:		
Preferred Shares, without par value, 5,000 shares authorized, none issued	—	—
Common Shares, without par value, 60,000 shares authorized, 28,966 and 28,966 shares issued and 28,488 and 28,180 shares outstanding at December 31, 2018 and 2017, respectively, with no stated value	—	—
Additional paid-in capital	231,647	228,486
Common Shares held in treasury, 478 and 786 shares at December 31, 2018 and 2017, respectively, at cost	(8,880)	(7,118)
Retained earnings	146,251	92,264
Accumulated other comprehensive loss	(85,752)	(69,560)
Total shareholders' equity	283,266	244,072
Total liabilities and shareholders' equity	\$559,519	\$559,037

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

## CONSOLIDATED STATEMENTS OF OPERATIONS

Year ended December 31 (in thousands, except per share data)	2018	2017	2016
Net sales	\$866,199	\$824,444	\$695,977
Costs and expenses:			
Cost of goods sold	609,568	576,304	500,538
Selling, general and administrative	138,553	141,893	111,145
Design and development	51,074	48,877	40,212
Operating income	67,004	57,370	44,082
Interest expense, net	4,720	5,783	6,277
Equity in earnings of investee	(2,038)	(1,636)	(1,233)
Other (income) expense, net	(736)	641	(147)
Income before income taxes	65,058	52,582	39,185
Provision (benefit) for income taxes	11,210	7,533	(36,389)
Net income	53,848	45,049	75,574
Net loss attributable to noncontrolling interest	—	(130)	(1,887)
Net income attributable to Stoneridge, Inc.	\$ 53,848	\$ 45,179	\$ 77,461
Earnings per share attributable to Stoneridge, Inc.:			
Basic	\$ 1.90	\$ 1.61	\$ 2.79
Diluted	\$ 1.85	\$ 1.57	\$ 2.74
Weighted-average shares outstanding:			
Basic	28,402	28,082	27,764
Diluted	29,080	28,772	28,309

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

## CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

Year ended December 31, (in thousands)	2018	2017	2016
Net income	\$ 53,848	\$45,049	\$75,574
Less: Net loss attributable to noncontrolling interest	—	(130)	(1,887)
Net income attributable to Stoneridge, Inc.	53,848	45,179	77,461
Other comprehensive (loss) income, net of tax attributable to Stoneridge, Inc.:			
Foreign currency translation	(16,627)	15,473	2,401
Benefit plan adjustment	—	—	(84)
Unrealized gain (loss) on derivatives <sup>(1)</sup>	435	(125)	(408)
Other comprehensive (loss) income, net of tax attributable to Stoneridge, Inc.	(16,192)	15,348	1,909
Comprehensive income attributable to Stoneridge, Inc.	\$ 37,656	\$60,527	79,370

(1) Net of tax expense (benefit) of \$156, \$(68) and \$(10) for the years ended December 31, 2018, 2017 and 2016, respectively.

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

## CONSOLIDATED STATEMENTS OF CASH FLOWS

Year ended December 31, (in thousands)	2018	2017	2016
<b>OPERATING ACTIVITIES:</b>			
Net income	\$ 53,848	\$ 45,049	\$ 75,574
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation	22,786	21,490	19,998
Amortization, including accretion of deferred financing costs	6,731	6,764	3,615
Deferred income taxes	2,552	(5,959)	(38,747)
Earnings of equity method investee	(2,038)	(1,636)	(1,233)
Loss (gain) on fixed assets	333	(1,796)	48
Share-based compensation expense	5,632	7,265	6,134
Tax benefit related to share-based compensation expense	(1,584)	(858)	(977)
Change in fair value of earn-out contingent consideration	213	7,485	—
Intangible impairment charge	202	—	—
Changes in operating assets and liabilities, net of effect of business combination:			
Accounts receivable, net	(3,575)	(15,156)	(18,694)
Inventories, net	(10,002)	(2,132)	4,519
Prepaid expenses and other assets	2,291	(10,177)	2,652
Accounts payable	11,054	10,492	10,980
Accrued expenses and other liabilities	(7,671)	18,077	1,408
Net cash provided by operating activities	80,772	78,908	65,277
<b>INVESTING ACTIVITIES:</b>			
Capital expenditures	(29,027)	(32,170)	(24,476)
Proceeds from sale of fixed assets	111	77	652
Insurance proceeds for fixed assets	1,403	711	—
Business acquisition, net of cash acquired	—	(77,258)	—
Investment in venture capital fund	(437)	—	—
Net cash used for investing activities	(27,950)	(108,640)	(23,824)
<b>FINANCING ACTIVITIES:</b>			
Acquisition of noncontrolling interest, including transaction costs	—	(1,848)	—
Revolving credit facility borrowings	27,500	95,000	—
Revolving credit facility payments	(52,500)	(41,000)	(33,000)
Proceeds from issuance of debt	415	2,748	16,223
Repayments of debt	(5,071)	(11,573)	(25,748)
Other financing costs	—	(61)	(399)
Repurchase of Common Shares to satisfy employee tax withholding	(4,214)	(2,481)	(1,424)
Tax benefits related to share-based compensation expense	—	—	977
Net cash (used for) provided by financing activities	(33,870)	40,785	(43,371)
Effect of exchange rate changes on cash and cash equivalents	(3,863)	4,561	(2,054)
Net change in cash and cash equivalents	15,089	15,614	(3,972)
Cash and cash equivalents at beginning of period	66,003	50,389	54,361
Cash and cash equivalents at end of period	\$ 81,092	\$ 66,003	\$ 50,389
Supplemental disclosure of cash flow information:			
Cash paid for interest	\$ 4,997	\$ 5,746	\$ 5,786
Cash paid for income taxes, net	\$ 13,213	\$ 7,093	\$ 3,386
Supplemental disclosure of non-cash operating and financing activities:			
Bank payment of vendor payables under short-term debt obligations	\$ —	\$ —	\$ 3,764

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

## CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

(in thousands)	Number of Common Shares outstanding	Number of treasury shares	Additional paid-in capital	Common Shares held in treasury	Retained earnings (accumulated deficit)	Accumulated other comprehensive loss	Noncontrolling interest	Total shareholders' equity
BALANCE, DECEMBER 31, 2015	27,912	995	\$199,254	\$(4,208)	\$ (32,105)	\$(69,822)	\$ 13,310	\$106,429
Net income (loss)	—	—	—	—	77,461	—	(1,887)	75,574
Benefit plan adjustments, net	—	—	—	—	—	(84)	—	(84)
Unrealized loss on derivatives, net	—	—	—	—	—	(408)	—	(408)
Currency translation adjustments	—	—	—	—	—	2,401	2,339	4,740
Issuance of restricted Common Shares	67	(8)	—	—	—	—	—	—
Forfeited restricted Common Shares	(3)	3	—	—	—	—	—	—
Repurchased Common Shares for treasury	(126)	126	—	(1,424)	—	—	—	(1,424)
Tax benefit from share based compensation transactions	—	—	977	—	—	—	—	977
Share-based compensation	—	—	6,273	—	—	—	—	6,273
BALANCE, DECEMBER 31, 2016	27,850	1,116	206,504	(5,632)	45,356	(67,913)	13,762	192,077
Net income (loss)	—	—	—	—	45,179	—	(130)	45,049
Unrealized loss on derivatives, net	—	—	—	—	—	(125)	—	(125)
Currency translation adjustments	—	—	—	—	—	15,473	826	16,299
Acquisition of noncontrolling interest, net	—	—	15,820	—	—	(16,995)	(14,458)	(15,633)
Issuance of restricted Common Shares	462	(462)	—	—	—	—	—	—
Repurchased Common Shares for treasury	(132)	132	—	(1,486)	—	—	—	(1,486)
Share-based compensation	—	—	6,162	—	—	—	—	6,162
Adoption of ASU 2016-09 (Note 2)	—	—	—	—	1,729	—	—	1,729
BALANCE, DECEMBER 31, 2017	28,180	786	228,486	(7,118)	92,264	(69,560)	—	244,072
Net income	—	—	—	—	53,848	—	—	53,848
Unrealized gain on derivatives, net	—	—	—	—	—	435	—	435
Currency translation adjustments	—	—	—	—	—	(16,627)	—	(16,627)
Issuance of restricted Common Shares	461	(461)	—	—	—	—	—	—
Repurchased Common Shares for treasury	(153)	153	—	(1,762)	—	—	—	(1,762)
Tax benefit from share based compensation transactions	—	—	—	—	—	—	—	—
Share-based compensation	—	—	3,161	—	—	—	—	3,161
Cumulative effect of an accounting change	—	—	—	—	139	—	—	139
BALANCE, DECEMBER 31, 2018	28,488	478	\$231,647	\$(8,880)	\$146,251	\$(85,752)	\$ —	\$283,266

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

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
(in thousands, except share and per share data, unless otherwise indicated)

**1. Organization and Nature of Business**

Stoneridge, Inc. and its subsidiaries are global designers and manufacturers of highly engineered electrical and electronic components, modules and systems for the automotive, commercial, off-highway, motorcycle and agricultural vehicle markets.

**2. Summary of Significant Accounting Policies**

**Basis of Presentation**

The accompanying consolidated financial statements include the accounts of Stoneridge, Inc. and its wholly-owned and majority-owned subsidiaries (collectively, the "Company"). Intercompany transactions and balances have been eliminated in consolidation. The Company analyzes its ownership interests in accordance with Accounting Standards Codification ("ASC") "Consolidations (Topic 810)" to determine whether they are a variable interest entity and, if so, whether the Company is the primary beneficiary.

On January 31, 2017, the Company acquired Exploitatiemaatschappij Berghaaf B.V. ("Orlaco"), an electronics business which designs, manufactures and sells camera-based vision systems, monitors and related products. The acquisition was accounted for as a business combination, and accordingly, the Company's consolidated financial statements herein include the results of Orlaco from the date of acquisition. See Acquisitions in Note 2 below to the consolidated financial statements for additional details regarding the Orlaco acquisition.

The Company had a 74% controlling interest in PST Eletrônica Ltda. ("PST") from December 31, 2011 through May 15, 2017. On May 16, 2017, the Company acquired the remaining 26% noncontrolling interest in PST, which was accounted for as an equity transaction. As such, PST is now a wholly owned subsidiary. See Note 4 to the consolidated financial statements for additional details regarding the acquisition of PST's noncontrolling interest.

The Company's investment in Minda Stoneridge Instruments Ltd. ("MSIL") for the years ended December 31, 2018, 2017 and 2016 has been determined to be an unconsolidated entity, and therefore is accounted for under the equity method of accounting based on the Company's 49% ownership in MSIL.

**Accounting Estimates**

The preparation of financial statements in conformity with U.S. Generally Accepted Accounting Principles ("GAAP") requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, including certain self-insured risks and liabilities, disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Because actual results could differ from those estimates, the Company revises its estimates and assumptions as new information becomes available.

**Cash and Cash Equivalents**

The Company's cash and cash equivalents include actively traded money market funds with short-term investments in marketable securities, primarily U.S. government securities. Cash and cash equivalents are stated at cost, which approximates fair value, due to the highly liquid nature and short-term duration of the underlying securities with original maturities of 90 days or less.



**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
(in thousands, except share and per share data, unless otherwise indicated)

**2. Summary of Significant Accounting Policies – (continued)**

**Accounts Receivable and Concentration of Credit Risk**

Revenues are principally generated from the automotive, commercial, off-highway, motorcycle and agricultural vehicle markets. The Company's largest customers are Ford Motor Company and Volvo, primarily related to the Control Devices and Electronics reportable segments and accounted for the following percentages of consolidated net sales for the years ended December 31, 2018, 2017 and 2016:

	2018	2017	2016
Ford Motor Company	12%	14%	17%
Volvo	8%	6%	6%

Accounts receivable are recorded at the invoice price, net of an estimate of allowance for doubtful accounts and other reserves.

**Allowance for Doubtful Accounts**

The Company evaluates the collectability of accounts receivable based on a combination of factors. In circumstances where the Company is aware of a specific customer's inability to meet its financial obligations, a specific allowance for doubtful accounts is recorded against amounts due to reduce the net recognized receivable to the amount the Company reasonably believes will be collected. Additionally, the Company reviews historical trends for collectability in determining an estimate for its allowance for doubtful accounts. If economic circumstances change substantially, estimates of the recoverability of amounts due to the Company could be reduced by a material amount. The Company does not have collateral requirements with its customers.

**Sales of Accounts Receivable**

In prior years, the Company's PST segment sold selected accounts receivable on a full recourse basis to an unrelated financial institution in Brazil. PST accounts for these transactions as sales of accounts receivable. As such, in accordance with ASC 860, "Transfers and Servicing", the sales of accounts receivable are reflected as a reduction of accounts receivable in the consolidated balance sheets and the loss on sale is recorded within interest expense, net in the consolidated statements of operations while the proceeds received from the sale are included in the cash flows from operating activities in the consolidated statements of cash flows.

During 2017, PST sold \$2,520 (7,983 Brazilian real ("R\$")) of accounts receivable at a loss of \$86 (R\$273), which represents the implicit interest on the transaction, and received proceeds of \$2,434 (R\$7,710). PST did not have any remaining credit exposure at December 31, 2017 related to the receivables sold. During 2018, PST did not sell any of its accounts receivable.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(in thousands, except share and per share data, unless otherwise indicated)

### 2. Summary of Significant Accounting Policies – (continued)

#### Inventories

Inventories are valued at the lower of cost (using either the first-in, first-out (“FIFO”) or average cost methods) or net realizable value. The Company evaluates and adjusts as necessary its excess and obsolescence reserve on a quarterly basis. Excess inventories are quantities of items that exceed anticipated sales or usage for a reasonable period. The Company has guidelines for calculating provisions for excess inventories based on the number of months of inventories on hand compared to anticipated sales or usage. Management uses its judgment to forecast sales or usage and to determine what constitutes a reasonable period. Inventory cost includes material, labor and overhead. Inventories consist of the following:

As of December 31,	2018	2017
Raw materials	\$54,382	\$47,588
Work-in-progress	4,710	5,806
Finished goods	20,186	20,077
Total inventories, net	\$79,278	\$73,471

Inventory valued using the FIFO method was \$64,745 and \$54,837 at December 31, 2018 and 2017, respectively. Inventory valued using the average cost method was \$14,533 and \$18,634 at December 31, 2018 and 2017, respectively.

#### Pre-production Costs Related to Long-term Supply Arrangements

Engineering, research and development and other design and development costs for products sold on long-term supply arrangements are expensed as incurred unless the Company has a contractual guarantee for reimbursement from the customer which are capitalized as pre-production costs. Costs for molds, dies and other tools used to make products sold on long-term supply arrangements for which the Company either has title to the assets or has the noncancelable right to use the assets during the term of the supply arrangement are capitalized in property, plant and equipment and amortized to cost of sales over the shorter of the term of the arrangement or over the estimated useful lives of the assets, typically three to five years. Costs for molds, dies and other tools used to make products sold on long-term supply arrangements for which the Company has a contractual guarantee to a lump sum reimbursement from the customer are capitalized either as a component of prepaid expenses and other current assets or an investment and other long term assets, net within the consolidated balance sheets. Capitalized pre-production costs were \$6,875 and \$9,260 at December 31, 2018 and 2017, respectively. At December 31, 2018 and 2017, \$6,875 and \$8,894 were recorded as a component of prepaid expenses and other current assets on the consolidated balance sheets while the remaining amounts were recorded as a component of investments and other long term assets, net.

#### Acquisitions

##### Orlaco

On January 31, 2017, Stoneridge B.V., an indirect wholly-owned subsidiary of Stoneridge, Inc., acquired Orlaco. Orlaco designs, manufactures and sells camera-based vision systems, monitors and related products primarily to the heavy off-road machinery, commercial vehicle, lifting crane and warehousing and logistics industries. Stoneridge and Orlaco jointly developed the MirrorEye camera monitor system, which is a system solution to improve the safety and fuel economy for commercial vehicles. The MirrorEye camera monitor system integrates Orlaco’s vision processing technology and Stoneridge’s driver

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

(in thousands, except share and per share data, unless otherwise indicated)

**2. Summary of Significant Accounting Policies – (continued)**

information capabilities as well as the combined software capabilities of both businesses. The acquisition of Orlaco enhances the Stoneridge's Electronics segment global technical capabilities in vision systems and facilitates entry into new markets.

The aggregate consideration for the Orlaco acquisition was €74,939 (\$79,675), which included customary estimated adjustments to the purchase price. The Company paid €67,439 (\$71,701) in cash. The purchase price was subject to certain customary adjustments set forth in the purchase agreement. The Company is required to pay an additional amount up to €7,500 as contingent consideration ("earn-out consideration") if certain performance targets are achieved during the first two years. See Note 9 for additional details on the Orlaco contingent consideration.

The acquisition date fair value of the total consideration transferred consisted of the following:

Cash	\$79,675
Fair value of earn-out consideration and other adjustments	4,208
<b>Total purchase price</b>	<b>\$83,883</b>

The following table summarizes the final fair value of the assets acquired and liabilities assumed at the acquisition date (including measurement period adjustments):

**At January 31, 2017**

Cash	\$ 2,165
Accounts receivable	7,929
Inventory	9,409
Prepaid and other current assets	298
Property, plant and equipment	6,668
Identifiable intangible assets	38,739
Other long-term assets	6
<b>Total identifiable assets acquired</b>	<b>65,214</b>
Accounts payable	3,020
Other current liabilities	834
Deferred tax liabilities	10,206
Warranty liability	899
<b>Total liabilities assumed</b>	<b>14,959</b>
<b>Net identifiable assets acquired</b>	<b>50,255</b>
Goodwill	33,628
<b>Net assets acquired</b>	<b>\$83,883</b>

Assets acquired and liabilities assumed were recorded at estimated fair values based on management's estimates, available information, and reasonable and supportable assumptions. Also, the Company utilized a third-party to assist with certain estimates of fair values, including:

- Fair value estimate for inventory was based on a comparative sales method
- Fair value estimate for property, plant and equipment was based on appraised values utilizing cost and market approaches

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(in thousands, except share and per share data, unless otherwise indicated)

### 2. Summary of Significant Accounting Policies – (continued)

- Fair values for intangible assets were based on a combination of market and income approaches, including the relief from royalty method
- Fair value for the earn-out consideration was based on a Monte Carlo simulation analysis utilizing forecasted earnings before interest, taxes, depreciation and amortization ("EBITDA") for the 2017 and 2018 earn-out period as well as a growth rate reduced by the market required rate of return

These fair value measurements are classified within Level 3 of the fair value hierarchy. See Note 10 for details on fair value hierarchy.

Goodwill is calculated as the excess of the fair value of consideration transferred over the fair market value of the acquired identifiable assets and assumed liabilities and represents the future economic benefits arising from other assets acquired that could not be separately recognized. The goodwill is not deductible for income tax purposes.

Of the \$38,739 of acquired identifiable intangible assets, \$27,518 was assigned to customer lists with a 15-year useful life; \$5,142 was assigned to trademarks with a 20-year useful life; and \$6,079 was assigned to technology with a 7-year weighted-average useful life.

The Company recognized \$1,259 of acquisition related costs in the consolidated statement of operations as a component of selling, general and administrative ("SG&A") expense for the year ended December 31, 2017. There were no acquisition related costs for the year ended December 31, 2018.

The Company's statement of operations included \$1,636 of expense in cost of goods sold ("COGS") for the year ended December 31, 2017 associated with the step-up of the Orlaco inventory to fair value. The Company's statement of operations included \$369 and \$4,853 of expense for the fair value adjustment for earn-out consideration in SG&A expenses for the year ended December 31, 2018 and 2017, respectively.

The following unaudited pro forma information reflects the Company's consolidated results of operations as if the acquisition had taken place on January 1, 2016. The unaudited pro forma information is not necessarily indicative of the results of operations that the Company would have reported had the transaction actually occurred at the beginning of these periods, nor is it necessarily indicative of future results.

Year ended December 31,	2017	2016
Net sales	\$829,474	\$752,864
Net income attributable to Stoneridge, Inc. and subsidiaries	\$ 45,283	\$ 8,218

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
(in thousands, except share and per share data, unless otherwise indicated)

**2. Summary of Significant Accounting Policies – (continued)**

**Property, Plant and Equipment**

Property, plant and equipment are recorded at cost and consist of the following:

As of December 31,	2018	2017
Land and land improvements	\$ 4,619	\$ 4,863
Buildings and improvements	37,234	37,581
Machinery and equipment	212,225	192,107
Office furniture and fixtures	9,929	10,070
Tooling	75,620	75,038
Information technology	27,179	27,466
Vehicles	872	881
Leasehold improvements	2,799	2,841
Construction in progress	23,064	24,312
Total property, plant, and equipment	393,541	375,159
Less: accumulated depreciation	(281,328)	(264,757)
Property, plant and equipment, net	\$ 112,213	\$ 110,402

Depreciation is provided using the straight-line method over the estimated useful lives of the assets. Depreciation expense for the years ended December 31, 2018, 2017 and 2016 was \$22,786, \$21,490 and \$19,998, respectively. Depreciable lives within each property classification are as follows:

Buildings and improvements	10 – 40 years
Machinery and equipment	3 – 10 years
Office furniture and fixtures	3 – 10 years
Tooling	2 – 5 years
Information technology	3 – 7 years
Vehicles	3 – 5 years
Leasehold improvements	shorter of lease term or 3 – 10 years

Maintenance and repair expenditures that are not considered improvements and do not extend the useful life of the property, plant and equipment are charged to expense as incurred. Expenditures for improvements and major renewals are capitalized. When assets are retired or otherwise disposed of, the related cost and accumulated depreciation are removed from the accounts, and any gain or loss on the disposition is recorded in the consolidated statements of operations as a component of SG&A expenses.

**Impairment of Long-Lived or Finite-Lived Assets**

The Company reviews the carrying value of its long-lived assets and finite-lived intangible assets for impairment when events or circumstances indicate that their carrying value may not be recoverable. Factors the Company considers important that could trigger testing of the related asset groups for an impairment include current period operating or cash flow losses combined with a history of operating or cash flow losses, a projection or forecast that demonstrates continuing losses, significant adverse changes in the business climate within a particular business or current expectations that a long-lived asset will be sold or otherwise disposed of significantly before the end of its estimated useful life. To test for impairment, the estimated undiscounted cash flows expected to be generated from the use and disposal of the asset or asset group is compared to its carrying value. An asset group is established by identifying the lowest level of cash flows generated by the group of assets that are largely independent of cash flows of other assets. If cash flows cannot be separately and independently identified for a single asset, we will

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(in thousands, except share and per share data, unless otherwise indicated)

### 2. Summary of Significant Accounting Policies – (continued)

determine whether an impairment has occurred for the group of assets for which we can identify projected cash flows. If these undiscounted cash flows are less than their respective carrying values, an impairment charge would be recognized to the extent that the carrying values exceed estimated fair values. The estimation of undiscounted cash flows and fair value requires us to make assumptions regarding future operating results over the life of the asset or the life of the primary asset in the asset group. The results of the impairment testing are dependent on these estimates which require judgment. The occurrence of certain events, including changes in economic and competitive conditions, could impact cash flows eventually realized and management's ability to accurately assess whether an asset is impaired.

### Goodwill and Other Intangible Assets

#### *Goodwill*

The total purchase price associated with acquisitions is allocated to the acquisition date fair values of identifiable assets acquired and liabilities assumed with the excess purchase price assigned to goodwill.

Goodwill was \$36,717 and \$38,419 at December 31, 2018 and 2017, respectively, all of which relates to the Electronics segment. Goodwill is not amortized, but instead is tested for impairment at least annually, or earlier when events and circumstances indicate that it is more likely than not that such assets have been impaired, by applying a fair value-based test. In conducting our annual impairment assessment testing, we first perform a qualitative assessment of whether it is more likely than not that a reporting unit's fair value is less than its carrying amount. If not, no further goodwill impairment testing is performed. If it is more likely than not that a reporting unit's fair value is less than its carrying amount, or if we elect not to perform a qualitative assessment of a reporting unit, we then compare the fair value of the reporting unit to the related net book value. If the net book value of a reporting unit exceeds its fair value, an impairment loss is measured and recognized.

The Company utilizes an income statement approach to estimate the fair value of a reporting unit and a market valuation approach to further support this analysis. The income approach is based on projected debt-free cash flow which is discounted to the present value using discount factors that consider the timing and risk of cash flows. We believe that this approach is appropriate because it provides a fair value estimate based on the reporting unit's expected long-term operating cash flow performance. This approach also mitigates the impact of cyclical trends that occur in the industry. Fair value is estimated using internally developed forecasts, as well as commercial and discount rate assumptions. The discount rate used is the value-weighted average of our estimated cost of equity and of debt ("cost of capital") derived using both known and estimated customary market metrics. Our weighted average cost of capital is adjusted to reflect a risk factor, if necessary. Other significant assumptions include terminal value growth rates, terminal value margin rates, future capital expenditures and changes in future working capital requirements. While there are inherent uncertainties related to the assumptions used and to management's application of these assumptions to this analysis, we believe that the income statement approach provides a reasonable estimate of the fair value of a reporting unit. The market valuation approach is used to further support our analysis. There was no impairment of goodwill for the years ended December 31, 2018, 2017 or 2016.



## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(in thousands, except share and per share data, unless otherwise indicated)

### 2. Summary of Significant Accounting Policies – (continued)

Goodwill and changes in the carrying amount of goodwill by segment for the years ended December 31, 2018 and 2017 were as follows:

	Electronics
Balance at January 1, 2018	\$38,419
Currency translation	(1,702)
Balance at December 31, 2018	\$36,717

	Electronics
Balance at January 1, 2017	\$ 931
Acquisition of business	33,628
Currency translation	3,860
Balance at December 31, 2017	\$38,419

The Company's cumulative goodwill impairment loss since inception was \$300,083 at December 31, 2018 and 2017, which includes PST's goodwill impairment in 2014 and goodwill impairment recorded by the Company's Control Devices segment in 2008 and 2004.

### Other Intangible Assets

Other intangible assets, net at December 31, 2018 and 2017 consisted of the following:

As of December 31, 2018	Acquisition cost	Accumulated amortization	Net
Customer lists	\$52,200	\$(14,549)	\$37,651
Tradenames	20,689	(5,884)	14,805
Technology	15,581	(6,005)	9,576
Total other intangible assets	\$88,470	\$(26,438)	\$62,032

As of December 31, 2017	Acquisition cost	Accumulated amortization	Net
Customer lists	\$57,672	\$(12,695)	\$44,977
Tradenames	23,546	(5,646)	17,900
Technology	17,443	(5,077)	12,366
Other	41	(41)	—
Total other intangible assets	\$98,702	\$(23,459)	\$75,243

Other intangible assets, net at December 31, 2018 for customer lists, tradenames, and technology include \$25,501, \$4,939 and \$4,566, respectively, related to the Electronics segment and customer lists, tradenames and technology of \$12,150, \$9,866 and \$5,010, respectively, related to the PST segment.

The Company recognized \$6,406, \$6,440 and \$3,259 of amortization expense related to intangible assets in 2018, 2017 and 2016, respectively. Amortization expense is included as a component of SG&A on the consolidated statements of operations. Annual amortization expense for intangible assets is estimated to be approximately \$6,205 for the years 2019 through 2023. The weighted-average remaining amortization period is approximately 12 years.

For the year ended December 31, 2018 the Company recognized \$202 of intangible impairment charge related to the Electronics segment customer lists as a result of the European Aftermarket restructuring as noted in Note 13. There were no intangible impairment charges for the year ended December 31, 2017.

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
(in thousands, except share and per share data, unless otherwise indicated)

**2. Summary of Significant Accounting Policies – (continued)**

**Accrued Expenses and Other Current Liabilities**

Accrued expenses and other current liabilities consist of the following:

As of December 31,	2018	2017
Compensation related liabilities	<b>\$18,717</b>	\$22,429
Contingent consideration <sup>(A)</sup>	<b>8,602</b>	—
Product warranty and recall obligations	<b>7,211</b>	6,867
Accrued income taxes	<b>1,507</b>	6,897
Other <sup>(B)</sup>	<b>21,843</b>	16,353
Total accrued expenses and other current liabilities	<b>\$57,880</b>	\$52,546

(A) Accrued contingent consideration includes the Orlaco contingent consideration, as referenced in Note 2 and Note 10, and is included in accrued expenses and other current liabilities for the year ended December 31, 2018 and was included in other long-term liabilities for the year ended December 31, 2017.

(B) "Other" is comprised of miscellaneous accruals, none of which individually contributed a significant portion of the total.

**Income Taxes**

The Company accounts for income taxes using the liability method. Deferred income taxes reflect the tax consequences on future years of differences between the tax basis of assets and liabilities and their financial reporting amounts. Future tax benefits are recognized to the extent that realization of such benefits is more likely than not to occur. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in the period that includes the enactment date.

Deferred tax assets are recognized to the extent that these assets are more likely than not to be realized (See Note 6). In making such a determination, the Company considers all available positive and negative evidence, including future release of existing taxable temporary differences, projected future taxable income, tax planning strategies, and results of recent operations. Release of some or all of a valuation allowance would result in the recognition of certain deferred tax assets and a decrease to income tax expense for the period the release is recorded.

The Company's policy is to provide for uncertain tax positions and the related interest and penalties based upon management's assessment of whether a tax benefit is more likely than not to be sustained upon examination by tax authorities. To the extent the Company prevails in matters for which a liability for an unrecognized tax benefit is established or is required to pay amounts in excess of the liability, the Company's effective tax rate in a given financial statement period may be affected.

The Tax Legislation created a provision known as Global Intangible Low-Taxed Income ("GILTI") that imposes a tax on certain earnings of foreign subsidiaries. The Company has made an accounting policy election to reflect GILTI taxes, if any, as a current income tax expense in the period incurred.

**Currency Translation**

The financial statements of foreign subsidiaries, where the local currency is the functional currency, are translated into U.S. dollars using exchange rates in effect at the period end for assets and liabilities and average exchange rates during each reporting period for the results of operations. Adjustments resulting from translation of financial statements are reflected as a component of accumulated other comprehensive loss in the Company's consolidated balance sheets.

Foreign currency transactions are remeasured into the functional currency using translation rates in effect at the time of the transaction with the resulting adjustments included on the consolidated statements of

## **NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

(in thousands, except share and per share data, unless otherwise indicated)

### **2. Summary of Significant Accounting Policies – (continued)**

operations within other expense, net. These foreign currency transaction losses (gains), including the impact of hedging activities, were \$(487), \$500 and \$(268) for the years ended December 31, 2018, 2017 and 2016, respectively.

#### **Revenue Recognition and Sales Commitments**

The Company recognizes revenue when obligations under the terms of a contract with our customer are satisfied; generally this occurs with the transfer of control of our products and services, which is usually when the parts are shipped or delivered to the customer's premises. The Company recognizes monitoring service revenues over time, as the services are provided to customers. Revenue is measured as the amount of consideration we expect to receive in exchange for transferring goods or providing services. The transaction price will include estimates of variable consideration to the extent it is probable that a significant reversal of revenue recognized will not occur. Incidental items that are not significant in the context of the contract are recognized as expense. The Company collects certain taxes and fees on behalf of government agencies and remits such collections on a periodic basis. The taxes are collected from customers but are not included in net sales. Estimated returns are based on historical authorized returns. The Company often enters into agreements with its customers at the beginning of a given vehicle's expected production life. Once such agreements are entered into, it is the Company's obligation to fulfill the customers' purchasing requirements for the entire production life of the vehicle. These agreements are subject to potential renegotiation from time to time, which may affect product pricing. See Note 3 for additional disclosure.

#### **Shipping and Handling Costs**

Shipping and handling costs are included in COGS on the consolidated statements of operations.

#### **Product Warranty and Recall Reserves**

Amounts accrued for product warranty and recall claims are established based on the Company's best estimate of the amounts necessary to settle existing and future claims on products sold as of the balance sheet dates. These accruals are based on several factors including past experience, production changes, industry developments and various other considerations including insurance coverage. The Company can provide no assurances that it will not experience material claims or that it will not incur significant costs to defend or settle such claims beyond the amounts accrued or beyond what the Company may recover from its suppliers. The current portion of the product warranty and recall reserve is included as a component of accrued expenses and other current liabilities on the consolidated balance sheets. Product warranty and recall includes \$3,283 and \$3,112 of a long-term liability at December 31, 2018 and 2017, respectively, which is included as a component of other long-term liabilities on the consolidated balance sheets.

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
(in thousands, except share and per share data, unless otherwise indicated)

**2. Summary of Significant Accounting Policies – (continued)**

The following provides a reconciliation of changes in the product warranty and recall reserve:

Year ended December 31,	2018	2017
Product warranty and recall at beginning of period	\$ 9,979	\$ 9,344
Accruals for warranties established during period	6,217	4,933
Assumed warranty liability related to Orlaco	—	899
Aggregate changes in pre-existing liabilities due to claim developments	646	4,899
Settlements made during the period	(5,831)	(10,407)
Foreign currency translation	(517)	311
Product warranty and recall at end of period	<b>\$10,494</b>	<b>\$ 9,979</b>

**Design and Development Costs**

Expenses associated with the development of new products, and changes to existing products are charged to expense as incurred, and are included in the Company's consolidated statements of operations as a separate component of costs and expenses. These product development costs amounted to \$51,074, \$48,877 and \$40,212 for the years ended December 31, 2018, 2017 and 2016, respectively, or 5.9%, 5.9% and 5.8% of net sales for these respective periods.

**Research and Development Activities**

The Company enters into research and development contracts with certain customers, which generally provide for reimbursement of costs. The Company incurred and was reimbursed for contracted research and development costs of \$16,540, \$14,946 and \$12,764 for the years ended December 31, 2018, 2017 and 2016, respectively.

**Share-Based Compensation**

At December 31, 2018, the Company had two types of share-based compensation plans: (1) Long-Term Incentive Plan for employees and (2) the Amended Directors' Restricted Shares Plan, for non-employee directors. The Long-Term Incentive Plan is made up of the Long-Term Incentive Plan which expired on June 30, 2007, the Amended and Restated Long-Term Incentive Plan, as amended, which expired on April 24, 2016 and the 2016 Long-Term Incentive Plan that was approved by shareholders on May 10, 2016, and expires on May 10, 2026.

Total compensation expense recognized as a component of SG&A expense on the consolidated statements of operations for share-based compensation arrangements was \$5,632, including the forfeiture of certain grants associated with employee resignations, \$7,265, related to higher attainment of performance-based awards and accelerated expense associated with the retirement of eligible employees, and \$6,134, including \$545 from the accelerated vesting in connection with the retirement of the Company's former President and Chief Executive Officer, for the years ended December 31, 2018, 2017 and 2016, respectively. There was no share-based compensation expense capitalized in inventory during 2018, 2017 or 2016.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(in thousands, except share and per share data, unless otherwise indicated)

### 2. Summary of Significant Accounting Policies – (continued)

#### Financial Instruments and Derivative Financial Instruments

Financial instruments, including derivative financial instruments, held by the Company include cash and cash equivalents, accounts receivable, accounts payable, long-term debt and foreign currency forward contracts. The carrying value of cash and cash equivalents, accounts receivable and accounts payable is considered to be representative of fair value because of the short maturity of these instruments. See Note 10 for fair value disclosures of the Company's financial instruments.

#### Common Shares Held in Treasury

The Company accounts for Common Shares held in treasury under the cost method (applied on a FIFO basis) and includes such shares as a reduction of total shareholders' equity.

#### Earnings Per Share

Basic earnings per share was computed by dividing net income attributable to Stoneridge Inc. by the weighted-average number of Common Shares outstanding for each respective period. Diluted earnings per share was calculated by dividing net income attributable to Stoneridge, Inc. by the weighted-average of all potentially dilutive Common Shares that were outstanding during the periods presented.

Actual weighted-average Common Shares outstanding used in calculating basic and diluted net income per share were as follows:

Year ended December 31,	2018	2017	2016
Basic weighted-average Common Shares outstanding	28,402,227	28,082,114	27,763,990
Effect of dilutive shares	677,599	689,531	544,932
Diluted weighted-average Common Shares outstanding	29,079,826	28,771,645	28,308,922

There were no performance-based restricted Common Shares outstanding at December 31, 2018, 2017 or 2016. There were also 628,220, 766,538 and 843,140 performance-based right to receive Common Shares outstanding at December 31, 2018, 2017 and 2016. These performance-based restricted and right to receive Common Shares are included in the computation of diluted earnings per share based on the number of Common Shares that would be issuable if the end of the year were the end of the contingency period.

#### Deferred Financing Costs, net

Deferred financing costs are amortized over the life of the related financial instrument using the straight-line method, which approximates the effective interest method. Deferred finance cost amortization and debt discount accretion for the years ended December 31, 2018, 2017 and 2016 was \$326, \$324 and \$355, respectively, and is included as a component of interest expense, net in the consolidated statements of operations. The Company has elected to continue to present deferred financing costs related to the Credit Facility within long-term assets in the Company's consolidated balance sheets. Deferred financing costs, net, were \$882 and \$1,208, as of December 31, 2018 and 2017, respectively.

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
(in thousands, except share and per share data, unless otherwise indicated)

**2. Summary of Significant Accounting Policies – (continued)**

**Changes in Accumulated Other Comprehensive Loss by Component**

Changes in accumulated other comprehensive loss for the years ended December 31, 2018 and 2017 were as follows:

	Foreign currency translation	Unrealized gain (loss) on derivatives	Total
Balance at January 1, 2018	<b>\$(69,417)</b>	<b>\$ (143)</b>	<b>\$(69,560)</b>
Other comprehensive (loss) income before reclassifications	<b>(16,627)</b>	<b>1,448</b>	<b>(15,179)</b>
Amounts reclassified from accumulated other comprehensive loss	<b>—</b>	<b>(1,013)</b>	<b>(1,013)</b>
Net other comprehensive (loss) income, net of tax	<b>(16,627)</b>	<b>435</b>	<b>(16,192)</b>
Balance at December 31, 2018	<b>\$(86,044)</b>	<b>\$ 292</b>	<b>\$(85,752)</b>
Balance at January 1, 2017	<b>\$(67,895)</b>	<b>\$ (18)</b>	<b>\$(67,913)</b>
Other comprehensive income before reclassifications	<b>15,473</b>	<b>509</b>	<b>15,982</b>
Amounts reclassified from accumulated other comprehensive loss	<b>—</b>	<b>(634)</b>	<b>(634)</b>
Net other comprehensive income (loss), net of tax	<b>15,473</b>	<b>(125)</b>	<b>15,348</b>
Reclassification of foreign currency translation associated with noncontrolling interest acquired	<b>(16,995)</b>	<b>—</b>	<b>—</b>
Balance at December 31, 2017	<b>\$(69,417)</b>	<b>\$ (143)</b>	<b>\$(69,560)</b>

**Reclassifications**

Certain prior period amounts have been reclassified to conform to their 2018 presentation in the consolidated financial statements.

**Recently Adopted Accounting Standards**

In March 2018, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) 2018-05, “Income Taxes — Amendments to SEC Paragraphs Pursuant to SEC Staff Accounting Bulletin No. 118.” The standard provides for a provisional one-year measurement period for entities to finalize their accounting for certain tax effects of the Tax Legislation. The Company adopted this standard as of January 1, 2018, which did not have a material impact on its consolidated financial statements. The Company has completed its accounting for SAB 118 as of December 31, 2018.

In January 2017, the FASB issued ASU 2017-01, “Clarifying the Definition of a Business (Topic 805)”. It revises the definition of a business and provides a framework to evaluate when an input and a substantive process are present in an acquisition to be considered a business. This guidance was effective for annual periods beginning after December 15, 2017. The Company adopted this standard on January 1, 2018, which did not have a material impact on its consolidated financial statements.

In October 2016, the FASB issued ASU 2016-16, “Accounting for Income Taxes: Intra-Entity Asset Transfers of Assets Other than Inventory (Topic 740)”. This guidance requires that the tax effects of all intra-entity sales of assets other than inventory be recognized in the period in which the transaction occurs. The Company adopted this standard on January 1, 2018, which did not have a material impact on its consolidated financial statements.



## **NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

(in thousands, except share and per share data, unless otherwise indicated)

### **2. Summary of Significant Accounting Policies – (continued)**

In August 2016, the FASB issued ASU 2016-15, "Statement of Cash Flows — Classification of Certain Cash Receipts and Cash Payments (Topic 230)", which provides guidance on the presentation and classification of certain cash receipts and cash payments in the statement of cash flows in order to reduce diversity in practice. This ASU was effective for interim and annual periods beginning after December 15, 2017. The Company adopted this standard as of January 1, 2018, which did not have a material impact on its consolidated financial statements.

In January 2016, the FASB issued ASU 2016-01, "Financial Instruments — Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities." The standard requires equity investments and other ownership interests in unconsolidated entities (other than those accounted for using the equity method of accounting or those that result in consolidation of the investee) to be measured at fair value with changes in fair value recognized in net income. The Company adopted this standard as of January 1, 2018, which did not have a material impact on its consolidated financial statements.

In May 2014, the FASB issued ASU 2014-09, "Revenue from Contracts with Customers" and related amendments, which is the new comprehensive revenue recognition standard (collectively known as Accounting Standard Codification ("ASC") 606) that has superseded existing revenue recognition guidance under U.S. GAAP. The standard's core principle is that a company will recognize revenue when it transfers promised goods or services to a customer in an amount that reflects the consideration to which a company expects to be entitled in exchange for those goods or services. To achieve this principle, an entity identifies the contract with a customer, identifies the separate performance obligations in the contract, determines the transaction price, allocates the transaction price to the separate performance obligations and recognizes revenue when each separate performance obligation is satisfied. The Company adopted this standard on January 1, 2018 using the modified retrospective transition method. Under the modified retrospective method, the Company would have recognized the cumulative effect of initially applying the standard as an adjustment to opening retained earnings at the date of initial application; however, the Company did not have any material adjustments as of the date of the adoption. The Company has not experienced a material impact on its results of operations from the adoption of ASC 606; however, the Company has expanded its disclosures consistent with the requirements of the new standard and the Company will continue to evaluate new contracts to apply the framework of ASC 606. In particular, the Company will evaluate new contracts with customers analyzing the impact, if any, on revenue from the sale of production parts, particularly in regards to material rights, variable consideration and the impact of termination clauses on the timing of revenue recognition. The majority of our revenue continues to be recognized when products are shipped from our manufacturing facilities. The Company has not changed how it accounts for reimbursable pre-production costs, currently accounted for as a reduction of costs incurred. Refer to Note 3 for the expanded revenue disclosures.

### **Recently Issued Accounting Standards Not Yet Adopted as of December 31, 2018**

In January 2018, the FASB issued ASU 2018-02, "Income Statement — Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income." This guidance gives entities the option to reclassify to retained earnings the tax effects resulting from the enactment of Tax Cuts and Jobs Act (Tax Legislation") related to items in accumulated other comprehensive income ("AOCI") that the FASB refers to as having been stranded in AOCI. The new guidance is effective for fiscal years beginning after December 15, 2018 and interim periods within those fiscal years. Early adoption is permitted for periods for which financial statements have not yet been

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(in thousands, except share and per share data, unless otherwise indicated)

### 2. Summary of Significant Accounting Policies – (continued)

issued or made available for issuance, including the period the Tax Legislation was enacted. The Company will adopt this standard as of January 1, 2019, which is not expected to have a material impact on its consolidated financial statements.

In June 2016, the FASB issued ASU 2016-13, “Financial Instruments — Credit Losses (Topic 326) Measurement of Credit Losses on Financial Instruments”, which requires measurement and recognition of expected credit losses for financial assets held and requires enhanced disclosures regarding significant estimates and judgments used in estimating credit losses. ASU 2016-13 is effective for public business entities for annual periods beginning after December 15, 2019, and early adoption is permitted for annual periods beginning after December 15, 2018. The Company is currently evaluating the impact of its pending adoption of ASU 2016-13 on the consolidated financial statements. The Company will adopt this standard as of January 1, 2020 and are still evaluating the impact on its consolidated financial statements.

In February 2016, the FASB issued ASU 2016-02, “Leases (Topic 842)”, which will require that a lessee recognize assets and liabilities on the balance sheet for all leases with a lease term of more than twelve months, with the result being the recognition of a right of use asset and a lease liability. The new standard is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2018. The Company will adopt this standard as of January 1, 2019 using the modified retrospective approach and will elect the transition option to use the effective date January 1, 2019, as the date of initial application. The Company will not adjust its comparative period financial statements for effects of the ASU 2016-02, or make the new required lease disclosures for periods before the effective date. The Company will recognize its cumulative effect transition adjustment as of the effective date. In addition, the Company will elect the package of practical expedients permitted under the transition guidance within the new standard. The impact of adoption will result in the recognition of right of use assets estimated in the range of \$15,600 to \$21,200, with corresponding lease liabilities of the same amount. The standard will not have a significant impact on the Company’s consolidated results of operations and cash flows.

### 3. Revenue

The Company adopted ASC 606 using the modified retrospective method as applied to customer contracts that were not completed as of January 1, 2018. As a result, financial information for reporting periods beginning after January 1, 2018 are presented under ASC 606, while comparative financial information has not been adjusted and continues to be reported in accordance with the Company’s historical accounting policy for revenue recognition prior to the adoption of ASC 606. The Company did not record a cumulative adjustment related to the adoption of ASC 606, and the effects of the adoption were not significant.

Revenue is recognized when obligations under the terms of a contract with our customer are satisfied; generally this occurs with the transfer of control of our products and services, which is usually when the parts are shipped or delivered to the customer’s premises. Revenue is measured as the amount of consideration we expect to receive in exchange for transferring goods or providing services. The transaction price will include estimates of variable consideration to the extent it is probable that a significant reversal of revenue recognized will not occur. Incidental items that are not significant in the context of the contract are recognized as expense. The expected costs associated with our base warranties continue to be recognized as expense when the products are sold. Customer returns only occur if products do not meet the specifications of the contract and are not connected to any repurchase obligations of the Company.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(in thousands, except share and per share data, unless otherwise indicated)

### 3. Revenue – (continued)

The Company does not have any financing components or significant payment terms as payment occurs shortly after the point of sale. Taxes assessed by a governmental authority that are both imposed on and concurrent with a specific revenue-producing transaction that are collected by the Company from a customer are excluded from revenue. Amounts billed to customers related to shipping and handling costs are included in net sales in the consolidated statements of operations. Shipping and handling costs associated with outbound freight after control over a product is transferred to the customer are accounted for as a fulfillment cost and are included in cost of sales.

#### *Revenue by Reportable Segment*

**Control Devices.** Our Control Devices segment designs and manufactures products that monitor, measure or activate specific functions within a vehicle. This segment includes product lines such as sensors, actuators, valves and switches. We sell these products principally to the automotive market in the North American, European, and Asia Pacific regions. To a lesser extent, we also sell these products to the commercial vehicle and agricultural markets in our North America and European regions. Our customers included in these markets primarily consist of original equipment manufacturers (“OEM”) and companies supplying components directly to the OEMs (“Tier 1 supplier”).

**Electronics.** Our Electronics segment designs and manufactures electronic instrument clusters, electronic control units, driver information systems, camera-based vision systems, monitors and related products. These products are sold principally to the commercial vehicle market primarily through our OEM and aftermarket channels in the North American and European regions, and to a lesser extent, the Asia Pacific region. The camera-based vision systems and related products are sold principally to the off-highway vehicle market in the North American and European regions.

**PST.** Our PST segment primarily serves the South American region and specializes in the design, manufacture and sale of in-vehicle audio and video devices, electronic vehicle security alarms, convenience accessories, vehicle tracking devices and monitoring services primarily for the automotive and motorcycle markets. PST sells its products through the aftermarket distribution channel, to factory authorized dealer installers, also referred to as original equipment services, direct to OEMs and through mass merchandisers. In addition, monitoring services and tracking devices are sold directly to corporate and individual consumers.

The following tables disaggregate our revenue by reportable segment and geographical location<sup>(1)</sup> for the periods ended December 31, 2018 and 2017:

Year ended December 31,	Control Devices		Electronics		PST		Consolidated	
	2018	2017	2018	2017	2018	2017	2018	2017
Net Sales:								
North America	\$395,148	\$409,596	\$ 85,363	\$ 62,174	\$ —	\$ —	\$480,511	\$471,770
South America	—	—	—	—	80,175	94,533	80,175	94,533
Europe	14,727	8,164	255,400	216,577	—	—	270,127	224,741
Asia Pacific	31,422	29,768	3,964	3,632	—	—	35,386	33,400
Total net sales	\$441,297	\$447,528	\$344,727	\$282,383	\$80,175	\$94,533	\$866,199	\$824,444

(1) Company sales based on geographic location are where the sale originates not where the customer is located.

#### *Performance Obligations*

For OEM and Tier 1 supplier customers, the Company typically enters into contracts with its customers to provide serial production parts that consist of a set of documents including, but not limited to, an award letter, master purchase agreement and master terms and conditions. For each production product, the

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**(in thousands, except share and per share data, unless otherwise indicated)**

**3. Revenue – (continued)**

Company enters into separate purchase orders that contain the product specifications and an agreed-upon price. The performance obligation does not exist until a customer release is received for a specific number of parts. The majority of the parts sold to OEM and Tier 1 suppliers are specifically customized to the specific customer, with the exception of off-highway products that are common across all customers. The transaction price is equal to the contracted price per part and there is no expectation of material variable consideration in the transaction price. For most customer contracts, the Company does not have an enforceable right to payment at any time prior to when the parts are shipped or delivered to the customer; therefore, the Company recognizes revenue at the point in time it satisfies a performance obligation by transferring control of a part to the customer. Certain customer contracts contain an enforceable right to payment if the customer terminates the contract for convenience and therefore are recognized over time using the cost to complete input method.

Our aftermarket products are focused on meeting the demand for repair and replacement parts, compliance parts and accessories and are sold primarily to aftermarket distributors and mass retailers in our South American, European and North American markets. Aftermarket products have one type of performance obligation which is the delivery of aftermarket parts and spare parts. For aftermarket customers, the Company typically has standard terms and conditions for all customers. In addition, aftermarket products have alternative use as they can be sold to multiple customers. Revenue for aftermarket part production contracts is recognized at a point in time when the control of the parts transfer to the customer which is based on the shipping terms. Aftermarket contracts may include variable consideration related to discounts and rebates and is included in the transaction price upon recognizing the product revenue.

A small portion of the Company's sales are comprised of monitoring services that include both monitoring devices and fees to individual, corporate, fleet and cargo customers in our PST segment. These monitoring service contracts are generally not capable of being distinct and are accounted for as a single performance obligation. We recognize revenue for our monitoring products and services contracts over the life of the contract. There is no variable consideration associated with these contracts. The Company has the right to consideration from a customer in the amount that corresponds directly with the value to the customer of the Company's performance to date. Therefore the Company recognizes revenue over time using the practical expedient ASC 606-10-55-18 in the amount the Company has a "right to invoice" rather than selecting an output or input method.

**4. Investments**

***Minda Stoneridge Instruments Ltd.***

The Company has a 49% interest in MSIL, a company based in India that manufactures electronics, instrumentation equipment and sensors for the motorcycle, commercial vehicle and automotive markets. The investment is accounted for under the equity method of accounting. The Company's investment in MSIL, recorded as a component of investments and other long-term assets, net on the consolidated balance sheets, was \$11,288 and \$10,131 as of December 31, 2018 and 2017, respectively. Equity in earnings of MSIL included in the consolidated statements of operations were \$2,038, \$1,636 and \$1,233 for the years ended December 31, 2018, 2017 and 2016, respectively.

***PST Eletrônica Ltda.***

The Company had a 74% controlling interest in PST from December 21, 2011 through May 15, 2017. On May 16, 2017, the Company acquired the remaining 26% noncontrolling interest in PST for \$1,500 in cash along with earn-out consideration. The Company will be required to pay additional earn-out

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

(in thousands, except share and per share data, unless otherwise indicated)

**4. Investments – (continued)**

consideration, which is not capped, based on PST's financial performance in either 2020 or 2021. The preliminary estimated fair value of the earn-out consideration as of the acquisition date was \$10,180, and was based on discounted cash flows utilizing forecasted EBITDA in 2020 and 2021. The Company's statement of operations for the years ended December 31, 2018 and 2017 included \$(156) and \$2,632, respectively, of (income) expense for the fair value adjustment for earn-out consideration in SG&A expense. See Note 10 for the fair value and foreign currency adjustments of the earn-out consideration. This fair value measurement is classified within Level 3 of the fair value hierarchy. The transaction was accounted for as an equity transaction, and therefore no gain or loss was recognized in the statement of operations or comprehensive income. The noncontrolling interest balance on the May 16, 2017 acquisition date was \$14,458, of which \$31,453 and (\$16,995) was related to the carrying value of the investment and foreign currency translation, respectively, and accordingly these amounts were reclassified to additional paid-in capital and accumulated other comprehensive loss, respectively.

The following table sets forth a summary of the change in noncontrolling interest:

<b>Year ended December 31,</b>	<b>2017</b>	<b>2016</b>
Noncontrolling interest at beginning of period	\$ 13,762	\$13,310
Net loss	(130)	(1,887)
Foreign currency translation	826	2,339
Comprehensive income	696	452
Acquisition of noncontrolling interest	(14,458)	—
Noncontrolling interest at end of period	\$ —	\$13,762

PST has dividends payable to former noncontrolling interest holders of R\$23,204 Brazilian real (\$5,980) and R\$22,330 Brazilian real (\$6,742) as of December 31, 2018 and 2017, respectively. The dividends payable balance includes monetary correction of R\$2,752 Brazilian real (\$709) and R\$1,879 Brazilian real (\$567) as of December 31, 2018 and 2017, respectively. The dividend is payable on or before January 1, 2020, and is subject to monetary correction based on the Brazilian National Extended Consumer Price inflation index ("IPCA"). The dividend payable related to PST is recorded within other current liabilities on the consolidated balance sheet.

**Other Investments**

In December 2018, the Company entered into an agreement to make a \$10,000 investment in a fund managed by Autotech Ventures ("Autotech"), a venture capital firm focused on ground transportation technology. The Company's \$10,000 investment in the Autotech fund will be contributed over the expected ten year life of the fund. The fourth quarter of 2018 contribution of \$437 to the Autotech Ventures fund was recorded in investments and other long-term assets in the consolidated balance sheet as of December 31, 2018.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(in thousands, except share and per share data, unless otherwise indicated)

### 5. Debt

As of December 31,	2018	2017	Interest rates at December 31, 2018	Maturity
<b>Revolving Credit Facility</b>				
Credit Facility	\$96,000	\$121,000	3.40% – 3.58%	September 2021
<b>Debt</b>				
PST short-term obligations	989	—	10.0% – 11.27%	2019
PST long-term notes	1,527	8,016	8.0%	November 2021
Other	—	28		
Total debt	2,516	8,044		
Less: current portion	(1,533)	(4,192)		
Total long-term debt, net	\$ 983	\$ 3,852		

#### *Revolving Credit Facility*

On November 2, 2007, the Company entered into an asset-based credit facility which permitted borrowing up to a maximum level of \$100,000. The Company entered into an Amended and Restated Credit and Security Agreement and a Second Amended and Restated Credit and Security Agreement on September 20, 2010 and December 1, 2011, respectively.

On September 12, 2014, the Company entered into a Third Amended and Restated Credit Agreement (the "Amended Agreement"). The Amended Agreement provides for a \$300,000 revolving credit facility (the "Credit Facility"), which replaced the Company's existing \$100,000 asset-based credit facility and includes a letter of credit subfacility, swing line subfacility and multicurrency subfacility. The Amended Agreement also has an accordion feature which allows the Company to increase the availability by up to \$80,000 upon the satisfaction of certain conditions. The Amended Agreement extended the termination date to September 12, 2019 from December 1, 2016. On March 26, 2015, the Company entered into Amendment No. 1 of the Amended Agreement which amended the definition of Consolidated EBITDA to allow for the add back of cash premiums and other non-cash charges related to the amendment and restatement of the Amended Agreement and the early extinguishment of the Company's 9.5% Senior Notes totaling \$10,507 both of which occurred in second half of 2014. Consolidated EBITDA is used in computing the Company's leverage ratio and interest coverage ratio which are covenants within the Amended Agreement. On February 23, 2016, the Company entered into Amendment No. 2 of the Amended Agreement which amended and waived any default or potential defaults with respect to the pledging as collateral additional shares issued by a wholly owned subsidiary and newly issued shares associated with the formation of a new subsidiary. On August 12, 2016, the Company entered into Amendment No. 3 of the Amended Agreement which extended the expiration date by two years to September 12, 2021, increased the borrowing sub-limit for the Company's foreign subsidiaries by \$30,000 to \$80,000, increased the basket of permitted loans and investments in foreign subsidiaries by \$5,000 to \$30,000, and provided additional flexibility to the Company for certain permitted corporate transactions involving its foreign subsidiaries as defined, in the Amended Agreement. As a result of Amendment No. 3, the Company capitalized deferred financing costs of \$399, which will be amortized over the remaining term of the Credit Facility. On January 30, 2017, the Company entered into Consent and Amendment No. 4 to the Amended Agreement which amended certain definitions, schedules and exhibits of the Credit Facility, consented to a Dutch Reorganization, and consented to the Orlaco acquisition. As a result of Amendment No. 4, the Company capitalized deferred financing costs of \$61, which will be amortized over the remaining term of the Credit Facility. On September 11, 2018, the Company entered into Amendment No. 5 to the Amended Agreement which extended financial accommodations to permit the Company to invest in certain funds in an amount that does not exceed \$10,000. On October 26, 2018, the Company



**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
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**5. Debt – (continued)**

entered into Consent and Amendment No. 6 to the Amended Agreement which amended certain definitions, sections and schedules of the Credit Facility and consented to realignment of certain foreign subsidiaries, and permits the Company to repurchase the Company's outstanding common shares in an amount that does not exceed \$50,000.

Borrowings under the Amended Agreement will bear interest at either the Base Rate, as defined, or the LIBOR Rate, at the Company's option, plus the applicable margin as set forth in the Amended Agreement. The Company is also subject to a commitment fee ranging from 0.20% to 0.35% based on the Company's leverage ratio. The Amended Agreement requires the Company to maintain a maximum leverage ratio of 3.00 to 1.00, and a minimum interest coverage ratio of 3.50 to 1.00 and places a maximum annual limit on capital expenditures. The Amended Agreement also contains other affirmative and negative covenants and events of default that are customary for credit arrangements of this type including covenants which place restrictions and/or limitations on the Company's ability to borrow money, make capital expenditures and pay dividends.

Borrowings outstanding on the Credit Facility at December 31, 2018 and 2017 were \$96,000 and \$121,000, respectively. Borrowings decreased under the Credit Facility due to voluntary principal repayments.

The Company has outstanding letters of credit of \$1,815 and \$2,008 at December 31, 2018 and 2017, respectively.

***Debt***

PST maintains short-term and long-term notes used for working capital purposes which have fixed interest rates. The weighted-average interest rates of short-term and long-term debt of PST at December 31, 2018 was 10.45% and 8.00%, respectively. Depending on the specific note, interest is payable either monthly or annually. Scheduled maturities of PST debt at December 31, 2018 are as follows: \$1,533 in 2019, \$513 in 2020 and \$470 in 2021.

The Company's wholly-owned subsidiary located in Stockholm, Sweden, has an overdraft credit line which allows overdrafts on the subsidiary's bank account up to a maximum level of 20,000 Swedish krona, or \$2,259 and \$2,439 at December 31, 2018 and 2017, respectively. At December 31, 2018 and 2017, there was no balance outstanding on this overdraft credit line.

The Company was in compliance with all Credit Facility and debt covenants at December 31, 2018 and 2017.

At December 31, 2018, the future maturities of the Credit Facility and debt were as follows:

Year ended December 31,	
2019	\$ 1,533
2020	513
2021	96,470
2022	—
2023	—
Total	\$98,516



**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
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**6. Income Taxes**

The income tax expense (benefit) included in the accompanying consolidated statement of operations represents federal, state and foreign income taxes. The components of income before income taxes and the provision for income taxes consist of the following:

<b>Year ended December 31,</b>	<b>2018</b>	<b>2017</b>	<b>2016</b>
Income before income taxes:			
Domestic	<b>\$32,907</b>	\$36,657	\$ 35,088
Foreign	<b>32,151</b>	15,925	4,097
<b>Total income before income taxes</b>	<b>\$65,058</b>	<b>\$52,582</b>	<b>\$ 39,185</b>
Provision for income taxes:			
Current:			
Federal	<b>\$ 2,370</b>	\$ 2,478	\$ 760
State and foreign	<b>6,288</b>	11,014	2,575
<b>Total current expense</b>	<b>8,658</b>	<b>13,492</b>	<b>3,335</b>
Deferred:			
Federal	<b>3,788</b>	(2,585)	(37,828)
State and foreign	<b>(1,236)</b>	(3,374)	(1,896)
<b>Total deferred benefit</b>	<b>2,552</b>	<b>(5,959)</b>	<b>(39,724)</b>
<b>Total income tax (benefit) expense</b>	<b>\$11,210</b>	<b>\$ 7,533</b>	<b>\$(36,389)</b>

A reconciliation of the Company's effective income tax rate to the statutory federal tax rate is as follows:

<b>Year ended December 31,</b>	<b>2018</b>	<b>2017</b>	<b>2016</b>
Statutory U.S. federal income tax rate	<b>21.0%</b>	35.0%	35.0%
State income taxes, net of federal tax benefit	<b>0.1</b>	(0.8)	1.9
Tax credits and incentives	<b>(7.9)</b>	(4.2)	(0.8)
Foreign tax rate differential	<b>1.1</b>	(4.5)	(4.7)
Impact of change in enacted tax law	<b>(1.3)</b>	(17.2)	—
Change in valuation allowance	<b>(3.0)</b>	4.2	(121.6)
U.S. tax on foreign earnings	<b>1.0</b>	—	—
Compensation and benefits	<b>1.3</b>	(1.1)	0.3
Other <sup>(A)</sup>	<b>4.9</b>	2.9	(2.9)
<b>Effective income tax rate</b>	<b>17.2%</b>	<b>14.3%</b>	<b>(92.8)%</b>

(A) The amount for 2018 includes the impact of reducing tax attributes due to legal entity consolidation which is completely offset with change in valuation allowance.

The Company recognized income tax expense (benefit) of \$11,210 or 17.2%, \$7,533 or 14.3% and \$(36,389) or (92.8)% of income before income taxes for federal, state and foreign income taxes for the years ended December 31, 2018, 2017 and 2016, respectively. The change in tax expense for the year ended December 31, 2018 compared to the same period for 2017 was predominantly due to the impact of the enactment of the Tax Legislation in the United States on December 22, 2017, and the release of the U.S. federal, certain state and foreign valuation allowances in 2016.

The Tax Legislation significantly revises the U.S. corporate income tax by, among other things, lowering corporate income tax rates and imposing a one-time transition tax on deemed repatriated earnings of foreign subsidiaries. The impact of the Tax Legislation in 2017 was a tax benefit of \$(9,062), consisting of an increase in tax expense of \$6,207 due to the one-time deemed repatriation tax, offset by the favorable impact of the reduced tax rate on the Company's net deferred tax liabilities and other deferred tax adjustments of \$(15,269) related to certain earnings included in the one-time transition tax. Pursuant to

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

(in thousands, except share and per share data, unless otherwise indicated)

**6. Income Taxes – (continued)**

the guidance within SEC Staff Accounting Bulletin No. 118 (“SAB 118”), as of December 31, 2017, the Company recognized the provisional effects of the enactment of the Tax Legislation for which measurement could be reasonably estimated. Adjustments to the provisional amounts recorded by the Company as of December 31, 2017 that are identified within a subsequent measurement period of up to one year from the enactment date are required to be included as an adjustment to tax expense from continuing operations in the period the amounts are determined.

During 2018, the Department of Treasury issued additional guidance with respect to several provisions of the Tax Legislation. The Company completed its accounting for the effects of the Tax Legislation under SAB 118 and recognized a tax benefit of \$(131) in the third quarter of 2018 and a tax expense of \$710 in the fourth quarter of 2018. The adjustments to the provisional amounts are primarily related to the one-time transition tax and the impact of the reduced tax rate on the Company’s net deferred tax liabilities.

The Tax Legislation also created a provision known as Global Intangible Low-Taxed Income (“GILTI”) that imposes a tax on certain earnings of foreign subsidiaries. The Company has made an accounting policy election to reflect GILTI taxes, if any, as a current income tax expense in the period incurred.

The Company has not provided deferred taxes related to the earnings of certain foreign subsidiaries that are not considered indefinitely reinvested, however, it has recognized a deferred tax asset related to the expected foreign currency impact upon repatriation. Any foreign tax on repatriation of earnings not considered to be indefinitely reinvested is expected to be immaterial. At December 31, 2018, the aggregate undistributed earnings of our foreign subsidiaries amounted to \$55,707.

Significant components of the Company’s deferred tax assets and liabilities were as follows:

<b>As of December 31,</b>	<b>2018</b>	<b>2017</b>
Deferred tax assets:		
Inventories	\$ 2,135	\$ 1,921
Employee compensation and benefits	1,225	2,647
Accrued liabilities and reserves	4,181	5,187
Property, plant and equipment	647	1,045
Tax loss carryforwards	8,437	10,929
Tax credit carryforwards	26,221	29,744
Other	410	416
Gross deferred tax assets	43,256	51,889
Less: Valuation allowance	(8,962)	(11,986)
Deferred tax assets less valuation allowance	34,294	39,903
Deferred tax liabilities:		
Property, plant and equipment	(2,545)	(3,489)
Intangible assets	(16,683)	(22,067)
Outside basis difference in foreign subsidiary	(13,750)	(13,750)
Other	(4,090)	(3,243)
Gross deferred tax liabilities	(37,068)	(42,549)
Net deferred tax liabilities	\$ (2,774)	\$ (2,646)

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

(in thousands, except share and per share data, unless otherwise indicated)

**6. Income Taxes – (continued)**

The balance sheet classification of our net deferred tax asset is shown below:

<b>Year ended December 31,</b>	<b>2018</b>	<b>2017</b>
Long-term deferred tax assets	<b>\$ 12,121</b>	<b>\$ 16,228</b>
Long-term deferred tax liabilities	<b>(14,895)</b>	<b>(18,874)</b>
Net deferred tax liabilities	<b>\$ (2,774)</b>	<b>\$ (2,646)</b>

Based on the Company's review of both positive and negative evidence regarding the realizability of deferred tax assets at December 31, 2018, a valuation allowance continues to be recorded against certain deferred tax assets based upon the conclusion that it was more likely than not they would not be realized. The future provision for income taxes may be significantly impacted by changes to valuation allowances in certain countries.

The Company has net operating loss carry forwards of \$64,189 and \$24,745 for state and foreign tax jurisdictions, respectively. The state net operating losses expire from 2025-2034 or have indefinite lives and the foreign net operating losses expire from 2019-2023 or have indefinite lives. The Company has general business and foreign tax credit carry forwards of \$23,404, \$1,493 and \$1,324 for U.S. federal, state and foreign jurisdictions, respectively. The U.S. federal general business credits, if unused, begin to expire in 2024, and the state and foreign tax credits expire at various times.

The following is a reconciliation of the Company's total gross unrecognized tax benefits:

	<b>2018</b>	<b>2017</b>	<b>2016</b>
Balance as of January 1	<b>\$3,645</b>	<b>\$3,839</b>	<b>\$4,304</b>
Tax positions related to the current year:			
Additions	<b>—</b>	<b>31</b>	<b>208</b>
Tax positions related to the prior years:			
Reductions	<b>(165)</b>	<b>(176)</b>	<b>(61)</b>
Expirations of statutes of limitation	<b>1</b>	<b>(49)</b>	<b>(612)</b>
Balance as of December 31	<b>\$3,481</b>	<b>\$3,645</b>	<b>\$3,839</b>

At December 31, 2018, the Company has classified \$32 as a noncurrent liability and \$3,449 as a reduction to non-current deferred income tax assets. The amount of unrecognized tax benefits is not expected to change significantly during the next 12 months. If the Company's tax positions are sustained by the taxing authorities in favor of the Company, the amount that would affect the Company's effective tax rate is approximately \$3,481 and \$3,645 at December 31, 2018 and 2017, respectively.

The Company classifies interest expense and, if applicable, penalties which could be assessed related to unrecognized tax benefits as a component of income tax expense (benefit). For the years ended December 31, 2018, 2017 and 2016, the Company recognized approximately \$(13), \$(33) and \$(59) of gross interest and penalties, respectively. The Company has accrued approximately \$19 and \$32 for the payment of interest and penalties at December 31, 2018 and 2017, respectively.

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**6. Income Taxes – (continued)**

The Company conducts business globally and, as a result, files income tax returns in the U.S. federal jurisdiction and various state and foreign jurisdictions. In the normal course of business, the Company is subject to examination by taxing authorities throughout the world. The following table summarizes the open tax years for each jurisdiction:

<b>Jurisdiction</b>	<b>Open Tax Years</b>
U.S. Federal	2015 – 2018
Argentina	2013 – 2018
Brazil	2013 – 2018
China	2015 – 2018
France	2016 – 2018
Germany	2015 – 2018
Italy	2013 – 2018
Mexico	2013 – 2018
Netherlands	2015 – 2018
Spain	2014 – 2018
Sweden	2013 – 2018
United Kingdom	2017 – 2018

**7. Operating Lease Commitments**

The Company leases equipment, vehicles and buildings from third parties under operating lease agreements. For the years ended December 31, 2018, 2017 and 2016, lease expense totaled \$7,278, \$6,261, and \$5,290, respectively.

Future minimum operating lease commitments as of December 31, 2018 were as follows:

<b>Year ended December 31,</b>	
2019	<b>\$ 5,691</b>
2020	<b>4,131</b>
2021	<b>3,256</b>
2022	<b>2,444</b>
2023	<b>2,477</b>
Thereafter	<b>4,106</b>
<b>Total</b>	<b>\$22,105</b>

**8. Share-Based Compensation Plans**

In April 2006, the Company's shareholders approved the Amended and Restated Long-Term Incentive Plan (the "2006 Plan") and reserved 1,500,000 Common Shares of which the maximum number of Common Shares which may be issued subject to incentive stock options is 500,000. In May 2010, shareholders approved an amendment to the 2006 Plan to increase the number of shares by 1,500,000 to 3,000,000, and in May 2013, shareholders approved another amendment to this plan to increase the number of shares by 1,500,000 to 4,500,000. As the 2006 Plan expired in May 2016, there were no shares available for grant at December 31, 2018 or 2017. As of December 31, 2018, there are 295,381 shares granted subject to future vesting of which 107,510 shares were time-based and 187,871 were performance-based.

In May 2016, the Company's shareholders approved the 2016 Long-Term Incentive Plan (the "2016 Plan") and reserved 1,800,000 Common Shares (of which the maximum number of Common Shares which may be issued). Under the 2016 Plan, as of December 31, 2018, the Company has granted 789,995 share units,

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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### 8. Share-Based Compensation Plans – (continued)

of which 316,970 were time-based with cliff vesting using the straight-line method and 473,025 were performance-based. There are 1,063,691 shares available to be granted under the 2016 Plan at December 31, 2018.

In 2016, pursuant to the 2006 Plan and in 2017 and 2018, pursuant to the 2016 Plan, the Company granted time-based and performance-based share units. The time-based share units cliff vest three years after the date of grant. The performance based share units vest and are no longer subject to forfeiture upon the recipient remaining an employee of the Company for three years from the date of grant and, for a portion of the annual awards, upon the Company attaining certain targets of performance measured against a peer group's three year performance in terms of total shareholder return and, for the remaining portion of the annual awards, upon achieving certain earnings per share targets established by the Company during the performance period of the award.

The allocation of performance shares granted between total shareholder return and earnings per share were as follows for the years ended December 31:

	2018	2017	2016
Total shareholder return	55%	55%	55%
Earnings per share	45%	45%	45%

In April 2005, the Company adopted the Directors' Restricted Shares Plan (the "Director Share Plan") and reserved 500,000 Common Shares for issuance under the Director Share Plan. In May 2013, shareholders approved an amendment to the Director Share Plan to increase the number of shares for issuance by 200,000 to 700,000. In May 2018, the Company's shareholders approved an amendment to the Director Share Plan to increase the number of shares for issuance by 150,000 to 850,000. Under the Director Share Plan, the Company has cumulatively issued 646,052 restricted Common Shares. As such, there are 203,948 restricted Common Shares available to be issued at December 31, 2018. Shares issued annually under the Director Share Plan vest one year after the date of grant.

#### ***Restricted Shares***

The fair value of the non-vested time-based restricted Common Share awards was calculated using the market value of the Common Shares on the date of issuance. The weighted-average grant-date fair value of time-based restricted Common Shares granted during the years ended December 31, 2018, 2017 and 2016 was \$24.69, \$18.73 and \$13.52, respectively.

The fair value of the non-vested performance-based restricted Common Share awards with a performance condition requiring the Company to obtain certain earnings per share targets was estimated using the market value of the shares on the date of grant. The fair value of non-vested performance-based restricted Common Share awards with a market condition requiring the Company to obtain a total shareholder return target relative to a group of peer companies was estimated using a Monte Carlo valuation model taking into consideration the probability of achievement using multiple simulations. The awards that use earnings per share as the performance target are expensed beginning when it is probable that the Company will meet the underlying performance condition.

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**8. Share-Based Compensation Plans – (continued)**

A summary of the status of the Company's non-vested share units as of December 31, 2018 and the changes during the year then ended, are presented below:

	Time-based awards		Performance-based awards	
	Common Shares	Weighted-average grant date fair value	Common Shares	Weighted-average grant date fair value
Non-vested as of December 31, 2017	443,152	\$15.01	744,188	\$14.92
Granted	176,116	\$24.69	215,490	\$29.41
Vested	(182,451)	\$13.21	(284,462)	\$11.19
Forfeited or cancelled	(16,821)	\$19.99	(46,996)	\$17.13
Non-vested as of December 31, 2018	419,996	\$19.64	628,220	\$21.41

A summary of the status of the Company's non-vested share units as of December 31, 2017 and the changes during the year then ended, are presented below:

	Time-based awards		Performance-based awards	
	Common Shares	Weighted-average grant date fair value	Common Shares	Weighted-average grant date fair value
Non-vested as of December 31, 2016	612,037	\$12.32	825,140	\$12.14
Granted	177,664	\$18.73	217,495	\$21.54
Vested	(310,207)	\$12.05	(165,783)	\$11.72
Forfeited or cancelled	(36,342)	\$13.23	(132,664)	\$12.52
Non-vested as of December 31, 2017	443,152	\$15.01	744,188	\$14.92

As of December 31, 2018, total unrecognized compensation cost related to non-vested time-based share units granted was \$3,321. That cost is expected to be recognized over a weighted-average period of 1.16 years.

For the years ended December 31, 2018, 2017 and 2016, the total fair value of awards vested was \$12,577, \$8,718 and \$5,394, respectively.

As of December 31, 2018, total unrecognized compensation cost related to non-vested performance-based share units granted was \$3,481 for shares probable to vest. That cost is expected to be recognized over a weighted-average period of 1.18 years dependent upon the achievement of performance conditions. As noted above, the Company has issued and outstanding performance-based restricted Common Share awards that use different performance targets (total shareholder return and earnings per share).

The tax benefit realized for the tax deductions from the vesting of restricted Common Shares of the share-based payment arrangements was \$1,584, \$858 and \$977 for the years ended December 31, 2018, 2017 and 2016.

**9. Employee Benefit Plans**

The Company has certain defined contribution profit sharing and 401(k) plans covering substantially all of its employees in the United States and Europe. The Company provides matching contributions to the Company's 401(k) plan. Company contributions are generally discretionary. For the years ended December 31, 2018, 2017 and 2016, expenses related to these plans amounted to \$3,520, \$2,601 and \$1,601, respectively.

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
(in thousands, except share and per share data, unless otherwise indicated)

**10. Financial Instruments and Fair Value Measurements**

**Financial Instruments**

A financial instrument is cash or a contract that imposes an obligation to deliver, or conveys a right to receive cash or another financial instrument. The carrying values of cash and cash equivalents, accounts receivable and accounts payable are considered to be representative of fair value because of the short maturity of these instruments. The fair value of debt approximates the carrying value of debt.

**Derivative Instruments and Hedging Activities**

On December 31, 2018, the Company had open foreign currency forward contracts which are used solely for hedging and not for speculative purposes. Management believes that its use of these instruments to reduce risk is in the Company's best interest. The counterparties to these financial instruments are financial institutions with investment grade credit ratings.

***Foreign Currency Exchange Rate Risk***

The Company conducts business internationally and therefore is exposed to foreign currency exchange rate risk. The Company uses derivative financial instruments as cash flow and fair value hedges to manage its exposure to fluctuations in foreign currency exchange rates by reducing the effect of such fluctuations on foreign currency denominated intercompany transactions, inventory purchases and other foreign currency exposures. The currencies hedged by the Company during 2018, 2017 and 2016 include the euro and Mexican peso. In addition, the Company hedged the U.S. dollar against the Swedish krona and euro on behalf of its European subsidiaries in 2018 and 2016.

These forward contracts were executed to hedge forecasted transactions and were accounted for as cash flow hedges. As such, the effective portion of the unrealized gain or loss was deferred and reported in the Company's consolidated balance sheets as a component of accumulated other comprehensive loss. The cash flow hedges were highly effective. The effectiveness of the transactions has been and will be measured on an ongoing basis using regression analysis and forecasted future purchases of the currency.

In certain instances, the foreign currency forward contracts do not qualify for hedge accounting or are not designated as hedges, and therefore are marked to market with gains and losses recognized in the Company's consolidated statements of operations as a component of other expense (income), net.

The Company's foreign currency forward contracts are designed to offset some of the gains and losses realized on the underlying foreign currency denominated transactions as follows:

***Euro-denominated Foreign Currency Forward Contracts***

At December 31, 2017, the Company held foreign currency forward contracts with an underlying notional amount of \$1,486 to reduce the exposure related to the Company's euro-denominated intercompany loans. There were no contracts entered into as of December 31, 2018 as these contracts were settled in December 2018. The euro-denominated foreign currency forward contract was not designated as a hedging instrument. For the years ended December 31, 2018, 2017 and 2016, the Company recognized a gain of \$73, a loss of \$174 and a gain of \$57, respectively, in the consolidated statements of operations as a component of other expense (income), net related to the euro-denominated contract.

***U.S. dollar-denominated Foreign Currency Forward Contracts — Cash Flow Hedge***

The Company entered into on behalf of one of its European Electronics subsidiaries whose functional currency is the Swedish krona, U.S. dollar-denominated currency contracts which expired ratably on a monthly basis from February 2018 through December 2018. There were no contracts entered into as of December 31, 2018 or 2017.



## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(in thousands, except share and per share data, unless otherwise indicated)

### 10. Financial Instruments and Fair Value Measurements – (continued)

The Company entered into on behalf of one of its European Electronics subsidiaries whose functional currency is the euro, U.S. dollar-denominated currency contracts which expired ratably on a monthly basis from February 2018 through December 2018. There were no contracts entered into as of December 31, 2018 or 2017.

#### *Mexican peso-denominated Foreign Currency Forward Contracts — Cash Flow Hedge*

The Company holds Mexican peso-denominated foreign currency contracts with notional amounts at December 31, 2018 of \$9,017 which expire ratably on a monthly basis from January 2019 through December 2019, compared to \$9,143 at December 31, 2017.

The Company evaluated the effectiveness of the Mexican peso-denominated foreign currency forward contracts held as of December 31, 2018 and 2017, and the years then ended, and concluded that the hedges were effective.

The notional amounts and fair values of derivative instruments in the consolidated balance sheets were as follows:

	Notional amounts <sup>(A)</sup>		Prepaid expenses and other current assets		Accrued expenses and other current liabilities	
As of December 31,	2018	2017	2018	2017	2018	2017
Derivatives designated as hedging instruments:						
Cash flow hedges:						
Forward currency contracts	\$9,017	\$9,143	\$370	\$ —	\$ —	\$221
Derivatives not designated as hedging instruments:						
Forward currency contracts	\$ —	\$1,486	\$ —	\$ —	\$ —	\$ 48

(A) Notional amounts represent the gross contract/notional amount of the derivatives outstanding.

Gross amounts recorded for the cash flow hedges in other comprehensive loss in shareholders' equity and in net income for the years ended December 31 were as follows:

	Gain (loss) recorded in other comprehensive income (loss)			Gains (loss) reclassified from other comprehensive income (loss) into net income <sup>(A)</sup>		
Years ended December 31,	2018	2017	2016	2018	2017	2016
Derivatives designated as cash flow hedges:						
Forward currency contracts	\$1,967	\$441	\$(582)	\$1,376	\$634	\$(164)

(A) Gains and losses reclassified from comprehensive loss into net income were recognized in COGS in the Company's consolidated statements of operations.

The net deferred gain of \$370 on the cash flow hedge derivatives will be reclassified from other comprehensive income (loss) to the consolidated statements of operations in 2019. The Company has measured the ineffectiveness of the forward currency contracts and any amounts recognized in the consolidated financial statements were immaterial for the years ended December 31, 2018, 2017 and 2016.

# NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(in thousands, except share and per share data, unless otherwise indicated)

## 10. Financial Instruments and Fair Value Measurements – (continued)

### Fair Value Measurements

The Company's assets and liabilities are measured at fair value on a recurring basis and are categorized using the three levels of the fair value hierarchy based on the reliability of the inputs used. Fair values estimated using Level 1 inputs consist of quoted prices in active markets for identical assets or liabilities that the Company has the ability to access at the measurement date. Fair values estimated using Level 2 inputs, other than quoted prices, are observable for the asset or liability, either directly or indirectly and include among other things, quoted prices for similar assets or liabilities in markets that are active or inactive as well as inputs other than quoted prices that are observable. For forward currency contracts, inputs include foreign currency exchange rates. Fair values estimated using Level 3 inputs consist of significant unobservable inputs.

The following table presents our assets and liabilities that are measured at fair value on a recurring basis and are categorized using the three levels of the fair value hierarchy based on the reliability of inputs used.

As of December 31,	2018				2017
	Fair values estimated using				
	Fair value	Level 1 inputs	Level 2 inputs	Level 3 inputs	Fair value
Financial assets carried at fair value:					
Forward currency contracts	\$ 370	\$ —	\$ 370	\$ —	\$ —
Total financial assets carried at fair value	\$ 370	\$ —	\$ 370	\$ —	\$ —
Financial liabilities carried at fair value:					
Forward currency contracts	\$ —	\$ —	\$ —	\$ —	\$ 269
Earn-out consideration	18,672	—	—	18,672	20,746
Total financial liabilities carried at fair value	\$18,672	\$ —	\$ —	\$18,672	\$21,015

The following table sets forth a summary of the change in fair value of the Company's Level 3 financial liabilities related to earn-out consideration that are measured at fair value on a recurring basis.

	Orlaco	PST	Total
Balance at December 31, 2017	\$8,637	\$12,109	\$20,746
Change in fair value	369	(156)	213
Foreign currency adjustments	(404)	(1,883)	(2,287)
Balance at December 31, 2018	\$8,602	\$10,070	\$18,672
	Orlaco	PST	Total
Balance at December 31, 2016	\$ —	\$ —	\$ —
Fair value on acquisition date	3,243	10,180	13,423
Change in fair value	4,853	2,632	7,485
Foreign currency adjustments	541	(703)	(162)
Balance at December 31, 2017	\$8,637	\$12,109	\$20,746

The earn-out considerations related to Orlaco and PST are recorded within other current liabilities and other long-term liabilities, respectively, in the consolidated balance sheet as of December 31, 2018. The earn-out considerations related to Orlaco and PST were recorded within other long-term liabilities in the consolidated balance sheet as of December 31, 2017. The change in fair value of the earn-out

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(in thousands, except share and per share data, unless otherwise indicated)

### 10. Financial Instruments and Fair Value Measurements – (continued)

considerations are recorded within SG&A expense on the consolidated statements of operations for the years ended December 31, 2018 and 2017.

The fair value for the Orlaco earn-out consideration is based on a Monte Carlo simulation utilizing forecasted earnings before interest, taxes, depreciation and amortization ("EBITDA") for the 2017 and 2018 earn-out period as well as a growth rate reduced by the market required rate of return. The Company will be required to pay the PST earn-out consideration, which is not capped, based on PST's financial performance in either 2020 or 2021. The fair value of the PST earn-out consideration is based on discounted cash flows utilizing forecasted EBITDA in 2020 and 2021 using the key inputs of forecasted sales and expected operating income reduced by the market required rate of return.

The increase in fair value of earn-out consideration related to the Orlaco acquisition is primarily due to actual performance exceeding forecasted performance as well as the reduced time from the current period end to the payment date offset by foreign currency translation. The Orlaco earn-out consideration reached the capped amount of €7,500 as of the quarter ended March 31, 2018. The net decrease in fair value of earn-out consideration for PST was due to a reduction in forecasted performance and foreign currency translation partially offset by the reduced time from the current period end to the payment date. The foreign currency impact for the PST earn-out considerations is included in other expense (income), net in the consolidated statements of operations.

There were no transfers in or out of Level 3 from other levels in the fair value hierarchy for the year ended December 31, 2018.

Except for the fair value of assets acquired and liabilities assumed related to the Orlaco acquisition discussed in Note 2, no non-recurring fair value adjustments were required for nonfinancial assets for the years ended December 31, 2018 and 2017.

### 11. Commitments and Contingencies

From time to time we are subject to various legal actions and claims incidental to our business, including those arising out of breach of contracts, product warranties, product liability, patent infringement, regulatory matters and employment-related matters. The Company establishes accruals for matters which it believes that losses are probable and can be reasonably estimated. Although it is not possible to predict with certainty the outcome of these matters, the Company is of the opinion that the ultimate resolution of these matters will not have a material adverse effect on its consolidated results of operations or financial position.

As a result of environmental studies performed at the Company's former facility located in Sarasota, Florida, the Company became aware of soil and groundwater contamination at this site. The Company engaged an environmental engineering consultant to assess the level of contamination and to develop a remediation and monitoring plan for the site. Soil remediation at the site was completed during the year ended December 31, 2010. Upon approval of the remedial action plan by the Florida Department of Environmental Protection, ground water remediation began in the fourth quarter of 2015. During the years ended December 31, 2018, 2017 and 2016, environmental remediation costs incurred were immaterial. At December 31, 2018 and 2017, the Company had accrued an undiscounted liability of \$111 and \$265, respectively, related to future remediation costs. At December 31, 2018 and 2017, \$111 and \$253, respectively, were recorded as a component of accrued expenses and other current liabilities on the consolidated balance sheets while the remaining amount was recorded as a component of other long-term liabilities. Costs associated with the recorded liability will be incurred to complete the groundwater remediation, with the balance relating to monitoring costs to be incurred over multiple years. The recorded liability is based on assumptions in the remedial action plan. Although the

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(in thousands, except share and per share data, unless otherwise indicated)

### 11. Commitments and Contingencies – (continued)

Company sold the Sarasota facility in December 2011, the liability to remediate the site contamination remains the responsibility of the Company. Due to the ongoing site remediation, the Company is currently required to maintain a \$1,489 letter of credit for the benefit of the buyer.

The Company's PST subsidiary has civil, labor and other non-income tax contingencies for which the likelihood of loss is deemed to be reasonably possible, but not probable, by the Company's legal advisors in Brazil. As a result, no provision has been recorded with respect to these contingencies, which amounted to R\$29,700 (\$7,600) and R\$33,800 (\$10,200) at December, 2018 and 2017, respectively. An unfavorable outcome on these contingencies could result in significant cost to the Company and adversely affect its results of operations.

#### *Insurance Recoveries*

The Company incurred losses and incremental costs related to the damage to assets caused by a storm at its Mexican production facility in the fourth quarter of 2016 and is pursuing recovery of such costs under applicable insurance policies. Anticipated proceeds from insurance recoveries related to losses and incremental costs that have been incurred ("loss recoveries") are recognized when receipt is probable. Anticipated proceeds from insurance recoveries in excess of the net book value of damaged property, plant and equipment ("insurance gain contingencies") are recognized when all contingencies related to the claim have been resolved.

Loss recoveries related to the damage of inventory and incremental costs included in costs of sales were not significant for the year ended December 31, 2018 and there were no loss recoveries and insurance gain contingencies related to the damage of property, plant and equipment included within SG&A expense. In 2017, loss recoveries related to the damage of inventory and incremental costs included in cost of sales were \$189 and loss recoveries and insurance gain contingencies related to the damage of property, plant and equipment included within SG&A expense were \$1,923. As of December 31, 2017, the Company had confirmation of the open insurance claim and recorded a receivable of \$1,644. The cash payment was subsequently received in January 2018. Cash proceeds related to the damage of inventory and incremental costs were \$241 and \$500 for the years ended December 31, 2018 and 2017, respectively, and are included in cash flows from operating activities. Cash proceeds related to the damage of property, plant and equipment of \$1,403 and \$711 for the years ended December 31, 2018 and 2017, respectively, are included in cash flows from investing activities.

### 12. Headquarter Relocation and Consolidation

During the fourth quarter of 2016, the Company relocated its corporate headquarters from Warren, Ohio to Novi, Michigan and consolidated its other corporate functions into one location. As a result, the Company incurred headquarter relocation costs recorded within SG&A expense, which included employee retention, relocation, severance, recruiting, duplicate wages and professional fees, of \$269, \$493 and \$1,769 for the years ended December 31, 2018, 2017, and 2016, respectively.

In connection with the headquarter relocation, the Company was approved for a Michigan Business Development Program grant of up to \$1,400 based upon the number of new jobs created in Michigan through 2022. As a result of the attainment of the first and second milestones, grant income of \$312 and \$338 was recognized during the years ended December 31, 2018 and 2017, respectively, within SG&A expense in the consolidated statements of operations.

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
(in thousands, except share and per share data, unless otherwise indicated)

**13. Restructuring and Business Realignment**

In the fourth quarter of 2018, we undertook restructuring actions for our Electronics segment affecting our European Aftermarket business and China operations. We recognized expense of \$3,539 for the year ended December 31, 2018 as a result of these actions for severance, contract termination costs, excess and obsolete inventory write-offs and the non-cash write-off of intangible assets and of impaired fixed assets. Excess and obsolete inventory write-offs of \$823 were recognized in COGS for the year ended December 31, 2018 and all other restructuring costs were recognized in SG&A in the consolidated statement of operations. The Company expects to incur approximately \$1,080 of additional restructuring costs related to the actions initiated as of December 31, 2018.

The expenses for the 2018 restructuring activities that relate to the Electronics reportable segment include the following:

	Accrual as of January 1, 2018	2018 Charge to Expense	Cash	Utilization Non-Cash	Accrual as of December 31, 2018
Employee termination benefits	\$ —	\$1,939	\$(1,419)	\$ —	\$520
Excess and obsolete inventory	—	823	—	(823)	—
Intangible impairment	—	200	—	(200)	—
Fixed asset impairment	—	157	—	(157)	—
Contract termination costs	—	156	(139)	—	17
Other related costs	—	264	(145)	—	119
<b>Total</b>	<b>\$ —</b>	<b>\$3,539</b>	<b>\$(1,703)</b>	<b>\$(1,180)</b>	<b>\$656</b>

In addition to the specific restructuring activities, the Company regularly evaluates the performance of its businesses and cost structures, including personnel, and makes necessary changes thereto in order to optimize its results. The Company also evaluates the required skill sets of its personnel and periodically makes strategic changes. As a consequence of these actions, the Company incurs severance related costs which are referred to as business realignment charges.

Business realignment charges by reportable segment were as follows:

<b>Year ended December 31</b>	<b>2018</b>	<b>2017</b>	<b>2016</b>
Control Devices <sup>(A)</sup>	\$169	\$ —	\$ —
Electronics <sup>(B)</sup>	63	1,223	1,180
PST <sup>(C)</sup>	478	589	1,437
<b>Total business realignment charges</b>	<b>\$710</b>	<b>\$1,812</b>	<b>\$2,617</b>

- (A) Business realignment severance costs for the year ended December 31, 2018 related to D&D were \$128. Business realignment severance costs for the year ended December 31, 2017 related to SG&A were \$41.
- (B) Business realignment severance costs for the year ended December 31, 2018 related to SG&A were \$63. Business realignment severance costs for the year ended December 31, 2017 related to COGS and SG&A were \$56 and \$1,167, respectively. Business realignment severance costs for the year ended December 31, 2016 related to SG&A and D&D were \$196 and \$984, respectively.
- (C) Business realignment severance costs for the year ended December 31, 2018 related to COGS, SG&A and D&D were \$63, \$386 and \$29, respectively. Business realignment severance costs for the year ended December 31, 2017 related to COGS, SG&A and D&D were \$370, \$218 and \$1, respectively. Business realignment severance costs for the year ended December 31, 2016 related to COGS, SG&A and D&D were \$437, \$884 and \$116, respectively.

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

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**13. Restructuring and Business Realignment – (continued)**

There were no significant restructuring or business realignment expenses related to the unallocated corporate segment during the years ended December 31, 2018, 2017 or 2016.

Business realignment charges classified by statement of operations line item were as follows:

Year ended December 31	2018	2017	2016
Cost of goods sold	\$ 63	\$ 426	\$ 437
Selling, general and administrative	491	1,385	1,080
Design and development	156	1	1,100
Total business realignment charges	\$710	\$1,812	\$2,617

**14. Segment Reporting**

Operating segments are defined as components of an enterprise that are evaluated regularly by the Company's chief operating decision maker in deciding how to allocate resources and in assessing performance. The Company's chief operating decision maker is the chief executive officer.

The Company has three reportable segments, Control Devices, Electronics and PST, which also represent its operating segments. The Control Devices reportable segment produces sensors, switches, valves and actuators. The Electronics reportable segment produces electronic instrument clusters, electronic control units, driver information systems and camera-based vision systems, monitors and related products. The PST reportable segment designs and manufactures electronic vehicle security alarms, convenience accessories, vehicle tracking devices and monitoring services and in-vehicle audio and video devices.

The accounting policies of the Company's reportable segments are the same as those described in Note 2. The Company's management evaluates the performance of its reportable segments based primarily on revenues from external customers, capital expenditures and operating income. Inter-segment sales are accounted for on terms similar to those to third parties and are eliminated upon consolidation.

The financial information presented below is for our three reportable operating segments and includes adjustments for unallocated corporate costs and intercompany eliminations, where applicable. Such costs and eliminations do not meet the requirements for being classified as an operating segment. Corporate costs include various support functions, such as corporate accounting/finance, executive administration, human resources, information technology and legal.

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
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**14. Segment Reporting – (continued)**

A summary of financial information by reportable segment is as follows:

Year ended December 31,	2018	2017	2016
Net Sales:			
Control Devices	\$441,297	\$447,528	\$408,132
Inter-segment sales	8,348	5,044	1,826
Control Devices net sales	449,645	452,572	409,958
Electronics <sup>(D)</sup>	344,727	282,383	205,256
Inter-segment sales	37,126	39,501	33,361
Electronics net sales	381,853	321,884	238,617
PST	80,175	94,533	82,589
Inter-segment sales	2	563	—
PST net sales	80,177	95,096	82,589
Eliminations	(45,476)	(45,108)	(35,187)
Total net sales	\$866,199	\$824,444	\$695,977
Operating Income (Loss):			
Control Devices	\$ 64,191	\$ 72,555	\$ 61,815
Electronics <sup>(D)</sup>	28,236	18,119	14,798
PST	4,989	2,661	(3,462)
Unallocated Corporate <sup>(A)</sup>	(30,412)	(35,965)	(29,069)
Total operating income	\$ 67,004	\$ 57,370	\$ 44,082
Depreciation and Amortization:			
Control Devices	\$ 11,914	\$ 10,887	\$ 10,276
Electronics <sup>(D)</sup>	8,982	8,143	3,971
PST	7,443	8,316	8,559
Unallocated Corporate	852	584	452
Total depreciation and amortization <sup>(B)</sup>	\$ 29,191	\$ 27,930	\$ 23,258
Interest Expense, net:			
Control Devices	\$ 76	\$ 103	\$ 226
Electronics	85	119	142
PST	824	1,812	3,396
Unallocated Corporate	3,735	3,749	2,513
Total interest expense, net	\$ 4,720	\$ 5,783	\$ 6,277
Capital Expenditures:			
Control Devices	\$ 16,737	\$ 17,484	\$ 13,261
Electronics <sup>(D)</sup>	5,965	8,158	5,665
PST	3,242	3,831	3,213
Unallocated Corporate <sup>(C)</sup>	3,083	2,697	2,337
Total capital expenditures	\$ 29,027	\$ 32,170	\$ 24,476



**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
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**14. Segment Reporting – (continued)**

<b>As of December 31,</b>	<b>2018</b>	<b>2017</b>
Total Assets:		
Control Devices	\$ 175,708	\$ 164,632
Electronics <sup>(D)</sup>	265,838	252,324
PST	81,002	100,382
Corporate <sup>(C)</sup>	359,837	377,657
Eliminations	(322,866)	(335,958)
Total assets	\$ 559,519	\$ 559,037

The following table presents net sales and long-term assets for the geographic areas in which the Company operates:

<b>Year ended December 31,</b>	<b>2018</b>	<b>2017</b>	<b>2016</b>
Net Sales:			
North America	\$480,511	\$471,770	\$428,046
South America	80,175	94,533	82,589
Europe and Other <sup>(D)</sup>	305,513	258,141	185,342
Total net sales	\$866,199	\$824,444	\$695,977

<b>As of December 31,</b>	<b>2018</b>	<b>2017</b>
Long-term Assets:		
North America	\$ 86,763	\$ 89,997
South America	45,408	58,989
Europe and Other <sup>(D)</sup>	107,171	106,682
Total long-term assets	\$239,342	\$255,668

- (A) Unallocated Corporate expenses include, among other items, accounting/finance, human resources, information technology and legal costs as well as share-based compensation.
- (B) These amounts represent depreciation and amortization on property, plant and equipment and certain intangible assets.
- (C) Assets located at Corporate consist primarily of cash, intercompany loan receivables, fixed assets for the headquarter building, information technology assets, equity investments and investments in subsidiaries.
- (D) The amounts for 2018 and 2017 include the Orlaco business which was acquired on January 31, 2017 as disclosed in Note 2.

**15. Subsequent Events**

On January 10, 2019, the Company committed to a restructuring plan that will result in the closure of our Canton, Massachusetts facility ("Canton Facility") by the end of 2019 and the consolidation of manufacturing operations at that site into other Company locations ("Canton Restructuring"). Company management informed employees at the Canton Facility of this restructuring decision on January 11, 2019. This restructuring action will result in the closure of the Canton facility and the termination of the employment of Canton Facility employees. The estimated costs for the Canton Restructuring include employee severance and termination costs, contract terminations costs, professional fees, the non-cash write-off of impaired fixed assets and transition costs. The estimated total cost of the Canton Facility restructuring plan, that will impact the Control Devices segment, is between \$8,500 and \$9,500 and will be incurred through 2020.

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
(in thousands, except share and per share data, unless otherwise indicated)

**16. Unaudited Quarterly Financial Data**

The following is a summary of quarterly results of operations:

	Quarter ended			
<b>2018</b>	<b>December 31</b>	<b>September 30</b>	<b>June 30</b>	<b>March 31</b>
Net sales	\$210,814	\$208,853	\$220,602	\$225,930
Gross profit	57,959	63,285	67,418	67,969
Operating income	12,664	18,312	19,181	16,847
Income tax expense	690	3,467	3,820	3,233
Net income	12,056	13,292	15,120	13,380
Earnings per share attributable to Stoneridge, Inc.:				
Basic <sup>(A)</sup>	\$ 0.42	\$ 0.47	\$ 0.53	\$ 0.47
Diluted <sup>(A)</sup>	\$ 0.42	\$ 0.46	\$ 0.52	\$ 0.46

	Quarter ended			
<b>2017</b>	<b>December 31</b>	<b>September 30</b>	<b>June 30</b>	<b>March 31</b>
Net sales	\$207,440	\$203,582	\$209,111	\$204,311
Gross profit	61,026	62,549	63,414	61,151
Operating income	13,234	13,296	15,676	15,164
Income tax (benefit) expense <sup>(B)</sup>	(6,036)	3,809	5,189	4,571
Net income	18,908	8,049	8,919	9,173
Net loss attributable to noncontrolling interests	—	—	(100)	(30)
Net income attributable to Stoneridge, Inc.	18,908	8,049	9,019	9,203
Earnings per share attributable to Stoneridge, Inc.:				
Basic <sup>(A)</sup>	\$ 0.67	\$ 0.29	\$ 0.32	\$ 0.33
Diluted <sup>(A)</sup>	\$ 0.65	\$ 0.28	\$ 0.32	\$ 0.32

(A) Earnings per share for the year may not equal the sum of the four historical quarters earnings per share due to changes in weighted-average basic and diluted shares outstanding.

(B) The impact of the Tax Legislation was an increase in tax expense of \$6,200 due to the one-time deemed repatriation tax, offset by the favorable impacts of the reduced tax rate on the Company's net deferred tax liabilities and other deferred tax adjustments of \$(15,300) million related to certain earnings included in the one-time transition tax.

**SCHEDULE II — VALUATION AND QUALIFYING ACCOUNTS**  
**(in thousands)**

The following schedules provide the activity for accounts receivable reserves and valuation allowance for deferred tax assets for the years ended December 31, 2018, 2017 and 2016:

	Balance at beginning of period	Charged to costs and expenses	Write-offs	Balance at end of period
Accounts receivable reserves:				
Year ended December 31, 2018	<b>\$1,109</b>	<b>\$1,244</b>	<b>\$(1,110)</b>	<b>\$1,243</b>
Year ended December 31, 2017	1,630	2,173	(2,694)	1,109
Year ended December 31, 2016	1,066	1,604	(1,040)	1,630
	Balance at beginning of period	Net additions charged to expense (benefit) <sup>(A)</sup>	Exchange rate fluctuations and other items	Balance at end of period
Valuation allowance for deferred tax assets:				
Year ended December 31, 2018	<b>\$11,986</b>	<b>\$ (1,922)</b>	<b>\$(1,102)</b>	<b>\$ 8,962</b>
Year ended December 31, 2017	11,125	874	(13)	11,986
Year ended December 31, 2016	59,391	(47,659)	(607)	11,125

(A) The Company recorded the release of a valuation allowance associated with its U.S. federal, certain state and foreign deferred tax assets of \$49,600 during the year ended December 31, 2016.

**Item 9. Changes In and Disagreements With Accountants On Accounting and Financial Disclosure.**

There have been no disagreements between the management of the Company and its Independent Registered Public Accounting Firm on any matter of accounting principles or practices of financial statement disclosures, or auditing scope or procedure.

**Item 9A. Controls and Procedures.*****Evaluation of Disclosure Controls and Procedures***

As of December 31, 2018, an evaluation was performed under the supervision and with the participation of the Company's management, including the principal executive officer ("PEO") and principal financial officer ("PFO"), of the effectiveness of the design and operation of the Company's disclosure controls and procedures as defined in Rule 13a-15(e) and Rule 15d-15(e) of the Securities Exchange Act of 1934, as amended. Based on that evaluation, the Company's PEO and PFO, concluded that the Company's disclosure controls and procedures were effective as of December 31, 2018.

***Management's Report on Internal Control Over Financial Reporting***

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rules 13a-15(f) and 15d-15(f). In evaluating the Company's internal control over financial reporting, management has adopted the framework in *Internal Control — Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 Framework). Under the supervision and with the participation of our management, including the PEO and PFO, we conducted an evaluation of the effectiveness of our internal control over financial reporting, as of December 31, 2018. Based on our evaluation under the framework in *Internal Control — Integrated Framework* (2013 Framework), our management has concluded that our internal control over financial reporting was effective as of December 31, 2018.

Because of 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.

Ernst & Young LLP, an independent registered public accounting firm, as auditor of the Company's financial statements, has issued an attestation report on the Company's internal control over financial reporting as of December 31, 2018. Ernst & Young's report is included herein.

***Changes in Internal Control Over Financial Reporting***

There were no changes to our internal controls over financial reporting during the quarter ended December 31, 2018 that has materially or is reasonably likely to materially affect internal control over financial reporting.

## **REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the Shareholders and the Board of Directors of Stoneridge, Inc.

### **Opinion on Internal Control over Financial Reporting**

We have audited Stoneridge, Inc. and Subsidiaries' internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, Stoneridge, Inc. and Subsidiaries (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2018 and 2017, the related consolidated statements of operations, comprehensive income, cash flows and shareholders' equity for each of the three years in the period ended December 31, 2018, and the related notes and schedule of the Company and our report dated February 27, 2019 expressed an unqualified opinion thereon.

### **Basis for Opinion**

The Company's management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

### **Definition and Limitations of Internal Control Over Financial Reporting**

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 (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) 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 (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 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.

*Ernst & Young LLP*

Detroit, Michigan  
February 27, 2019

**Item 9B. Other Information.**

None.

### PART III

**Item 10. Directors, Executive Officers and Corporate Governance.**

The information required by this Item 10 regarding our directors is incorporated by reference to the information under the sections and subsections entitled, "Proposal One: Election of Directors," "Section 16(a) Beneficial Ownership Reporting Compliance" and "Corporate Governance" contained in the Company's Proxy Statement in connection with its Annual Meeting of Shareholders to be held on May 14, 2019. The information required by this Item 10 regarding our executive officers appears as a Supplementary Item following Item 1 under Part I, hereof.

**Item 11. Executive Compensation.**

The information required by this Item 11 is incorporated by reference to the information under the sections and subsections "Compensation Committee," "Compensation Committee Interlocks and Insider Participation," "Compensation Committee Report" and "Executive Compensation" contained in the Company's Proxy Statement in connection with its Annual Meeting of Shareholders to be held on May 14, 2019.

**Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.**

The information required by this Item 12 (other than the information required by Item 201(d) of Regulation S-K which is set forth below) is incorporated by reference to the information under the heading "Security Ownership of Certain Beneficial Owners and Management" contained in the Company's Proxy Statement in connection with its Annual Meeting of Shareholders to be held on May 14, 2019.

In May 2010, we adopted an Amended Directors' Restricted Share Plan and an Amended and Restated Long-Term Incentive Plan, as amended. In May 2013, we adopted an Amended Directors' Restricted Shares Plan and an Amended and Restated Long-Term Incentive Plan, as amended, to increase the number of shares available for issuance under the plans. In May 2016, we adopted the 2016 Long-Term Incentive Plan. Our shareholders approved each plan. Equity compensation plan information as of December 31, 2018 is as follows:

	Number of securities remaining available for future issuance under equity compensation plans <sup>(A)</sup>
Equity compensation plans approved by shareholders	1,267,639
Equity compensation plans not approved by shareholders	—

(A) Excludes 1,018,277 share units issued to key employees pursuant to the Company's Amended and Restated Long-Term Incentive Plan, as amended and 29,939 restricted Common Shares issued and outstanding to directors under the Amended Directors' Restricted Share Plan as of December 31, 2018.



**Item 13. Certain Relationships and Related Transactions, and Director Independence.**

The information required by this Item 13 is incorporated by reference to the information under the subsections "Transactions with Related Persons", "Review and Approval of Transactions with Related Persons" and "Director Independence" contained in the Company's Proxy Statement in connection with its Annual Meeting of Shareholders to be held on May 14, 2019.

**Item 14. Principal Accounting Fees and Services.**

The information required by this Item 14 is incorporated by reference to the information under the subsections "Service Fees Paid to Independent Registered Accounting Firm" and "Pre-Approval Policies and Procedures" contained in the Company's Proxy Statement in connection with its Annual Meeting of Shareholders to be held on May 14, 2019.

## PART IV

### Item 15. Exhibits, Financial Statement Schedules.

(a) The following documents are filed as part of this Form 10-K.

	Page in Form 10-K
(1) Consolidated Financial Statements:	
Report of Independent Registered Public Accounting Firm	42
Consolidated Balance Sheets as of December 31, 2018 and 2017	43
Consolidated Statements of Operations for the Years Ended December 31, 2018, 2017 and 2016	44
Consolidated Statements of Comprehensive Income (Loss) for the Years Ended December 31, 2018, 2017 and 2016	45
Consolidated Statements of Cash Flows for the Years Ended December 31, 2018, 2017 and 2016	46
Consolidated Statements of Shareholders' Equity for the Years Ended December 31, 2018, 2017 and 2016	47
Notes to Consolidated Financial Statements	48
(2) Financial Statement Schedule:	
Schedule II — Valuation and Qualifying Accounts	84
(3) Exhibits:	91

Exhibit Number	Exhibit
2.1	Share Sale and Purchase Agreement, dated as of January 31, 2017, by and among Stoneridge B.V., Stoneridge, Inc., Wide-Angle Management B.V., Exploitiemaatschappij Berghaaf B.V., and Henrie G. van Beusekom (incorporated by reference to Exhibit 2.1 to the Company's Current Report on Form 8-K filed on February 1, 2017).
3.1	Second Amended and Restated Articles of Incorporation of the Company (incorporated by reference to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 1999).
3.2	Amended and Restated Code of Regulations of the Company (incorporated by reference to Exhibit 3.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2007).
4.1	Common Share Certificate (incorporated by reference to Exhibit 4.1 to the Company's Annual Report on Form 10-K for the year ended December 31, 1997).
10.1	Form of Directors' Restricted Shares Plan Grant Agreement under the Directors' Restricted Shares Plan (incorporated by reference to Exhibit 10.1 to the Company's Annual Report on Form 10-K for the year ended December 31, 2017)*.
10.2	Agreement for the Purchase and Sale of Quotas of Capital of PST Eletronica Ltda. ("PST") between Stoneridge, Inc. and Adriana Campos De Cerqueira Leite and Marcos Feretti and PST, guarantor, dated May 16, 2017 (incorporated by reference to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2017).
10.3	Stoneridge, Inc. Deferred Compensation Plan (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on June 2, 2017)*.
10.4	First Amendment to the Stoneridge, Inc. Deferred Compensation Plan (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on October 26, 2018)*.
10.5	Annual Incentive Plan (incorporated by reference to Exhibit 99.1 to the Company's Current Report on Form 8-K filed on May 12, 2016)*.
10.6	Stoneridge, Inc. Long-Term Cash Incentive Plan (incorporated by reference to Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2009)*.
10.7	Amended and Restated Officers' and Key Employees' Severance Plan of Stoneridge, Inc. (incorporated by reference to Exhibit 10.3 to the Company's Annual Report on Form 10-K for the year ended December 31, 2017)*.
10.8	Stoneridge, Inc. Amended and Restated Long-Term Incentive Plan – Form of Restricted Shares Grant Agreement (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2010)*.
10.9	Form of Phantom Share Grant Agreement under the Stoneridge, Inc. Long-Term Cash Incentive Plan (incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2010)*.
10.10	Amended and Restated Long-Term Incentive Plan, as amended (incorporated by reference to Exhibit 4.3 of the Company's Registration Statement on Form S-8 filed with the SEC on August 5, 2013 (No. 333-172002)*.

Exhibit Number	Exhibit
10.11	Amended Directors' Restricted Share Plan (incorporated by reference to Exhibit 4.4 of the Company's Registration Statement on Form S-8 filed with the SEC on August 5, 2013 (No. 333-172002))*.
10.12	Stoneridge, Inc. 2018 Amended and Restated Directors' Restricted Shares Plan (incorporated by reference to Exhibit 99.1 to the Company's Current Report on Form 8-K filed on May 16, 2018)*.
10.13	First Amendment to the Stoneridge, Inc. Amended and Restated Long-Term Incentive Plan, as amended (incorporated by reference to Exhibit 99.1 to the Company's Current Report on Form 8-K filed on May 8, 2013)*.
10.14	Form of Performance Share Grant Agreement under the Stoneridge, Inc. Long-Term Incentive Plan (incorporated by reference to Exhibit 10.12 to the Company's Annual Report on Form 10-K for the year ended December 31, 2017)*.
10.15	Form of Share Units Grant Agreement under the Stoneridge, Inc. 2016 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.13 to the Company's Annual Report on Form 10-K for the year ended December 31, 2017)*.
10.16	Stoneridge, Inc. 2016 Long-Term Incentive Plan (incorporated by reference to Exhibit 99.2 to the Company's Current Report on Form 8-K filed on May 12, 2016)*.
10.17	First Amendment to the Stoneridge, Inc. Amended Directors' Restricted Shares Plan (incorporated by reference to Exhibit 99.2 to the Company's Current Report on Form 8-K filed on May 8, 2013)*.
10.18	Amended and Restated Change in Control Agreement (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on December 21, 2011)*.
10.19	Amended and Restated Change in Control Agreement, filed herewith*.
10.20	Employment Agreement, dated March 16, 2015, between the Company and Jonathan B. DeGaynor (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on March 19, 2015)*.
10.21	Indemnification Agreement between the Company and Jonathan B. DeGaynor (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed on March 19, 2015).
10.22	Third Amended and Restated Credit Agreement by and among Stoneridge, Inc. and certain of its subsidiaries as borrowers and its lenders, dated September 12, 2014 (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on September 15, 2014).
10.23	Amendment No. 1 to Third Amended and Restated Credit Agreement (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on March 31, 2015).
10.24	Amendment No. 2 to Third Amended and Restated Credit Agreement (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on February 24, 2016).

Exhibit Number	Exhibit
10.25	Amendment No. 3 to Third Amended and Restated Credit Agreement (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on August 17, 2015).
10.26	Consent and Amendment No. 4 to Third Amended and Restated Credit Agreement (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on February 1, 2017).
10.27	Amendment No. 5 to Third Amended and Restated Credit Agreement (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2018).
10.28	Consent and Amendment No. 6 to Third Amended and Restated Credit Agreement (incorporated by reference to Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2018).
14.1	Code of Ethics for Senior Financial Officers (incorporated by reference to Exhibit 14.1 to the Company's Annual Report on Form 10-K for the year ended December 31, 2003).
21.1	Principal Subsidiaries and Affiliates of the Company, filed herewith.
23.1	Consent of Independent Registered Public Accounting Firm, filed herewith.
31.1	Chief Executive Officer certification pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, filed herewith.
31.2	Chief Financial Officer certification pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, filed herewith.
32.1	Chief Executive Officer certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, filed herewith.
32.2	Chief Financial Officer certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, filed herewith.
101.INS	XBRL Instance Document
101.SCH	XBRL Schema Document
101.CAL	XBRL Calculation Linkbase Document
101.DEF	XBRL Definition Linkbase Document
101.LAB	XBRL Labels Linkbase Document
101.PRE	XBRL Presentation Linkbase Document

\* — Reflects management contract or compensatory plan or arrangement required to be filed as an exhibit pursuant to Item 15(b) of this Annual Report on Form 10-K.

(b) The exhibits listed are filed as part of or incorporated by reference into this report.

(c) Additional Financial Statement Schedules.

None.

## SIGNATURES

Pursuant to the requirements of the Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

STONERIDGE, INC.

Date: February 27, 2019

/s/ ROBERT R. KRAKOWIAK

Robert R. Krakowiak  
*Executive Vice President, Chief Financial Officer  
and Treasurer*  
(Principal Financial Officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Date: February 27, 2019

/s/ JONATHAN B. DEGAYNOR

Jonathan B. DeGaynor  
*President, Chief Executive Officer and Director*  
(Principal Executive Officer)

Date: February 27, 2019

/s/ ROBERT R. KRAKOWIAK

Robert R. Krakowiak  
*Executive Vice President, Chief Financial Officer and  
Treasurer*  
(Principal Financial Officer)

Date: February 27, 2019

/s/ ROBERT J. HARTMAN JR.

Robert J. Hartman Jr.  
*Chief Accounting Officer*  
(Principal Accounting Officer)

Date: February 27, 2019

/s/ WILLIAM M. LASKY

William M. Lasky  
*Chairman of the Board of Directors*

Date: February 27, 2019

/s/ JEFFREY P. DRAIME

Jeffrey P. Draime  
*Director*

Date: February 27, 2019

/s/ DOUGLAS C. JACOBS

Douglas C. Jacobs  
*Director*

Date: February 27, 2019

/s/ IRA C. KAPLAN

Ira C. Kaplan  
*Director*

Date: February 27, 2019

/s/ KIM KORTH

Kim Korth  
*Director*

Date: February 27, 2019

/s/ GEORGE S. MAYES, JR.

George S. Mayes, Jr.  
*Director*

Date: February 27, 2019

/s/ PAUL J. SCHLATHER

Paul J. Schlather  
*Director*

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Novi, Michigan 48377