
**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, 2016

OR

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

Commission File No. 001-35456

ALLISON TRANSMISSION HOLDINGS, INC.

(Exact Name of Registrant as Specified in Its Charter)

Delaware
(State of Incorporation)

26-0414014
(I.R.S. Employer
Identification Number)



One Allison Way
Indianapolis, IN 46222
(Address of Principal Executive Offices and Zip Code)

(317) 242-5000
(Registrant's Telephone Number, Including Area Code)

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

<u>Title of each class</u>	<u>Name of each exchange on which registered</u>
Common Stock, \$0.01 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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of 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, or a smaller reporting company. See definitions of "large accelerated filer," "accelerated filer," and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer Accelerated filer
Non-accelerated filer (Do not check if a smaller reporting company) Smaller reporting company

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

The aggregate market value of the voting and non-voting stock held by non-affiliates was approximately \$4,186.7 million as of June 30, 2016.

As of February 8, 2017, there were 162,611,552 shares of Common Stock outstanding.

Documents Incorporated by Reference

Portions of the Registrant's definitive Proxy Statement for its 2017 annual meeting of stockholders will be incorporated by reference in Part III of this Annual Report on Form 10-K.

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Cautionary Note Regarding Forward-Looking Statements

This Annual Report on Form 10-K contains forward-looking statements. The words “believe,” “expect,” “anticipate,” “intend,” “estimate” and other expressions that are predictions of or indicate future events and trends and that do not relate to historical matters identify forward-looking statements. You should not place undue reliance on these forward-looking statements. Although forward-looking statements reflect management’s good faith beliefs, reliance should not be placed on forward-looking statements because they involve known and unknown risks, uncertainties and other factors, which may cause the actual results, performance or achievements to differ materially from anticipated future results, performance or achievements expressed or implied by such forward-looking statements. Forward-looking statements speak only as of the date the statements are made. We undertake no obligation to publicly update or revise any forward-looking statement, whether as a result of new information, future events, changed circumstances or otherwise. These forward-looking statements are subject to numerous risks and uncertainties, including, but not limited to: uncertainty in the global regulatory and business environments in which we operate; our participation in markets that are competitive; the highly cyclical industries in which certain of our end users operate; the failure of markets outside North America to increase adoption of fully-automatic transmissions; the concentration of our net sales in our top five customers and the loss of any one of these; future reductions or changes in government subsidies or changes in government subsidies for hybrid vehicles and other external factors impacting demand; U.S. defense spending; general economic and industry conditions; the discovery of defects in our products, resulting in delays in new model launches, recall campaigns and/or increased warranty costs and reduction in future sales or damage to our brand and reputation; our ability to prepare for, respond to and successfully achieve our objectives relating to technological and market developments, competitive threats and changing customer needs; risks associated with our international operations; labor strikes, work stoppages or similar labor disputes, which could significantly disrupt our operations or those of our principal customers; risks related to our substantial indebtedness; and our intention to pay dividends and repurchase shares of our common stock.

Important factors that could cause actual results to differ materially from our expectations are disclosed under Part I, Item 1A, “Risk Factors” in this Annual Report on Form 10-K. All written and oral forward-looking statements attributable to us, or persons acting on our behalf, are expressly qualified in their entirety by the cautionary statements as well as other cautionary statements that are made from time to time in our other Securities and Exchange Commission filings or public communications. You should evaluate all forward-looking statements made in this Annual Report on Form 10-K in the context of these risks and uncertainties.

Certain Trademarks

This Annual Report on Form 10-K includes trademarks, such as Allison Transmission and ReTran, which are protected under applicable intellectual property laws and are our property and/or the property of our subsidiaries. This report also contains trademarks, service marks, copyrights and trade names of other companies, which are the property of their respective owners. We do not intend our use or display of other companies’ trademarks, service marks, copyrights or trade names to imply a relationship with, or endorsement or sponsorship of us by, any other companies. Solely for convenience, our trademarks and trade names referred to in this report may appear without the ® or ™ symbols, but such references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights or the right of the applicable licensor to these trademarks and trade names.

PART I.

ITEM 1. Business

Overview

Allison Transmission Holdings, Inc. and its subsidiaries (“Allison,” the “Company” or “we”) design and manufacture commercial and defense fully-automatic transmissions. The business was founded in 1915 and has been headquartered in Indianapolis, Indiana since inception. Allison was an operating unit of General Motors Corporation (“Old GM”) from 1929 until 2007, when Allison once again became a stand-alone company. In March 2012, Allison began trading on the New York Stock Exchange under the symbol, “ALSN”.

We have approximately 2,600 employees and 13 different transmission product lines. Although approximately 78% of revenues were generated in North America in 2016, we have a global presence by serving customers in Europe, Asia, South America and Africa. We serve customers through an independent network of approximately 1,400 independent distributor and dealer locations worldwide.

Our Business

We are the world’s largest manufacturer of fully-automatic transmissions for medium- and heavy-duty commercial vehicles and medium- and heavy-tactical U.S. defense vehicles. Allison transmissions are used in a wide variety of applications, including on-highway trucks (distribution, refuse, construction, fire and emergency), buses (primarily school, transit and hybrid-transit), motorhomes, off-highway vehicles and equipment (primarily energy, mining and construction) and defense vehicles (wheeled and tracked). We estimate that globally, in 2016, we sold approximately 60% of all fully-automatic transmissions for medium- and heavy-duty on-highway commercial vehicle applications. We believe the Allison brand is one of the most recognized in our industry as a result of the performance, reliability and fuel efficiency of our transmissions and is associated with high quality, durability, vocational value, technological leadership and superior customer service.

We introduced the world’s first fully-automatic transmission for commercial vehicles over 60 years ago. Since that time, we have driven the trend in North America and Western Europe towards increasing automaticity by targeting a diverse range of commercial vehicle vocations. Allison transmissions are optimized for the unique performance requirements of end users, which typically vary by vocation. Our products are highly engineered, requiring advanced manufacturing processes, and employ complex software algorithms for our transmission controls to maximize end user performance. We have developed over 100 different models that are used in more than 2,500 different vehicle configurations and are compatible with more than 500 combinations of engine brands, models and ratings (including diesel, gasoline, natural gas and other alternative fuels). Additionally, we have created thousands of unique Allison-developed calibrations available to be used with our transmission control modules.

Our Industry

Commercial vehicles typically employ one of three transmission types: manual, automated manual transmissions (“AMT”) or fully-automatic. Manual transmissions are the most prevalent transmission type used in Class 8 tractors in North America and in medium- and heavy-duty commercial vehicles, generally, outside North America. Manual transmissions utilize a disconnect clutch causing power to be interrupted during each gear shift resulting in energy loss-related inefficiencies and less work being accomplished for a given amount of fuel consumed. In long-distance trucking, this power interruption is not a significant factor, as the manual transmission provides its highest degree of fuel economy during steady-state cruising. However, steady-state cruising is only one part of the duty cycle. When the duty cycle requires a high degree of “start and stop” activity or speed transients, as is common in many vocations as well as in urban environments, we believe manual transmissions result in reduced performance, lower fuel efficiency, lower average speed for a given amount of fuel consumed and inferior ride quality. Moreover, the clutches must be replaced regularly, resulting in increased maintenance expense and vehicle downtime. Manual transmissions also require a skilled driver to operate the disconnect clutch when launching the vehicle and shifting gears. AMTs are manual transmissions that feature automated operation of the disconnect clutch. Fully-automatic transmissions utilize technology that smoothly shifts gears instead of a disconnect clutch, thereby delivering uninterrupted power to the wheels during gear shifts and requiring minimal driver input. These transmissions deliver superior acceleration, higher productivity, increased fuel efficiency, reduced operating costs, less driveline shock and smoother shifting relative to both manual transmissions and AMTs in vocations with a high degree of “start and stop” activity, as well as in urban environments.

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Emerging technologies in commercial-duty transmissions and powertrains include dual clutch transmissions (“DCT”) and electric drive powertrains. DCTs are variants of manual transmissions and AMTs that incorporate a “dual clutch” mechanism to facilitate shifting the manual transmission gearbox. Electric drive powertrains are also emerging in selected end markets, such as transit buses, and are in part driven by efforts to reduce fuel consumption and greenhouse gas emissions. Electric drive powertrains differ from “hybrid” powertrains because they only propel the vehicle with an electric motor; “hybrids” generally utilize both a conventional internal combustion power source and powertrain as well as the means to propel the vehicle electrically. While both emerging technologies are gaining use in niche automotive markets, they are just beginning to evolve and become proven in commercial vehicle markets.

Fuel efficiency, reduction in fuel consumption and greenhouse gas emissions are important considerations for commercial vehicles everywhere and they tend to go together. We believe fuel efficiency, the measure of work performed for a given amount of fuel consumed, is the best method to assess fuel consumption of commercial vehicles as compared to the more commonly-used fuel economy metric of miles-per-gallon (“MPG”). MPG is inadequate for commercial vehicles because it does not encompass two key elements of efficiency that we believe are important to vehicle owners and operators: payload and transport time. For example, if more work can be completed or more payload hauled using the same amount of fuel and/or over a shorter period of time, then we believe the vehicle is more fuel efficient. Since fuel economy only accounts for distance traveled and fuel consumed, ignoring time and work performed, we believe it is therefore an inferior metric to fuel efficiency when it comes to assessing commercial vehicles. Markets, regulations, policies and technology continue to evolve with respect to these topics.

Our Served Markets

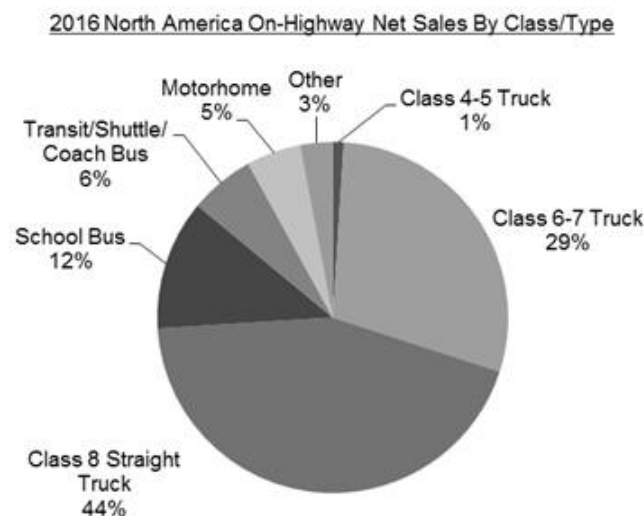
We sell our transmissions globally for use in medium- and heavy-duty on-highway commercial vehicles, off-highway vehicles and equipment and defense vehicles. In addition to the sale of transmissions, we also sell branded replacement parts, support equipment and other products necessary to service the installed base of vehicles utilizing our transmissions. The following table provides a summary of our business by end market, for the fiscal year ended December 31, 2016.

END MARKET	NORTH AMERICA			OUTSIDE NORTH AMERICA		DEFENSE	SERVICE PARTS, SUPPORT EQUIPMENT & OTHER
	ON-HIGHWAY	HYBRID TRANSIT BUS	OFF-HIGHWAY	ON-HIGHWAY	OFF-HIGHWAY		
2016 NET SALES (IN MILLIONS)	\$962	\$61	\$7	\$305	\$12	\$115	\$378
% OF TOTAL	52%	3%	1%	17%	1%	6%	20%
MARKET POSITION	<ul style="list-style-type: none"> #1 supplier of fully-automatic transmissions 	<ul style="list-style-type: none"> A leading supplier of hybrid-propulsion systems 	<ul style="list-style-type: none"> A leading independent supplier 	<ul style="list-style-type: none"> #1 supplier of fully-automatic transmissions in China Established presence in Western Europe 	<ul style="list-style-type: none"> A leading independent supplier 	<ul style="list-style-type: none"> #1 supplier of transmissions for the U.S. Department of Defense 	<ul style="list-style-type: none"> Approximately 1,400 dealers and distributors worldwide
VOCATIONS OR END USE	<ul style="list-style-type: none"> Distribution Emergency Refuse Construction Utility School, transit, shuttle and coach buses Motorhome Metro tractors 	<ul style="list-style-type: none"> Hybrid transit bus Hybrid shuttle bus 	<ul style="list-style-type: none"> Energy Mining Construction Specialty vehicle 	<ul style="list-style-type: none"> Distribution Emergency Refuse Construction Utility Transit, shuttle and coach buses 	<ul style="list-style-type: none"> Energy Mining Construction Specialty vehicle 	<ul style="list-style-type: none"> Medium- and heavy-tactical wheeled platforms Tracked combat platforms 	<ul style="list-style-type: none"> Parts Support equipment Remanufactured transmissions Fluids

Refer to NOTE 18, “Concentration of Risk” and NOTE 22, “Geographic Information” in Part II, Item 8, of this Annual Report on Form 10-K for additional information on our significant original equipment manufacturer (“OEM”) customers and net sales by geographical areas.

North America

On-Highway. We are the largest manufacturer of fully-automatic transmissions for the on-highway medium- and heavy-duty commercial vehicle market in North America. The following is a summary of our on-highway net sales by vehicle class in North America.



Our core North American on-highway market includes Class 4-5, Class 6-7 and Class 8 straight trucks, conventional transit, shuttle and coach buses, school buses and motorhomes. Class 8 trucks are subdivided into two markets: straight and tractor. Class 8 straight trucks are those with a unified body (e.g., refuse, construction, and dump trucks), while tractors have a vehicle chassis that is separable from the trailer they pull. We have been supplying transmissions for Class 8 straight trucks for decades, and it is a core end market for us. Today, we have very limited exposure to the Class 8 tractor market because lower priced manual transmissions generally meet the needs of these vehicles which are primarily used in long distance hauling. However, we have identified a portion of the Class 8 tractor market that we call metro tractors that are used in urban environments the majority of the time and developed a fully-automatic transmission (the “TC10”) that meets the unique duty cycle requirements of the Class 8 metro tractor market. Combining the startability and continuous, uninterrupted power qualities of a fully-automatic transmission with the cruising aspects of a manual transmission, the TC10 offers an alternative to traditional manual and automated manual transmissions in tractor applications.

We sell substantially all of our transmissions in the North American on-highway market to OEMs. These OEMs, in turn, install our transmissions in vehicles in which our transmission is either the exclusive transmission available or is specifically requested by end users. In 2016, OEM customers representing over 90% of our North American on-highway unit volume participated in long-term supply agreements (“LTSA”) with us. Generally, these supply agreements offer the OEM customer defined levels of mutual commitment with respect to growing Allison’s presence in the OEMs’ products and promotional efforts, pricing and sharing of commodity cost risk. The length of our customer agreements is typically between three and five years. We often compete in this market against independent manufacturers of manual transmissions, AMTs, DCTs, electric drive systems, fully-automatic transmissions manufactured by Ford Motor Company (“Ford”), ZF Friedrichshafen AG (“ZF”) and Voith GmbH, and against vertically integrated OEMs in certain weight classes that use their own internally manufactured transmissions in certain vehicles.

The following table presents a summary of our competitive position by vehicle class in the North America on-highway end market.

	CLASS 4-5 TRUCKS	CLASS 6-7 TRUCKS	CLASS 8 STRAIGHT TRUCKS	SCHOOL BUSES	MOTORHOMES
2016 SHARE	3%	70%	63%	92%	36%
PRIMARY COMPETITION	<ul style="list-style-type: none"> • Ford 	<ul style="list-style-type: none"> • Manual Transmissions • AMTs • Ford 	<ul style="list-style-type: none"> • Manual Transmissions • AMTs 	<ul style="list-style-type: none"> • Ford 	<ul style="list-style-type: none"> • Ford

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Hybrid Transit Buses. The interest in conserving fuel and reducing greenhouse gas emissions is driving demand for more fuel efficient commercial vehicles. Our customers in this North American end market are typically city, state and federal governmental entities, which utilize government funds to subsidize a portion of the purchase price for the transit buses containing our hybrid-propulsion system. In this market, we compete primarily with BAE Systems plc and manufacturers of electric drive systems.

Off-Highway. We have provided products used in vehicles and equipment that serve energy, mining and construction applications in North America for over 60 years. Off-highway energy applications include hydraulic fracturing equipment, well-stimulation equipment, pumping equipment, and well-servicing rigs, which often use a fully-automatic transmission to propel the vehicle and drive auxiliary equipment. We maintain a leadership position in this end market, with nearly all producers of well-stimulation and well-servicing equipment utilizing our heavy duty off-highway transmissions. Additionally, we sell kits that can increase the horsepower ratings of our existing off-highway products. Competition includes Caterpillar, Inc. (“Caterpillar”) and Twin Disc, Inc. (“Twin Disc”).

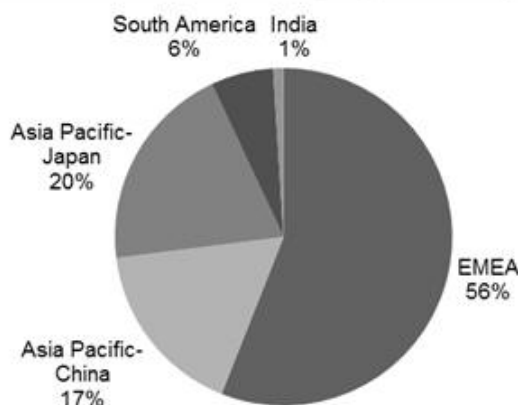
We also provide heavy-duty transmissions used in mining trucks, specialty vehicles and construction vehicles. Mining applications include trucks used to haul various commodities and other products, including rigid dump trucks, underground trucks and long-haul tractor trailer trucks with load capacities between 40 to 110 tons. Our major competitors in this end market are Caterpillar and Komatsu, Ltd. (“Komatsu”), both of which are vertically integrated and manufacture fully-automatic transmissions for their own vehicles. Specialty vehicles using our heavy-duty transmissions include airport rescue and firefighting vehicles and heavy-equipment transporters. Our major competitor in this end market is Twin Disc. Construction applications include articulated dump trucks, with Caterpillar, Volvo Group (“Volvo”) and ZF as competitors.

Outside North America

Outside North America we serve several different markets, including: Europe, Middle East, Africa (“EMEA”), Asia-Pacific, South America and India.

On-Highway. We are the largest manufacturer of fully-automatic transmissions for the commercial vehicle market outside of North America. While the use of fully-automatic transmissions in the medium- and heavy-duty commercial vehicle market has been widely accepted in North America, the markets outside North America continue to be dominated by manual transmissions. In 2016, fully-automatic transmission-equipped medium- and heavy-duty commercial vehicles represented less than 5% of the vehicles in markets outside North America and are concentrated in certain vocational end markets. The following is a summary of our on-highway net sales by region outside of North America.

2016 Outside North America On-Highway Net Sales By Region



Europe, Middle East, Africa. EMEA is composed of several different markets, each of which differs significantly from our core North American market by the degree of market maturity, sophistication and acceptance of fully-automatic transmission technology. Within Europe, we serve Western European developed markets, as well as Russian and Eastern European emerging markets, principally in the refuse, emergency, bus, coach, distribution and utility markets. Competition in Western Europe is most notably characterized by a high level of vertical powertrain integration with OEMs often utilizing their own manual transmissions and AMTs in their vehicles. The Middle East and Africa regions are generally characterized by very limited local vehicle production, with imports from the U.S., South America, Turkey, China, India and Europe accounting for the majority of vehicles.

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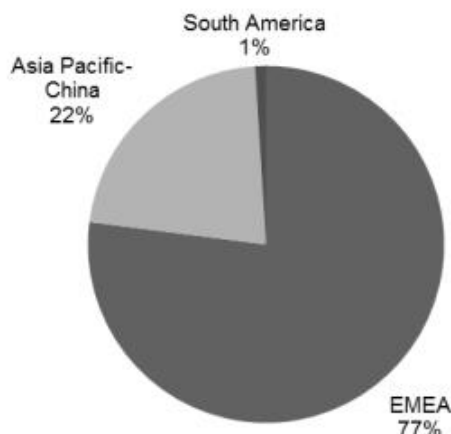
Asia-Pacific. Our key Asia-Pacific markets include China, Japan, Australia, and South Korea; however, we actively participate in several other important Asia-Pacific countries including Taiwan, Indonesia, Malaysia and Thailand, which are primarily importers of commercial vehicles. Within Asia-Pacific, our sales efforts are principally focused on the transit bus and vocational truck markets. Currently, manual transmissions are the predominant transmissions used in commercial vehicles in the Asia-Pacific region.

South America. The South American region is characterized by a high level of OEM integration, with captive manual transmission and AMT manufacturing. Currently, manual transmissions are the predominant transmissions used in commercial vehicles in South America.

India. Currently, manual transmissions are the predominant transmission used in commercial vehicles in India.

Off-Highway. The following is a summary of our off-highway net sales by region outside of North America.

2016 Outside North America Off-Highway Net Sales By Region



Europe, Middle East, Africa. Our off-highway markets in EMEA are mining and construction. Our major off-highway competitors are Caterpillar and Komatsu, both of which are vertically integrated manufacturers of off-highway mining vehicles, including the specific fully-automatic transmission used in their mining trucks. A typical construction application is the articulated dump truck, with competition from Caterpillar, Volvo and ZF transmissions.

Asia-Pacific. Off-highway markets in Asia are shared by energy, mining and construction applications. Our primary competitors are Caterpillar, Danyang Winstar Auto Parts Co. and Twin Disc in energy applications, Caterpillar and Komatsu in mining applications and Caterpillar, Volvo and ZF in construction applications.

Defense

We have a long-standing relationship with the U.S. Department of Defense (“DOD”), dating back to 1946, when we began developing our first-generation tank transmission. Today, we sell substantially all of the transmissions for medium- and heavy-tactical wheeled vehicle platforms including the Family of Medium Tactical Vehicles, Armored Security Vehicles, Heavy Expanded Mobility Tactical Trucks, Heavy Equipment Transporters, Palletized Loading Systems, M915 Series Trucks, Medium Tactical Vehicle Replacements and the Logistic Vehicle System Replacement. Additionally, we supplied transmissions for the majority of Mine-Resistant Ambush Protected (“MRAP”) Vehicles and the MRAP All-Terrain Vehicle and for the Joint Light Tactical Vehicle, which is the replacement vehicle for Humvee personnel transport. Transmissions for our wheeled vehicle platforms are typically sold to OEMs.

We are also the supplier on two of the three key tracked vehicle platforms, the Abrams tank and the M113 family of vehicles, which are sold directly to the DOD. Additionally, we sell parts kits to licensees for the production of transmissions for tracked vehicles manufactured outside North America. Overall, we have seen the demand for U.S. defense vehicles decrease as the funding for defense vehicles declines. Additionally, the DOD budgets and supplemental spending have allowed them to recapitalize and reset many vehicle systems, which has reduced the average age of the fleet and the need to procure new vehicles. See Part I, Item 1A, “Risk Factors” of this Annual Report on Form 10-K for a further discussion of risks associated with our contracts with the U.S. DOD.

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Globally, we face competition for the supply of our transmissions in tracked defense vehicles primarily from L-3 Communications Corporation, Renk AG and ZF. Additionally, we face limited competition from Caterpillar in certain defense wheeled vehicle platforms.

Service Parts, Support Equipment and Other






The aftermarket provides us with a relatively stable source of revenues as the installed base of vehicles and equipment utilizing our transmissions continues to grow. The need for replacement parts is driven by normal vehicle and equipment maintenance requirements and is not significantly impacted by economic cycles. Uninterrupted operation is generally critical for end users' profitability. End users focus on getting the vehicle back in service, which in some cases results in the aftermarket purchase decision being less price-sensitive.





The sale of Allison-branded parts and fluids, remanufactured transmissions and support equipment is fundamental to our brand promise. We have assembled a worldwide network of approximately 1,400 independent distributor and dealer locations to sell, service and support our transmissions. As part of our brand strategy, our distributors and dealers are required to sell genuine Allison-branded parts. Within the aftermarket, we offer remanufactured transmissions under our ReTran brand, which provides a cost-effective alternative for transmission repairs and replacements. We also provide support equipment to our OEMs to assist in installing new Allison transmissions into vehicles, and, therefore, sales of support equipment are dependent upon sales of new transmissions.



Over the last few years, traditional aftermarket sales have been tempered by improvements in product quality and durability. While traditional aftermarket sales are expected to grow, support equipment sales fluctuate with the introduction of new transmissions. The competition for service parts and ReTran transmissions comes from a variety of smaller-scale companies sourcing non-genuine "will-fit" parts from unauthorized manufacturers. These "will-fit" parts often do not meet our product specifications, and therefore may be of lesser quality than genuine Allison parts.

Our Product Offerings

Allison transmissions are sold under the Allison Transmission brand name and remanufactured transmissions are sold under the ReTran brand name. The following is a summary of our 13 transmission product lines.

<i>On-Highway Products</i>			
Product		Applications	
1000/2000 		<ul style="list-style-type: none"> • Distribution • Motorhome • Services 	<ul style="list-style-type: none"> • Refuse • School/Shuttle Bus • Wheeled Military • Specialty
3000 		<ul style="list-style-type: none"> • Construction • Distribution • Fire and Emergency • Motorhome • Wheeled Military 	<ul style="list-style-type: none"> • Coach and Transit Bus • Refuse • Specialty • Services
4000 		<ul style="list-style-type: none"> • Construction • Distribution • Fire and Emergency • Motorhome • Wheeled Military 	<ul style="list-style-type: none"> • Coach and Transit Bus • Refuse • Specialty • Articulated dump truck • Well Service Rigs
TC 10 		<ul style="list-style-type: none"> • Metro Tractors 	
H 40/50 EP 		<ul style="list-style-type: none"> • Hybrid Transit Bus 	

<i>Off-Highway Products</i>		
Product		Applications
5000 	6000 	<ul style="list-style-type: none">▪ Underground Mine Truck▪ Rigid Dump Truck▪ Well Service Rigs
8000 	9000 	<ul style="list-style-type: none">▪ Rigid Dump Truck▪ Hydraulic fracturing equipment

<i>Tracked Military Products</i>		
Product		Applications
X1100 		<ul style="list-style-type: none">▪ Tracked Defense (Abrams)
X200 		<ul style="list-style-type: none">▪ Tracked Defense (M113 Family of Vehicles)

Product Development and Engineering

We maintain product development and engineering capability dedicated to the design, development, refinement and support of our fully-automatic transmissions and hybrid-propulsion systems. We believe our customers expect our products to provide unparalleled performance and value defined in various ways, including delivering maximum cargo in minimum time, using the least amount of fuel possible while employing the fewest vehicles possible and experiencing maximum vehicle uptime. In response to those needs and the evolving customer focus on fuel efficiency, we provide vehicle specification guidelines, transmission control software and mechanical components to optimize fuel economy while delivering desired vehicle performance. Further, we are developing new technology to improve fuel efficiency and fuel economy by allowing engines to operate more efficiently and at lower speeds to avoid consuming fuel without compromising performance. Building on our engineering capabilities, we pioneered hybrid-propulsion in commercial vehicles and are developing new alternative technologies for use in our global commercial vehicle markets; however, decreased fuel costs, alternative fuels and other technologies have resulted in deteriorating market conditions for hybrid-propulsion vehicles in recent years. For the years ended December 31, 2016, 2015 and 2014, we have invested \$88.8 million, \$92.5 million and \$103.8 million in engineering – research and development expense, respectively.

From time to time, we acquire certain licenses to provide us with technology to complement our portfolio of products and product initiatives, such as our engineering development agreement with Torotrak plc and our development agreement with Fallbrook Technologies, Inc. For the years ended December 31, 2016, 2015 and 2014, we have invested \$0.0 million, \$0.2 million and \$6.1 million, respectively, in engineering – research and development expense related to technology-related licenses.

We maintain test tracks on our Indianapolis, Indiana campus and at our location in Szentgotthard, Hungary for vehicle driving, testing and calibration activities in addition to being a demonstration venue for customers. We also use test track facilities in New Carlisle, Indiana and Apache Junction, Arizona.

Sales and Marketing Organization

Our sales and marketing effort is organized along geographic and customer lines and is comprised of marketing, sales and service professionals, supported by application engineers worldwide. In North America, selling efforts in the on-highway end market are organized by distributor area responsibility, OEM sales and national accounts, for our large end users. Outside North America, we manage our sales, marketing, service and application engineering professionals through regional areas of responsibility. These regional management teams distribute OEM service and application engineering resources globally. We manage our defense products sales, marketing, service and application engineering through professionals based in Indianapolis, Indiana and Detroit, Michigan.

We have developed a marketing strategy to reach OEM customers as well as end users. We target our end users primarily through marketing activities by our sales staff, who directly call on end users and attend local trade shows, targeting specific vocations globally and through our plant tour programs, where end users may test our products on the Indianapolis test track and our enhanced customer experience demonstration track at our Hungary facility.

While our marketing management uses the term “customer” interchangeably for OEMs and end users, the primary objective of our marketing strategy is to create demand for fully-automatic transmissions through:

- OEM promotion of our products and incorporation of fully-automatic transmissions in their commercial vehicle product offerings;
- Allison representative and/or Allison distributor contact with identified, major end users; and
- Our network of independent dealers who contact other end users.

The process is interactive, as Allison representatives, Allison distributors, OEMs and dealers educate customers and respond to the specific applications, requirements and needs of numerous specialty markets.

Similarly, we work with customers, dealers and OEMs to educate, improve and simplify how they specify vehicles and vehicle systems in order to optimize vehicle performance and fuel consumption. Our field organization also works closely with distributors who, in turn, work with dealers to provide end users with education, parts, service and warranty support. The defense marketing group follows a defined plan that identifies country, vehicle and specific OEMs and then approaches the ultimate end user through a variety of channels.

Manufacturing

Our manufacturing strategy provides for distributed capability in manufacturing and assembly of our products for the global commercial vehicle market. Our primary manufacturing facilities, located in Indianapolis, Indiana, consist of approximately 2.3 million square feet of usable manufacturing space in six plants. We also have established customization and parts distribution in the United States, The Netherlands, Brazil, China, Hungary, India and Japan, and plants in Chennai, India and Szentgotthard, Hungary. Our high volume on-highway products are produced in multiple global locations while off-highway, hybrid-propulsion and defense tracked and wheeled products are produced in Indianapolis.

Suppliers and Raw Materials

A significant amount of the part numbers that make up our transmissions are purchased from outside suppliers, and during 2016, we purchased approximately \$600.0 million of direct materials and components from outside suppliers. The largest elements of our direct spending are aluminum and steel castings and forgings that are formed by our suppliers into our larger components and assemblies for use in our transmissions. However, our spending on aluminum and steel raw materials directly and indirectly through our purchase of these components constituted approximately 19% of our direct material and component costs in 2016. The balance of our direct and indirect materials and components costs are primarily composed of value-added services and conversion costs. Our supply contracts, along with an intensive supplier selection and performance monitoring process, have enabled us to establish and maintain close relationships with suppliers and have contributed to our overall operating efficiency and industry-leading quality.

Intellectual Property

Patents and other proprietary rights are important to the continued success of our business. We also rely upon trade secrets, know-how, continuing technological innovation and licensing opportunities to develop and maintain our competitive position. We protect our proprietary rights through a variety of methods, including confidentiality agreements and proprietary information agreements with suppliers, employees, consultants and others who may have access to proprietary information. We own over 300 issued patents worldwide, and we have licensing arrangements with respect to more than 600 additional patents and patent applications. We have more than 400 pending patent applications throughout the world that relate to aspects of the technology incorporated in many of our products.

In addition, in conjunction with the sale of Allison (the "Acquisition Transaction") by Old GM, we acquired an irrevocable, royalty-free, worldwide license of more than 400 U.S. and foreign patents and patent applications, as well as certain unpatented technology and know-how, to manufacture, use and sell fully-automatic transmissions and certain hybrid-propulsion systems for use in vocational and defense vehicles and off-highway products. Such licenses are subject to certain limitations. See Part I, Item 1A, "Risk Factors" of this Annual Report on Form 10-K for a complete discussion of these risks and limitations. In addition, we acquired from Old GM an irrevocable, royalty-free, worldwide license under computer software programs that we use to run our business, including product design. Allison also acquired ownership of trademarks and copyrights relating to our business, subject in some cases to a non-exclusive license back to Old GM for use in connection with its existing six-speed A1000 transmission products, but only up to the termination of production of the A1000 transmission product by General Motors Company ("GM"), the successor to Old GM. GM has assumed Old GM's obligations under these agreements pursuant to an agreement between us and GM in which GM assumed certain contracts and agreements between us and Old GM (the "Cure Agreement").

Seasonality

Overall, the demand for our products is relatively consistent over the year. However, in typical market conditions, the North American truck market experiences a higher level of production in the first half of the year due to fewer holidays and the practice of plant shutdowns in July and December. Working capital levels do not fluctuate significantly in the normal course for our business.

Employees

As of December 31, 2016, we had approximately 2,600 employees, with approximately 89% of those employees in the U.S. Approximately 58% of our U.S. employees are represented by the International Union, United Automobile, Aerospace and Agricultural Implement Workers of America ("UAW") and are subject to a collective bargaining agreement. In November 2012, we entered into a five year agreement with the UAW Local 933 that expires in November 2017. As approximately 46% of our represented employees are currently retirement eligible, we anticipate a shift toward increasing the number of second tier employees over the coming years. There have been no strikes or work stoppages due to Allison-specific issues in over 30 years.

Environmental Compliance

We are subject to a variety of federal, state, local and foreign environmental laws and regulations, including those governing the discharge of pollutants into the air or water, the management and disposal of hazardous substances or wastes, and the cleanup of contaminated sites. Some of our operations require environmental permits and controls to prevent and reduce air and water pollution. These permits are subject to modification, renewal and revocation by issuing authorities. In addition, certain of our products and our customer's products are subject to certification requirements by a variety of regulatory bodies. We believe we are in substantial compliance with all material environmental laws and regulations applicable to our plants and operations. Historically, our annual costs of achieving and maintaining compliance with environmental, health and safety requirements have not been material to our results.

Increasing global efforts to control emissions of carbon dioxide, methane, ozone, nitrogen oxide and other greenhouse gases and pollutants, as well as the shifting focus of regulatory efforts towards total emissions output, have the potential to impact our facilities, costs, products and customers. The U.S. Environmental Protection Agency ("EPA") has taken action to control greenhouse gases from certain stationary and mobile sources. In addition, the U.S. Congress is considering proposals to limit greenhouse gas emissions, and several states have taken steps, such as adoption of cap and trade programs or other regulatory systems, to address greenhouse gases. There have also been international efforts seeking legally binding reductions in emissions of greenhouse gases. These developments and further actions that may be taken in the U.S. and in other countries, states or provinces could affect our operations both positively and negatively (e.g., by affecting the demand for or suitability of some of our products).

We also may be subject to liability as a potentially responsible party under the Comprehensive Environmental Response, Compensation and Liability Act and similar state or foreign laws for contaminated properties that we currently own, lease or operate or that we or our predecessors have previously owned, leased or operated, and sites to which we or our predecessors sent hazardous substances. Such liability may be joint and several so that we may be liable for more than our share of contamination, and any such liability may be determined without regard to causation or knowledge of contamination. We or our predecessors have been named potentially responsible parties at contaminated sites from time to time. We do not anticipate our liabilities relating to contaminated sites will be material to our results.

Under the asset purchase agreement with Old GM, Old GM agreed to indemnify us against certain environmental liabilities, including pre-acquisition offsite waste disposal from our facilities, former facilities associated with the business and any properties or facilities relating to the business that Old GM retained. While we are responsible for environmental liabilities that arise due to post-acquisition activities, GM, as successor to Old GM's obligations, performed remedial activities at our Indianapolis, Indiana manufacturing facilities relating to historical soil and groundwater contamination at the facilities. GM's activities were referred to as the "Corrective Action" plan, pursuant to the asset purchase agreement, whereby it retained responsibility for completing all obligations covered by a voluntary Corrective Action Agreement that Old GM entered with the EPA. By operation of the asset purchase agreement, once the EPA issues a final decision on GM's activities under the Corrective Action plan, we assume all responsibility for operating, monitoring and maintaining the ongoing Corrective Action and GM's indemnification obligations cease.

During the third quarter of 2015, the EPA determined that GM's remedial activities were complete and that the migration of any contamination was under control, and published a public notice seeking comment on a draft final decision, the issuance of which would result in us assuming responsibility for operating, monitoring and maintaining the ongoing Corrective Action activities through an anticipated agreed order of consent ("AOC") with the EPA. As a result of the publishing of the draft final decision, we determined that appropriate liabilities for operating, monitoring and maintaining the ongoing remedial activities could be reasonably estimated and recorded approximately \$14.0 million for the estimated undiscounted liabilities to be paid out over the next 30 years. The recorded liabilities will be adjusted periodically as remediation efforts progress or as additional technical, regulatory or legal information becomes available. We have funded and expect to continue to fund the expenditures for these activities from operating cash flow.

On January 27, 2016, the EPA issued a final decision, and we assumed all responsibility for the Corrective Action. We entered into an administrative order of consent with the EPA that requires us to provide financial assurance to complete the operation, monitoring and maintenance in the event we fail to do so. On December 23, 2016, we issued a letter of credit to the EPA in the amount of \$14.9 million.

Competition

We compete on the basis of product performance, quality, price, distribution capability and service in addition to other factors. We face competition from numerous manufacturers of various types of transmissions for commercial vehicles. We also face competition from manufacturers in our international operations and from international manufacturers entering our domestic market. Furthermore, we face an increasing amount of competition from vertical integration as some of our customers are OEMs that manufacture transmissions for their own products. Despite their transmission manufacturing capabilities, our existing OEM customers have chosen to purchase certain transmissions from us due to the quality, reliability and strong brand of our transmissions and in order to limit fixed costs, minimize production risks and maintain company focus on commercial vehicle design, production and marketing.

Corporate Information

Allison Transmission Holdings, Inc. was incorporated in Delaware on June 22, 2007. Our principal executive offices are located at One Allison Way, Indianapolis, IN 46222 and our telephone number is (317) 242-5000. Our internet address is www.allisontransmission.com. We file annual, quarterly and current reports, proxy statements and other documents with the United States Securities and Exchange Commission (“SEC”), under the Securities Exchange Act of 1934, as amended (the “Exchange Act”). These periodic and current reports and all amendments to those reports are available free of charge on the investor relations page of our website at <http://ir.allisontransmission.com>. We have included our website address throughout this filing as textual references only. The information contained on, or accessible through, our website is not incorporated into this Annual Report on Form 10-K. The public may read and copy any materials we file with the SEC at the SEC’s Public Reference Room at 100 F Street, NE, Washington, DC 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC also maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC at <http://www.sec.gov>.

ITEM 1A. Risk Factors

The following is a cautionary discussion of risks, uncertainties and assumptions that we believe are significant to our business. In addition to the factors discussed elsewhere in this Annual Report on Form 10-K, the following are the important factors that, individually or in the aggregate, we believe could make our actual results differ materially from those described in any forward-looking statements.

Risks Related to Our Business

We participate in markets that are competitive, and our competitors' actions could have a material adverse effect on our business, results of operations and financial condition.

Our business operates in competitive markets. We compete against other existing or new global manufacturers of transmissions for commercial vehicles on the basis of product performance, quality, price, distribution capability and service in addition to other factors. Actions by our competitors could lead to downward pressure on prices and/or a decline in our market share, either or both of which could adversely affect our results.

In addition, some of our customers or future customers are OEMs that manufacture or could in the future manufacture transmissions for their own products. Despite their transmission manufacturing capabilities, our existing OEM customers have chosen to purchase certain transmissions from us due to customer demand, resulting from the quality of our transmission products and in order to reduce fixed costs, eliminate production risks and maintain company focus. However, we cannot be certain these customers will continue to purchase our products in the future. Increased levels of production insourcing by these customers could result from a number of factors, such as shifts in our customers' business strategies, acquisition by a customer of another transmission manufacturer, the inability of third-party suppliers to meet specifications and the emergence of low-cost production opportunities in foreign countries. As a result, these OEMs may use transmissions produced internally or by another manufacturer and no longer choose to purchase transmissions from us. A significant reduction in the level of external sourcing of transmission production by our OEM customers could significantly impact our net sales and cash flows and, accordingly, have a material adverse effect on our business, results of operations and financial condition.

Certain of our end users operate in highly cyclical industries, which can result in uncertainty and significantly impact the demand for our products, which could have a material adverse effect on our business, results of operations and financial condition.

Some of the markets in which we operate, including energy, mining, construction, distribution and motorhomes, exhibit a high degree of cyclicity. Decisions to purchase our transmissions are largely a result of the performance of these and other industries we serve. If demand for output in these industries decreases, the demand for our products will likely decrease. Demand in these industries is impacted by numerous factors including prices of commodities, rates of infrastructure spending, housing starts, real estate equity values, interest rates, consumer spending, fuel costs, energy demands, municipal spending and commercial construction, among others. Increases or decreases in these variables globally may significantly impact the demand for our products, which could have a material adverse effect on our business, results of operations and financial condition. If we are unable to accurately predict demand, we may be unable to meet our customers' needs, resulting in the loss of potential sales, or we may manufacture excess products, resulting in increased inventories and overcapacity in our production facilities, increasing our unit production cost and decreasing our operating margins.

Continued volatility in and disruption to the global economic environment could adversely affect the ability of customers and suppliers to obtain credit and may have a material adverse effect on our business, results of operations and financial condition.

The commercial vehicle industry as a whole has been more adversely affected by volatile economic conditions than many other industries, as the purchase or replacement of commercial vehicles, which are durable items, can be deferred for many reasons, including reduced spending by end users. Future changes in the regulatory and business environments in which we operate may adversely affect our ability to sell our products or source materials needed to manufacture our products. Furthermore, financial instability or bankruptcy at any of our suppliers or customers could disrupt our ability to manufacture our products and impair our ability to collect receivables, any or all of which may have a material adverse effect on our business, results of operations and financial condition. In addition, some of our customers and suppliers may experience serious cash flow problems and, thus, may find it difficult to obtain financing, if financing is available at all. As a result, our customers' need for and ability to purchase our products or services may decrease, and our suppliers may increase their prices, reduce their output or change their terms of sale. Any inability of customers to pay us for our products and services, or any demands by suppliers for different payment terms, may materially and adversely affect our results of operations and financial condition. Furthermore, our suppliers may not be successful in generating sufficient sales or securing alternate financing arrangements, and therefore may no longer be able to supply goods and services to us. In that event, we would need to find alternate sources for these goods and services, and there is no assurance we would be able to find such alternate sources on favorable terms, if at all. Any such disruption in our supply chain could adversely affect our ability to manufacture and deliver our products on a timely basis, and thereby affect our results of operations.

Our long-term growth prospects and results of operations may be impaired if the rate of adoption of fully-automatic transmissions in commercial vehicles outside North America does not increase.

Our long-term growth strategy depends in part on an increased rate of automaticity outside North America. As part of that strategy, we have established manufacturing facilities in India and Hungary. We have also dedicated significant human resources to serve markets where we anticipate increased adoption of automaticity, including China, India, Brazil and Russia. However, manual transmissions remain the market leader outside North America and there can be no assurance that adoption of automatic transmissions will increase. Factors potentially impacting adoption of automatic transmissions outside of North America include the large existing installed base of manual transmissions, customer preferences for manual transmissions, commercial vehicle OEM vertical integration into manual transmission and AMT manufacturing, increased competition from AMTs, DCTs, electric driving systems, and other alternative transmission technologies and failure to further develop the Allison brand. If the rate of adoption of fully-automatic transmissions does not increase as we have anticipated, our long-term growth prospects and results of operations may be impaired.

Our sales are concentrated among our top five OEM customers and the loss or consolidation of any one of these customers or the discontinuation of particular vehicle models for which we are a significant supplier could reduce our net sales and have a materially adverse effect on our results of operations.

We have in the past and may in the future derive a significant portion of our net sales from a relatively limited number of OEM customers. For the years ended December 31, 2016, 2015 and 2014, our top five customers accounted for approximately 52%, 52% and 45% of our net sales, respectively. Our top three customers, Daimler, PACCAR and Navistar, accounted for approximately 21%, 9% and 9%, respectively, of our net sales during 2016. The loss of, or consolidation of any one of these customers, or a significant decrease in business from, one or more of these customers could harm our business. In addition, the discontinuation of particular vehicle models for which we are a significant supplier could reduce our net sales and have a material adverse effect on our results of operations.

Labor unrest could have a material adverse effect on our business, results of operations and financial condition.

As of December 31, 2016, approximately 58% of our U.S. employees, representing over 50% of our total employees, were represented by the UAW and are subject to a collective bargaining agreement. This agreement expires in November 2017. While we intend to negotiate in good faith with the UAW, we cannot guarantee we will be able to renew a collective bargaining agreement on similar or more favorable terms than those that presently exist. We may incur increased labor costs as a result of any of these renegotiations.

In addition to our unionized work force, many of our direct and indirect customers and vendors have unionized work forces. Strikes, work stoppages or slowdowns experienced by these customers or vendors or their other suppliers could result in slowdowns or closings of assembly plants that use our products or supply materials for use in the production of our products. Organizations responsible for shipping our products may also be impacted by strikes. Any interruption in the delivery of our products could reduce demand for our products and could have a material adverse effect on us.

In general, we consider our labor relations with all of our employees to be good. However, in the future we may be subject to labor unrest. The inability to reach a new agreement could delay or disrupt our operations in the affected regions, including the acquisition of raw materials and components, the manufacture, sales and distribution of products and the provision of services. If strikes, work stoppages or lock-outs at our facilities or at the facilities of our vendors or customers occur or continue for a long period of time, our business, results of operations and financial condition may be materially adversely affected.

We may not be successful in introducing our new products and technologies and responding to customer needs.

We currently have new products and technologies under development. The development of new products and technologies is difficult and the timetable for commercial release is uncertain, and we may not be successful in introducing our new products and responding to customer needs. In addition, it often takes significant time, in some cases multiple fleet buy cycles, before customers gain experience with new products and technologies and those new products and technologies become widely-accepted by the market, if at all. If we do not adequately anticipate the changing needs of our customers by developing and introducing new and effective products and technologies on a timely basis, our competitive position and prospects could be harmed. If our competitors are able to respond to changing market demands and adopt new technologies more quickly than we do, demand for our products could decline, our competitive position could be harmed, and we will not be able to recoup a return on our development investments. Moreover, changing customer demands as well as evolving safety and environmental standards could require us to adapt our products and technologies to address such changes. As a result, in the future we may experience delays in the introduction of some or all of our new products or modifications or enhancements of existing products. Furthermore, there may be production delays due to unanticipated technological setbacks, which may, in turn, delay the release of new products to our end users. If we experience significant delays in production, our net sales and results of operations may be materially adversely affected.

Our success depends on continued research and development efforts, the outcome of which is uncertain.

Our success depends on our ability to improve the efficiency and performance of our transmissions, and we invest significant resources in research and development in order to do so. Nevertheless, the research and development process is time-consuming and costly, and offers uncertain results. We may not be able through our research and development efforts to keep pace with improvements in transmission-related technology of our competitors, and licenses for technologies that would enable us to keep pace with our competitors may not be available on commercially reasonable terms if at all. Finally, our research and development efforts, and generally our ability to introduce improved products in the marketplace, may be constrained by the patents and other intellectual property rights of competitors and others.

A majority of our sales to the defense end market are to U.S. government entities and contractors for the U.S. government, and the loss of a significant number of our contracts, or budgetary declines or future reductions or changes in spending by the U.S. government would have a material adverse effect on our results of operations and financial condition.

The majority of our net sales to the defense end market are derived from contracts (revenue arrangements) with agencies of, and prime system contractors for, the U.S. government. If a significant number of our DOD contracts and subcontracts are simultaneously delayed or cancelled for budgetary, performance or other reasons, it would have a material adverse effect on our results of operations and financial condition. Approximately 6%, or \$115 million, of our net sales for the year ended December 31, 2016 were from our Defense end market.

Sales in our defense end market have been, and we expect will continue to be, negatively impacted by declining DOD spending on wheeled and tracked vehicles. In addition to declines in defense budgets, our future financial results may be adversely affected by:

- curtailment of the U.S. government's use of technology or other services and product providers, including curtailment due to government budget reductions, future government shutdowns and related fiscal matters;
- geopolitical developments that affect demand for our products and services; and
- technological developments that impact purchasing decisions or our competitive position.

Our international operations, in particular our emerging markets, are subject to various risks which could have a material adverse effect on our business, results of operations and financial condition.

Our business is subject to certain risks associated with doing business internationally, particularly in emerging markets. Outside-North America net sales represented approximately 22% of our net sales for 2016. Most of our operations are in the U.S., but we also have manufacturing and customization facilities in India and Hungary with a services agreement with Opel Szentgotthard Automotive Manufacturing Ltd., formerly GM-PTH, and customization capability in Brazil, The Netherlands, China and Japan. Further, we intend to continue to pursue growth opportunities for our business in a variety of business environments outside the U.S., which could exacerbate the risks set forth below. Our international operations are subject to, without limitation, the following risks:

- the burden of complying with multiple and possibly conflicting laws and any unexpected changes in regulatory requirements;
- foreign currency exchange controls, import and export restrictions and tariffs, including restrictions promulgated by the Office of Foreign Assets Control of the U.S. Department of the Treasury, and other trade protection regulations and measures;
- political risks, including increased trade protectionism and risks of loss due to civil disturbances, acts of terrorism, acts of war, guerilla activities and insurrection;
- unstable economic, financial and market conditions and increased expenses as a result of inflation or higher interest rates;
- difficulties in enforcement of third-party contractual obligations and intellectual property rights and collecting receivables through foreign legal systems;
- difficulty in staffing and managing international operations and the application of foreign labor regulations;
- differing local product preferences and product requirements;
- fluctuations in currency exchange rates to the extent that our assets or liabilities are denominated in a currency other than the functional currency of the country where we operate;
- potentially adverse tax consequences from changes in tax laws, requirements relating to withholding taxes on remittances and other payments by subsidiaries and restrictions on our ability to repatriate dividends from our subsidiaries; and
- exposure to liabilities under anti-corruption and anti-money laundering laws, including the U.S. Foreign Corrupt Practices Act (“FCPA”) and similar laws and regulations in other jurisdictions.

Any one of these factors could materially adversely affect our sales of products or services to international customers or harm our reputation, which could have a material adverse effect on our business, results of operations and financial condition.

Our international operations require us to comply with anti-corruption laws and regulations of the U.S. government and various international jurisdictions.

Doing business on a worldwide basis requires us and our subsidiaries to comply with the laws and regulations of the U.S. government and various international jurisdictions, and our failure to comply with these rules and regulations may expose us to liabilities. These laws and regulations may apply to companies, individual directors, officers, employees and agents, and may restrict our operations, trade practices investment decisions and partnering activities. In particular, our international operations are subject to U.S. and foreign anti-corruption laws and regulations, such as the FCPA. The FCPA prohibits U.S. companies and their officers, directors, employees and agents acting on their behalf from corruptly offering, promising, authorizing or providing anything of value to foreign officials for the purposes of influencing official decisions or obtaining or retaining business or otherwise obtaining favorable treatment. The FCPA also requires companies to make and keep books, records and accounts that accurately and fairly reflect transactions and dispositions of assets and to maintain a system of adequate internal accounting controls. As part of our business, we deal with state-owned business enterprises, the employees and representatives of which may be considered foreign officials for purposes of the FCPA. In addition, some of the international locations in which we operate lack a developed legal system and have elevated levels of corruption. As a result of the above activities, we are exposed to the risk of violating anti-corruption laws. Violations of these legal requirements are punishable by criminal fines and imprisonment, civil penalties, disgorgement of profits, injunctions, debarment from government contracts as well as other remedial measures. We have established policies and procedures designed to assist us and our personnel in complying with applicable U.S. and international laws and regulations. However, our employees, subcontractors and agents could take actions that violate these requirements, which could adversely affect our reputation, business, financial condition and results of operations.

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Sales of our hybrid-propulsion systems have been, and are expected to continue to be, negatively impacted by external factors, including fuel price trends, regulatory requirements, alternative technologies and governmental entities electing not to subsidize the purchase of such products by end users.

External factors, including diesel and natural gas fuel price trends, emissions and on-board diagnostics regulatory requirements, availability of compatible engine calibrations from engine manufacturers and alternative emerging green technologies, have negatively impacted, and are expected to continue to negatively impact, sales of our hybrid-propulsion systems. In addition, the sales of our hybrid-propulsion systems for use in transit buses have been, and are expected to continue to be, negatively impacted by governmental entities electing not to subsidize the purchase of such products by end users. In 2016, we derived approximately 3% of our net sales from the sale of hybrid-propulsion systems for use in transit buses to city, state and federal governmental end users. Such end users may be eligible to receive certain subsidies as a result of their purchase of vehicles using hybrid-propulsion systems. For example, the Federal Transit Authority and the DOE may provide funds for end users to pursue alternative fuel propulsion systems. While we do not directly receive these subsidies, if any of the subsidizing entities elect to curtail such subsidies to end users for any reason including governmental budget reductions and related fiscal matters, failure of our hybrid technology to qualify for such subsidies or redundancy by alternative technologies created by our competitors, our sales from our hybrid-propulsion systems may be negatively impacted. For the years ended December 31, 2016, 2015 and 2014, we experienced decreases in revenue generated from hybrid-propulsion systems for use in transit buses of 16%, 22% and 11%, respectively.

Any events that impact our brand name, including if the products we manufacture or distribute are found to be defective, could have an adverse effect on our reputation, cause us to incur significant costs and negatively impact our business, results of operations and financial condition.

We face exposure to product liability claims in the event that the use of our products has, or is alleged to have, resulted in injury, death or other adverse effects. We currently maintain product liability insurance coverage, but we cannot be assured that we will be able to obtain such insurance on acceptable terms in the future, if at all, or that any such insurance will provide adequate coverage against potential claims. Product liability claims can be expensive to defend and can divert the attention of management and other personnel for long periods of time, regardless of the ultimate outcome. An unsuccessful product liability defense could have a material adverse effect on our business, results of operation, financial condition or prospects. If one of our products is determined to be defective, we may face substantial warranty costs and may be responsible for significant costs associated with a product recall or a redesign. We have had defect and warranty issues associated with certain of our products in the past, and we cannot give assurance similar product defects will not occur in the future. See NOTE 9 “Product Warranty Liabilities” of Notes to Consolidated Financial Statements included in Part II, Item 8 of this Annual Report on Form 10-K for additional details regarding these warranty issues.

Furthermore, our business depends on the strong brand reputation we have developed. In addition to the risk of defective products, we also face significant risks in our efforts to penetrate new markets, where we have limited brand recognition. We also rely on our reputation with end users of our transmissions to specify our transmissions when purchasing new vehicles from our OEM customers. In the event we are not able to maintain or enhance our brand in these new markets or our reputation is damaged in our existing markets as a result of product defects or recalls, we may face difficulty in maintaining our pricing positions with respect to some of our products or experience reduced demand for our products, which could negatively impact our business, results of operations and financial condition.

Our brand and reputation are dependent on the continued participation and level of service of our numerous independent distributors and dealers.

We work with a network of approximately 1,400 independent distributors and dealers that provide post-sale service and parts and support equipment. Because we depend on the pull-through demand generated by end users for our products, any actions by the independent distributors or dealers, which are not in our control, may harm our reputation and damage the brand loyalty among our customer base. In the event that we are not able to maintain our brand reputation because of the actions of our independent distributors and dealers, we may face difficulty in maintaining our pricing positions with respect to some of our products or have reduced demand for our products, which could negatively impact our business, results of operations and financial condition. In addition, if a significant number of independent dealers were to terminate their contracts, it could adversely impact our business, results of operations and financial condition.

In the event of a catastrophic loss of our key manufacturing facility, our business would be adversely affected.

While we manufacture our products in several facilities and maintain insurance covering our facilities, including business interruption insurance, a catastrophic loss of the use of all or a portion of one of our manufacturing facilities due to accident, labor issues, weather conditions, acts of war, political unrest, terrorist activity, natural disaster or otherwise, whether short- or long-term, would have a material adverse effect on our business, results of operations and financial condition. Our most significant concentration of manufacturing is around our corporate headquarters in Indianapolis, Indiana where we produce approximately 90% of our transmissions. In addition to our Indianapolis manufacturing facilities, we currently operate manufacturing facilities in both Szentgotthard, Hungary and Chennai, India. In the event of a disruption at the Indianapolis facilities, our other facilities may not be adequately equipped to operate at a level sufficient to compensate for the volume of production at the Indianapolis facility due to their size and the fact that they have not yet been tested for such significant increases in production volume.

Increases in cost, disruption of supply or shortage of raw materials or components used in our products could harm our business and profitability.

Our products contain various raw materials, including corrosion-resistant steel, non-ferrous metals such as aluminum and nickel, and precious metals such as platinum and palladium. We use raw materials directly in manufacturing and in transmission components that we purchase from our suppliers. We generally purchase components with significant raw material content on the open market. The prices for these raw materials fluctuate depending on market conditions. Volatility in the prices of raw materials such as steel, aluminum and nickel could increase the cost of manufacturing our products. We may not be able to pass on these costs to our customers, and this could have a material adverse effect on our business, results of operations and financial condition. Even in the event that increased costs can be passed through to customers, our gross margin percentages would decline. Additionally, our suppliers are also subject to fluctuations in the prices of raw materials and may attempt to pass all or a portion of such increases on to us. In the event they are successful in doing so, our margins would decline.

In 2016, approximately 75% of our total spending on components was sourced from approximately 36 suppliers, some of which are the single source for such components. All of the suppliers from which we purchase materials and components used in our business are fully validated suppliers, meaning the suppliers' manufacturing processes and inputs have been validated under a production part approval process ("PPAP"). Furthermore, there are only a limited number of suppliers for certain of the materials used in our business, such as corrosion-resistant steel. As a result, our business is subject to the risk of additional price fluctuations and periodic delays in the delivery of our materials or components if supplies from a validated supplier are interrupted and a new supplier, if one is available, must be validated or materials and components must be purchased from a supplier without a completed PPAP. Any such price fluctuations or delays, if significant, could harm our profitability or operations. In addition, the loss of a supplier could result in significant material cost increases or reduce our production capacity. We also cannot guarantee we will be able to maintain favorable arrangements and relationships with these suppliers. An increase in the cost or a sustained interruption in the supply or shortage of some of these raw materials or components that may be caused by a deterioration of our relationships with suppliers or by events such as natural disasters, power outages, labor strikes, or the like could negatively impact our business, results of operations and financial condition. Although we have agreements with many of our customers that we will pass such price increases through to them, such contracts may be cancelled by our customers and/or we may not be able to recoup the costs of such price increases. Additionally, if we are unable to continue to purchase our required quantities of raw materials on commercially reasonable terms, or at all, if we are unable to maintain or enter into purchasing contracts for commodities, or if delivery of materials from suppliers is delayed or non-conforming, our operations could be disrupted or our profitability could be adversely impacted.

We could be materially adversely affected by any failure to maintain cost controls.

We rely on our cost structure and operating discipline to achieve strong operating margins. There are many factors that could affect our ability to realize expected cost savings or achieve future cost savings that we are not able to control, including the need for unexpected significant capital expenditures; unexpected changes in commodity or component pricing, including an increase in export or import tariffs, that we are unable to pass on to our suppliers or customers; our inability to maintain efficiencies gained from our workforce optimization initiatives; and our failure to achieve and maintain expected cost savings from our multi-tier wage and benefit structure. Additionally, we have substantial indebtedness of approximately \$2,187.6 million as of December 31, 2016. Our inability to maintain our cost controls could adversely impact our operating margins.

Many of the key patents and unpatented technology we use in our business are licensed to us, not owned by us, and our ability to use and enforce such patents and technology is restricted by the terms of the license.

Protecting our intellectual property rights is critical to our ability to compete and succeed as a company. In connection with the Acquisition Transaction, under the patent and technology license agreement (the "Patent and Technology License Agreement"), which was assumed by GM, we were granted an irrevocable, perpetual, royalty-free, worldwide license under a large number of U.S. and foreign patents and patent applications, as well as certain unpatented technology and know-how, to design, develop, manufacture, use and sell fully-automatic transmissions and H 40/50 EP hybrid-propulsion transit bus systems for use in certain vocational vehicles, defense vehicles and off-road products. With respect to the bulk of the intellectual property licensed to us under such license agreement, our license is exclusive with respect to the design, development, manufacture, use and sale of fully-automatic transmissions and H 40/50 EP hybrid-propulsion transit bus systems in vocational vehicles above certain weight rating thresholds, certain defense vehicles and certain off-road products. It is non-exclusive with respect to certain other products that are within the scope of the licensed patents or to which the licensed technology can be applied. We consider the patents and technology licensed under such license agreement, as a whole, to be critical to preserving our competitive position in the market. However, GM continues to own such patents and technology, and pursuant to the terms of such license agreement, GM has the right, in the first instance, to control the maintenance, enforcement and defense of such patents and the prosecution of the licensed patent applications. In addition, the license agreement limits our ability to sublicense our rights. The Patent and Technology License Agreement permits us to utilize the bulk of the intellectual property rights on an exclusive basis in non-defense vehicles with gross vehicle weights above 5900 kilograms (typically Class 4 and higher) with some limited exceptions for GM light-duty pickup truck and van platforms. It also permits us to utilize the bulk of the intellectual property rights on an exclusive basis in defense vehicles that exceed 4250 kilograms (generally Class 3 to Class 4 and higher). GM continues to have the right under such patents and technology to utilize the licensed intellectual property for use in vehicles below the above mentioned rating thresholds, as well as in some light-duty van and pickup truck platforms.

We rely on unpatented technology, which exposes us to certain risks.

We currently do, and may continue in the future to, rely on unpatented proprietary technology. In such regard, we cannot be assured that any of our applications for protection of our intellectual property rights will be approved or that others will not infringe or challenge our intellectual property rights. It is possible our competitors will independently develop the same or similar technology or otherwise obtain access to our unpatented technology.

Although we believe the loss or expiration of any single patent would not have a material effect on our business, results of operations or financial position, there can be no assurance that any one, or more, of the patents licensed from GM, or any other intellectual property owned by or licensed to us, will not be challenged, invalidated or circumvented by third parties. In fact, a number of the patents licensed to us by GM have expired since the date of the Acquisition Transaction, and others are set to expire in the next few years. When a patent expires, the inventions it discloses can be used freely by others. Thus, the competitive advantage that we gain from the patents licensed to us from GM pursuant to the Acquisition Transaction will decrease over time, and a greater burden will be placed on our own research and development and licensing efforts to develop and otherwise acquire technologies to keep pace with improvements of transmission-related technology in the marketplace. We enter into confidentiality and invention assignment agreements with employees, and into non-disclosure agreements with suppliers and appropriate customers so as to limit access to and disclosure of our proprietary information. We cannot be assured that these measures will provide meaningful protection for our trade secrets, know-how or other proprietary information in the event of any unauthorized use, misappropriation or disclosure. If we are unable to maintain the proprietary nature of our technologies, our ability to sustain margins on some or all of our products may be affected, which could reduce our sales and profitability. Moreover, the protection provided for our intellectual property by the laws and courts of foreign nations may not be as advantageous to us as the protection available under U.S. law.

Our pension and other post-retirement benefits funding obligations could increase significantly due to a reduction in funded status as a result of a variety of factors.

Our earnings may be positively or negatively impacted by the amount of income or expense recorded for our defined benefit pension plans and other post-retirement benefits (“OPEB”). Accounting principles generally accepted in the United States of America (“GAAP”) requires that income or expense for defined benefit pension plans be calculated at the annual measurement date using actuarial assumptions and calculations. These calculations reflect certain assumptions, the most significant of which relate to the capital markets, interest rates, health care inflation rates and other economic conditions. Changes in key economic indicators can change these assumptions. These assumptions, along with the actual value of assets at the measurement date, will impact the calculation of pension expense for the year. Although GAAP pension expense and pension contributions are not directly related, the key economic indicators that affect GAAP pension expense also affect the amount of cash that we would contribute to our defined benefit pension plans. Because the values of these defined benefit pension plans’ assets have fluctuated and will fluctuate in response to changing market conditions, the amount of gains or losses that will be recognized in subsequent periods, the impact on the funded status of the defined benefit pension plans and the future minimum required contributions, if any, could have a material adverse effect on our business, results of operations and financial condition. The magnitude of such impact cannot be determined with certainty at this time. However, the effect of a one percentage point decrease in the assumed discount rate would result in an increase in the December 31, 2016 defined benefit pension plans obligation of approximately \$18.5 million. Likewise, a one percentage point decrease in the effective interest rate for determining defined benefit pension plans contributions would result in an increase in the minimum required contributions for 2016 of approximately \$3.6 million. Similarly, a one percentage point decrease in the assumed discount rate would result in an increase in the December 31, 2016 OPEB obligation of approximately \$25.9 million. As of December 31, 2016, the unfunded status of our defined benefit pension plans and OPEB plan was \$4.5 million and \$143.9 million, respectively.

Environmental, health and safety laws and regulations may impose significant compliance costs and liabilities on us.

We are subject to many environmental, health and safety laws and regulations governing emissions to air, discharges to water, the generation, handling and disposal of waste and the cleanup of contaminated properties. Compliance with these laws and regulations is costly. We have incurred and expect to continue to incur significant costs to maintain or achieve compliance with applicable environmental, health and safety laws and regulations. Moreover, if these environmental, health and safety laws and regulations become more stringent or expand to include a larger portion of our products or our customer’s products in the future, we could incur additional costs in order to ensure that our business and products comply with such regulations. In addition, we may not be successful in complying with or the vehicle or customer OEMs to which we sell our products may choose not to comply with such laws and regulations, which could impact our ability to sell our products in certain locations. Furthermore, if our products that are already placed in service are found to be non-compliant with certain laws, regulations and certifications, we may incur additional costs and fines. We cannot assure we are in full compliance with all environmental, health and safety laws and regulations. Our failure to comply with applicable environmental, health and safety laws and regulations and permit requirements could result in civil or criminal fines, penalties or enforcement actions, third-party claims for property damage and personal injury, requirements to clean up property or to pay for the costs of cleanup or regulatory or judicial orders enjoining or curtailing operations or requiring corrective measures, including the installation of pollution control equipment or remedial actions. Our failure to comply could also result in our failure to secure adequate insurance for our business, resulting in significant exposure, diminished ability to hedge our risks and material modifications of our business operations.

We may be subject to liability as a potentially responsible party under the Comprehensive Environmental Response, Compensation and Liability Act and similar state or foreign laws for contaminated properties that we currently own, lease or operate or that we or our predecessors have previously owned, leased or operated, and sites to which we or our predecessors sent hazardous substances. Such liability may be joint and several so that we may be liable for more than our share of contamination, and any such liability may be determined without regard to causation or knowledge of contamination. We or our predecessors have been named potentially responsible parties at contaminated sites from time to time.

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We manage the remediation of historical soil and groundwater contamination at our Indianapolis, Indiana facilities under an AOC with the EPA. We recorded approximately \$14.0 million for the estimated undiscounted environmental liabilities to be paid out over the next 30 years, which will be adjusted periodically as remediation efforts progress or as additional technical, regulatory or legal information becomes available. In the fourth quarter of 2016, we satisfied the financial assurance requirement under the AOC by securing a letter of credit in the amount of \$14.9 million. See Part I, Item 1, “Business — Environmental Compliance” and Part II, Item 8, NOTE 17, “Commitments and Contingencies” of this Annual Report on Form 10-K. There can be no assurances that future environmental remediation obligations will not have a material adverse effect on our results of operations. In addition, we occasionally evaluate various alternatives with respect to our facilities, including possible dispositions or closings. Investigations undertaken in connection with these activities may lead to discoveries of contamination that must be remediated, and closings of facilities may trigger remediation requirements that are not applicable to operating facilities. We may also face lawsuits brought by third parties that either allege property damage or personal injury as a result of, or seek reimbursement for costs associated with, such contamination.

Our business and financial results may be adversely affected by government contracting risks.

We are subject to various laws and regulations applicable to parties doing business with the U.S. government, including laws and regulations governing performance of U.S. government contracts, the use and treatment of U.S. government furnished property and the nature of materials used in our products. We may be unilaterally suspended or barred from conducting business with the U.S. government, or become subject to fines or other sanctions if we are found to have violated such laws or regulations. As a result of the need to comply with these laws and regulations, we are subject to increased risks of governmental investigations, civil fraud actions, criminal prosecutions, whistleblower law suits and other enforcement actions. The laws and regulations to which we are subject include, but are not limited to, Export Administration Regulations, Federal Acquisition Regulation, International Traffic in Arms Regulations and regulations from the Bureau of Alcohol, Tobacco and Firearms and the FCPA.

U.S. government contracts are subject to modification, curtailment or termination by the U.S. government without prior written notice, either for convenience or for default as a result of our failure to perform under the applicable contract. If terminated by the U.S. government as a result of our default, we could be liable for additional costs the U.S. government incurs in acquiring undelivered goods or services from another source and any other damages it suffers. Additionally, we cannot assign prime U.S. government contracts without the prior consent of the U.S. government contracting officer, and we are required to register with the Central Contractor Registration Database. Furthermore, the U.S. government periodically audits our governmental contract costs, which could result in fines, penalties or adjustment of costs and prices under the contracts. The result of, or expiration of the statute of limitations for, such audits could have an impact on reported net income and cash flow from operations.

Exchange rate fluctuations could adversely affect our results of operations and financial position.

As a result of the expansion of our international operations, currency exchange rate fluctuations could affect our results of operations and financial position. We expect to generate an increasing portion of our net sales and expenses in such foreign currencies as the Japanese Yen, Euro, Indian Rupee, Brazilian Real, Chinese Yuan Renminbi, Canadian Dollar and Hungarian Forint. Although we may enter into foreign exchange agreements with financial institutions in order to reduce our exposure to fluctuations in the value of these and other foreign currencies, these transactions, if entered into, will not eliminate that risk entirely. To the extent that we are unable to match net sales received in foreign currencies with expenses paid in the same currency, exchange rate fluctuations could have a negative impact on our results of operations and financial condition. Additionally, because our consolidated financial results are reported in U.S. Dollars, if we generate net sales or earnings in other currencies, the conversion of such amounts into U.S. Dollars can result in an increase or decrease in the amount of our net sales or earnings. Furthermore, we sell certain of our products in our non-North American markets denominated in the U.S. Dollar. To the extent that certain of the local currencies in our non-North American markets are relatively weaker than the U.S. Dollar, whether as a result of foreign governments’ influence or otherwise, we could become less price competitive, which could have a material adverse effect on the results of our operations.

GM's actions may materially affect our business and operating results.

Although we are an independent company as a result of the Acquisition Transaction, GM's future actions may still have a material impact on our business and results of operations. Pursuant to the Cure Agreement after GM's emergence from bankruptcy in 2009, GM has assumed certain agreements from its predecessor, including the asset purchase agreement, intellectual property and software license agreements and a hybrid co-branding agreement. GM's failure to comply with any portion of these agreements for any reason, including the indemnities therein, could inhibit us from operating and expanding our business in the future.

Additionally, GM has received a non-exclusive, royalty-free, worldwide license to use the "Allison Transmission" name and certain related trademarks on GM's line of A1000 transmissions for use primarily in Class 2 and 3 pick-up trucks. If GM, or any of its subsidiaries or affiliated entities, or any third party uses the trade name "Allison Transmission" in ways that adversely affect such trade name or trademark, our reputation could suffer damage, which in turn could have a material adverse effect on our business, results of operations and financial condition.

In connection with the Acquisition Transaction, we entered into a mutual non-compete agreement with GM that restricts GM from competing with us in non-defense vehicles in North America with gross vehicle weights above 5900 kilograms (typically Class 4 and higher) with some limited exceptions for certain GM light-duty pickup truck and van platforms. It also restricts GM from competing with us in defense vehicles globally and in non-defense vehicles outside North America that exceed 4250 kilograms (generally Class 3 to Class 4 and higher) with some limited exceptions. The non-compete periods extend until August 2017 globally, except in Europe, where they expired in 2012. Similarly, we are restricted from competing with GM in weight classes below the above mentioned thresholds for similar periods of time. Upon expiration of the non-competition periods, both Allison and GM will be permitted to compete with each other but such expiration will generally not affect Allison's rights under the Patent and Technology License Agreement to use on an exclusive basis within its respective weight classes (subject to previously mentioned exceptions) the intellectual property that is licensed to Allison on an exclusive basis.

An impairment in the carrying value of goodwill or other intangible assets could negatively affect our consolidated results of operations and net worth.

Pursuant to GAAP, we are required to assess our goodwill and indefinite-lived intangible assets to determine if they are impaired on an annual basis, or more often if events or changes in circumstances indicate that impairment may have occurred. Intangible assets with finite lives are amortized over the useful life and are reviewed for impairment on triggering events such as events or changes in circumstances indicating that an impairment may have occurred. If the testing performed indicates that impairment has occurred, we are required to record a non-cash impairment charge for the difference between the carrying value of the goodwill and the implied fair value of the goodwill or the carrying value of the intangible assets and the fair value of the intangible assets in the period the determination is made. Disruptions to our business, end market conditions, protracted economic weakness and unexpected significant declines in operating results may result in charges for goodwill and other asset impairments.

Our annual goodwill and trade name impairment tests for the year ended December 31, 2016 resulted in no impairment. Although our analysis regarding the fair value of goodwill and trade name indicated that they exceeded their respective carrying values, materially different assumptions regarding the future performance of our business could result in goodwill impairment losses. See NOTE 2 "Summary of Significant Accounting Policies" and NOTE 5 "Goodwill and Other Intangible Assets" of Notes to Consolidated Financial Statements included in Part II, Item 8 of this Annual Report on Form 10-K for additional details.

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Provisions of our amended and restated certificate of incorporation and amended and restated bylaws and Delaware law might discourage, delay or prevent a change of control of our company or changes in our management and, as a result, depress the trading price of our common stock.

Our amended and restated certificate of incorporation and amended and restated bylaws contain provisions that could discourage, delay or prevent a change in control of our company or changes in our management that the stockholders of our company may deem advantageous. These provisions:

- authorize the issuance of blank check preferred stock that our Board of Directors could issue to increase the number of outstanding shares and to discourage a takeover attempt;
- limit the ability of stockholders to remove directors only “for cause”;
- prohibit our stockholders from calling a special meeting of stockholders;
- prohibit stockholder action by written consent, which requires all stockholder actions to be taken at a meeting of our stockholders;
- provide that the Board of Directors is expressly authorized to adopt, or to alter or repeal our bylaws;
- establish advance notice requirements for nominations for election to our Board of Directors or for proposing matters that can be acted upon by stockholders at stockholder meetings; and
- require the approval of holders of at least two-thirds of the outstanding shares of common stock to amend the bylaws and certain provisions of the certificate of incorporation.

These anti-takeover defenses could discourage, delay or prevent a transaction involving a change in control of our company. These provisions could also discourage proxy contests and make it more difficult for our stockholders to elect directors of their choosing and cause us to take corporate actions other than those they desire.

Risks Related to Our Indebtedness

Our substantial indebtedness could adversely affect our financial health, restrict our activities and affect our ability to meet our obligations.

We have a significant amount of indebtedness. As of December 31, 2016, we had total indebtedness of \$2,187.6 million and we would have been able to borrow an additional \$432.2 million under the revolving portion of our credit facility, less \$17.8 million of letters of credit. As of December 31, 2016, we had no outstanding borrowings against the revolving credit facility. At December 31, 2016, \$1,187.6 million of our total indebtedness was associated with Allison Transmission Inc.'s ("ATI"), the Company's wholly-owned subsidiary, Senior Secured Credit Facility Term B-3 Loan due 2022 (previously due 2019 and as refinanced in September 2016, the "Term B-3 Loan", and together with the revolving credit facility, defined as the "Senior Secured Credit Facility") and \$1,000.0 million of our total indebtedness was associated with ATI's 5.0% Senior Notes due September 2024 ("5.0% Senior Notes"). For a complete description of the terms of the Senior Secured Credit Facility and the 5.0% Senior Notes, please see Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations – Liquidity and Capital Resources."

Our substantial indebtedness could have important consequences. For example, it could:

- make it more difficult for us to satisfy our obligations under our indebtedness;
- require us to further dedicate a substantial portion of our cash flow from operations to payments of principal and interest on our indebtedness, thereby reducing the availability of our cash flow to fund acquisitions, working capital, capital expenditures, research and development efforts and other general corporate purposes;
- increase our vulnerability to and limit our flexibility in planning for, or reacting to, downturns or changes in our business and the industry in which we operate;
- restrict us from making strategic acquisitions or cause us to make non-strategic divestitures;
- expose us to the risk of increased interest rates as borrowings under the Senior Secured Credit Facility are subject to variable rates of interest;
- place us at a competitive disadvantage compared to our competitors that have less debt; and
- limit our ability to borrow additional funds.

In addition, the revolving portion of our Senior Secured Credit Facility contains a maximum total senior secured leverage ratio. The Senior Secured Credit Facility and the indenture governing the 5.0% Senior Notes also contains other negative and affirmative covenants that will limit our ability to engage in activities that may be in our long-term best interests. Our failure to comply with any of the covenants could result in an event of default which, if not cured or waived, could result in the acceleration of all of our indebtedness.

Our ability to pay regular dividends on our common stock is subject to the discretion of our Board of Directors and may be limited by our structure and statutory restrictions and restrictions imposed by the Senior Secured Credit Facility and the indenture governing the 5.0% Senior Notes as well as any future agreements.

Our Board of Directors declared a quarterly dividend of \$0.06 per share of common stock beginning in the second quarter of 2012, increased the quarterly dividend to \$0.12 per share of common stock beginning in the second quarter of 2013 and increased the quarterly dividend again to \$0.15 per share of common stock beginning in the fourth quarter of 2014. However, the payment of future dividends will be at the discretion of our Board of Directors and will depend on, among other things, our earnings, financial condition, capital requirements, level of indebtedness, statutory and contractual restrictions applying to the payment of dividends and other considerations that our Board of Directors deems relevant. The Senior Secured Credit Facility and the indenture governing the 5.0% Senior Notes also effectively limit our ability to pay dividends. As a consequence of these limitations and restrictions, we may not be able to make, or may have to reduce or eliminate, the payment of dividends on our common stock. Accordingly, you may have to sell some or all of your common stock after price appreciation in order to generate cash flow from your investment. You may not receive a gain on your investment when you sell your common stock and you may lose the entire amount of the investment. Additionally, any change in the level of our dividends or the suspension of the payment thereof could adversely affect the market price of our common stock.

To service our indebtedness, we will require a significant amount of cash and our ability to generate cash depends on many factors beyond our control.

Our ability to make cash payments on our indebtedness and to fund planned capital expenditures will depend on our ability to generate significant operating cash flow in the future. This, to a significant extent, is subject to general economic, financial, competitive, legislative, regulatory and other factors that are beyond our control.

We cannot ensure that our business will generate sufficient cash flow from operations or that future borrowings will be available to us under the Senior Secured Credit Facility in an amount sufficient to enable us to pay our indebtedness or to fund our other liquidity needs. In such circumstances, we may need to refinance all or a portion of our indebtedness on or before maturity. We cannot ensure that we will be able to refinance any of our indebtedness on commercially reasonable terms or at all. If we cannot service our indebtedness, we may have to take actions such as selling assets, seeking additional equity or reducing or delaying capital expenditures, strategic acquisitions, investments and alliances. We cannot ensure that any such actions, if necessary, could be effected on commercially reasonable terms or at all.

If we are unable to generate sufficient cash flow or are otherwise unable to obtain funds necessary to meet required payments of principal, premium, if any, and interest on our indebtedness, or if we otherwise fail to comply with the various covenants in the instruments governing our indebtedness, we could be in default under the terms of the agreements governing such indebtedness. In the event of such default, the holders of such indebtedness could elect to declare all the funds borrowed thereunder to be due and payable, together with accrued and unpaid interest, the lenders under the Senior Secured Credit Facility could elect to terminate their commitments thereunder, cease making further loans and institute foreclosure proceedings against our assets, and we could be forced into bankruptcy or liquidation. If our operating performance declines, we may in the future need to obtain waivers from the required lenders under the Senior Secured Credit Facility to avoid being in default. If we or any of our subsidiaries breach the covenants under the Senior Secured Credit Facility and seek a waiver, we may not be able to obtain a waiver from the required lenders. If this occurs, we would be in default under the Senior Secured Credit Facility, the lenders could exercise their rights, as described above, and we could be forced into bankruptcy or liquidation.

Despite current indebtedness levels, we and our subsidiaries may still be able to incur additional indebtedness, which could further exacerbate the risks associated with our substantial financial leverage.

We and our subsidiaries may be able to incur additional indebtedness in the future because the terms of our indebtedness do not fully prohibit us or our subsidiaries from doing so. Subject to covenant compliance and certain conditions, our indebtedness permits additional borrowing, including total borrowing up to \$432.2 million under the revolving portion of the Senior Secured Credit Facility. If new debt is added to our current debt levels and our subsidiaries' current debt levels, the related risks that we and they now face could intensify.

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ITEM 1B. Unresolved Staff Comments

None.

ITEM 2. Properties

Our world headquarters, which we own, is located at One Allison Way, Indianapolis, Indiana 46222. As of December 31, 2016, we have a total of 17 manufacturing and certain other facilities in seven countries. The following table sets forth certain information regarding these facilities.

<u>Plant</u>	<u>Location</u>	<u>Approximate Size (ft²)</u>	<u>Owned / Leased</u>	<u>Description</u>
Plant #3	Indianapolis	927,000	Own	Engineering, Operational Support
Plant #4	Indianapolis	425,900	Own	Manufacturing
Plant #6	Indianapolis	431,500	Own	Manufacturing
Plant #16	Indianapolis	391,700	Own	Manufacturing
Plant #12	Indianapolis	534,900	Own	Manufacturing
Plant #14	Indianapolis	481,100	Own	Manufacturing
Plant #15	Indianapolis	126,400	Lease	Manufacturing
Plant #17	Indianapolis	389,000	Own	Parts Distribution Center
Plant #20 Tech. Center	Indianapolis	59,000	Own	Engineering & Testing
Plant #21 Tech. Center	Indianapolis	10,000	Own	Engineering & Testing
Szentgotthard	Hungary	149,000	Own	Manufacturing & Customization
Szentgotthard	Hungary	3,900	Own	Sales & Marketing Support
Shanghai	China	38,000	Lease	Customization & Distribution
Santo Amaro/Sorocabo	Brazil	31,400	Own	Customization & Distribution
Chennai	India	258,500	Own	Manufacturing
Dubai	United Arab Emirates	16,500	Lease	Distribution
Sliedrecht	The Netherlands	37,000	Lease	Customization & Distribution

We believe all our facilities are suitable for their intended purpose, are being efficiently utilized and provide adequate capacity to meet demand for the next several years. The table above does not include sales offices located in various countries.

ITEM 3. Legal Proceedings

We are subject to various contingencies, including routine legal proceedings and claims arising out of the normal course of business. These proceedings primarily involve commercial claims, product liability claims, personal injury claims and workers' compensation claims. The outcome of these lawsuits, legal proceedings and claims cannot be predicted with certainty. Nevertheless, we believe the outcome of any of these currently existing proceedings, even if determined adversely, would not have a material adverse effect on our financial condition or results of operations.

ITEM 4. Mine Safety Disclosures

Not applicable.

PART II.

ITEM 5. Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities**Market Information**

Our common stock is listed on the NYSE under the symbol “ALSN.” The following table sets forth the high and low sale prices per share for our common stock on the NYSE and the dividends declared per share for each quarter for the periods indicated:

	<u>High</u>	<u>Low</u>	<u>Dividends Declared</u>
Year Ended December 31, 2016:			
First Quarter	\$27.13	\$20.56	\$ 0.15
Second Quarter	\$29.96	\$25.88	\$ 0.15
Third Quarter	\$30.52	\$26.74	\$ 0.15
Fourth Quarter	\$35.76	\$27.03	\$ 0.15
Year Ended December 31, 2015:			
First Quarter	\$34.03	\$30.48	\$ 0.15
Second Quarter	\$32.54	\$29.20	\$ 0.15
Third Quarter	\$30.06	\$25.89	\$ 0.15
Fourth Quarter	\$29.35	\$24.55	\$ 0.15

Holders

As of February 8, 2017, there were approximately 38,560 stockholders of record of our common stock, which includes the actual number of holders registered on the books of the Company and holders of shares in “street name” or persons, partnerships, associations, corporations or other entities identified in security position listings maintained by depositories.

Dividends

Our Board of Directors declared a quarterly dividend of \$0.15 per share each quarter during 2016 and 2015. We expect to continue paying cash dividends on a quarterly basis; however, future dividends are subject to approval of the Board of Directors and may be adjusted as business needs or market conditions change. In addition, our Senior Secured Credit Facility and the indenture governing the 5.0% Senior Notes restrict the payment of dividends under certain circumstances.

Unregistered Sales of Securities

During the period covered by this Annual Report on Form 10-K, we did not offer or sell any securities that were not registered under the Securities Act of 1933, as amended (the “Securities Act”).

Issuer Purchases of Equity Securities

On October 30, 2014, our Board of Directors authorized us to repurchase up to \$500.0 million of our common stock pursuant to a stock repurchase program (“2014 Repurchase Program”). We completed the \$500.0 million of authorized repurchases under the 2014 Repurchase Program in November 2016.

On November 14, 2016, our Board of Directors authorized us to repurchase up to an additional \$1,000.0 million of our common stock pursuant to a stock repurchase program (“2016 Repurchase Program”). The terms of the 2016 Repurchase Program provide that we may repurchase shares of our common stock, from time to time depending on market conditions and corporate needs, in the open market or through privately negotiated transactions in accordance with Rule 10b-18 of the Exchange Act. Unless earlier terminated by our Board of Directors, the 2016 Repurchase Program will expire on December 31, 2019.

The following table sets forth information related to our repurchase of our common stock on a monthly basis in the three months ended December 31, 2016:

	Total Number of Shares Purchased ⁽¹⁾	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Programs ⁽²⁾	Approximate Dollar Value of Shares that May Yet Be Purchased Under Programs ⁽²⁾
October 1 – October 31, 2016	564,228	\$ 28.12	564,228	\$ 9,587,348
November 1 – November 30, 2016	832,709	\$ 31.53	832,709	\$ 983,336,197
December 1 – December 31, 2016	1,339,646	\$ 34.17	1,318,000	\$ 938,290,204
Total	<u>2,736,583</u>		<u>2,714,937</u>	

(1) Shares purchased include 21,646 shares withheld to cover taxes due upon the vesting of restricted stock awards in December 2016.

(2) These values reflect repurchases made under the 2014 Repurchase Program and 2016 Repurchase Program. We completed the 2014 Repurchase Program in November 2016. Amount shown as of December 31, 2016 reflects the remaining amount under the 2016 Repurchase Program.

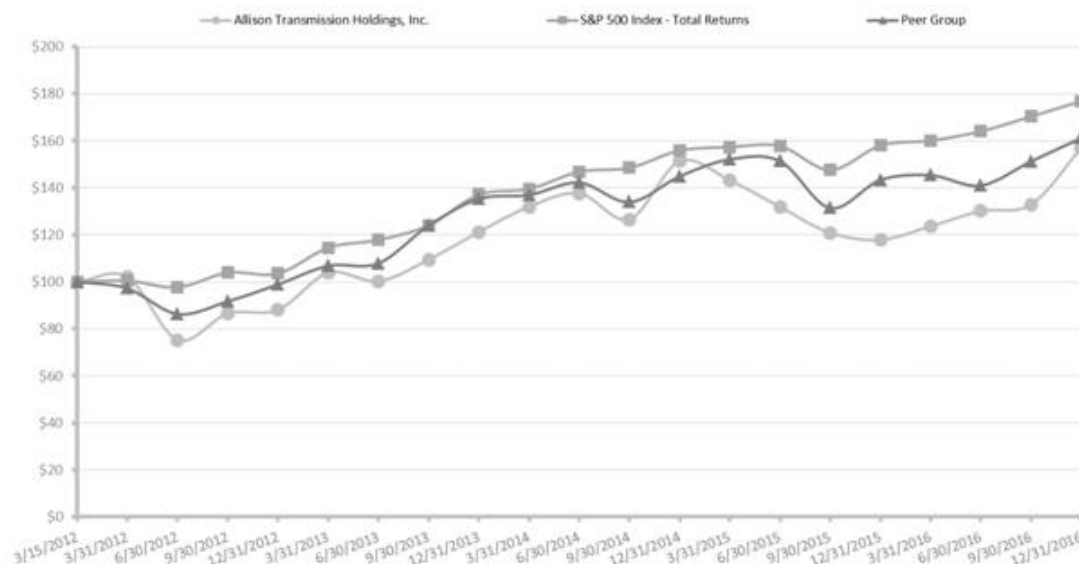
Issuances Under Equity Compensation Plans

For information regarding the securities authorized for issuance under our equity compensation plans, see Part III, Item 12 of this Annual Report on Form 10-K.

Comparative Stock Performance Graph

The information included under the heading “Comparative Stock Performance Graph” in this Item 5 of Part II of this Annual Report on Form 10-K shall not be deemed to be “soliciting material” or subject to Regulation 14A or 14C, shall not be deemed “filed” for purposes of Section 18 of the Exchange Act, or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act or the Exchange Act.

Set forth below is a graph comparing the total cumulative returns of ALSN, the S&P 500 Index and an index of peer companies selected by us. Our peer group includes Donaldson Company Inc., Graco Inc., Roper Technologies Inc., Gentex Corporation, Rockwell Automation Inc. and Sensata Technologies Holding N.V. The graph assumes \$100 was invested on March 15, 2012 in our common stock and each of the indices and that all dividends, if any, are reinvested.



	As of March 15, 2012	As of December 31, 2012	As of December 31, 2013	As of December 31, 2014	As of December 31, 2015	As of December 31, 2016
Allison Transmission Holdings, Inc	\$ 100.00	\$ 88.06	\$ 121.20	\$ 151.30	\$ 117.90	\$ 156.89
S&P 500 Index	100.00	103.52	137.04	155.80	157.96	176.85
Peer Group	100.00	98.89	135.29	144.86	143.33	161.13

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ITEM 6. Selected Financial Data

The following table sets forth certain financial information for the most recent five years. The following table should be read in conjunction with Part II, Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and Part II, Item 8, “Financial Statements and Supplementary Data” of this Annual Report on Form 10-K.

<i>(in millions, except per share data)</i>	<u>Dec. 31, 2016</u>	<u>Dec. 31, 2015</u>	<u>Dec. 31, 2014</u>	<u>Dec. 31, 2013</u>	<u>Dec. 31, 2012</u>
Consolidated Statements of Operations:					
Net sales	\$1,840.2	\$1,985.8	\$2,127.4	\$1,926.8	\$2,141.8
Gross profit	864.2	933.8	975.9	841.9	954.3
Operating expenses:					
Selling, general and administrative expenses	323.9	317.1	344.6	334.9	419.0
Engineering — research and development	88.8	92.5	103.8	97.1	115.1
Trade name impairment	—	80.0	—	—	—
Environmental remediation	—	14.0	—	—	—
Loss associated with impairment of long-lived assets	—	1.3	15.4	—	—
Total operating expenses	412.7	504.9	463.8	432.0	534.1
Operating income	451.5	428.9	512.1	409.9	420.2
Other income (expense), net:					
Interest income	0.7	0.7	0.9	0.8	0.9
Interest expense	(101.6)	(115.2)	(139.3)	(133.7)	(152.1)
Expenses related to long-term debt refinancing	(11.7)	(25.3)	—	—	—
Other income (expense), net	2.4	(0.3)	(5.6)	(10.9)	(52.8)
Total other expense, net	(110.2)	(140.1)	(144.0)	(143.8)	(204.0)
Income before income taxes	341.3	288.8	368.1	266.1	216.2
Income tax (expense) benefit	(126.4)	(106.5)	(139.5)	(100.7)	298.0
Net income	\$ 214.9	\$ 182.3	\$ 228.6	\$ 165.4	\$ 514.2
Earnings Per Share Data:					
Basic earnings per share	\$ 1.28	\$ 1.03	\$ 1.27	\$ 0.90	\$ 2.83
Weighted-average shares outstanding	167.8	175.9	179.8	184.5	182.0
Diluted earnings per share	\$ 1.27	\$ 1.03	\$ 1.25	\$ 0.88	\$ 2.76
Diluted weighted-average shares outstanding	168.8	177.2	182.3	187.9	186.2
Dividends declared per common share	\$ 0.60	\$ 0.60	\$ 0.51	\$ 0.42	\$ 0.18
Consolidated Balance Sheet Data:					
Cash and cash equivalents	\$ 204.7	\$ 251.6	\$ 263.0	\$ 184.7	\$ 80.2
Total assets	4,218.6	4,408.4	4,656.2	4,812.6	4,866.0
Total debt	2,158.7	2,377.2	2,491.2	2,642.4	2,787.4
Stockholders’ equity	1,080.3	1,188.6	1,397.8	1,438.8	1,356.9

ITEM 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations

The following discussion contains forward-looking statements regarding industry trends, our expectations regarding our future performance, liquidity and capital resources and other non-historical statements that involve risks and uncertainties. Our actual results may differ materially from those discussed in or implied by the forward looking statements as a result of various factors, including, without limitation, those set forth under Part I, Item 1A, “Risk Factors,” and other matters included elsewhere in this Annual Report on Form 10-K. The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our consolidated financial statements and the notes thereto included elsewhere in this Annual Report on Form 10-K, as well as the information presented under Part II, Item 6 of this Annual Report on Form 10-K.

Overview

We design and manufacture commercial and defense fully-automatic transmissions. The business was founded in 1915 and has been headquartered in Indianapolis, Indiana since inception. Allison was an operating unit of Old GM from 1929 until 2007, when Allison once again became a stand-alone company. In March 2012, Allison began trading on the New York Stock Exchange under the symbol, “ALSN”.

We have approximately 2,600 employees and 13 different transmission product lines. Although approximately 78% of revenues were generated in North America in 2016, we have a global presence by serving customers in Europe, Asia, South America and Africa. We serve customers through an independent network of approximately 1,400 independent distributor and dealer locations worldwide.

Recent Developments

On February 3, 2017, we entered into a stock repurchase agreement with ValueAct Capital Master Fund, L.P., a related party, to repurchase 10,525,204 shares of our common stock for approximately \$363.1 million. The purchase was funded with cash on hand and borrowings under the revolving credit facility, and the shares were subsequently retired. Subsequent to the transaction, we remain in compliance with the maximum senior secured leverage ratio covenant requirement under ATI’s Senior Secured Credit Facility.

Trends Impacting Our Business

Our net sales are driven by commercial vehicle production, which tends to be highly correlated to macroeconomic conditions. The 2016 reductions in North America On-Highway, global Off-Highway and Service Parts, Support Equipment and Other end markets net sales are consistent with tempering demand conditions in the North America On-Highway end market and the previously contemplated impact of low energy and commodity prices.

Full Year 2016 and 2015 Net Sales by End Market (in millions)

End Market	2016 Net Sales	2015 Net Sales	% Variance
North America On-Highway	\$ 962	\$ 1,059	(9%)
North America Hybrid-Propulsion Systems for Transit Bus	61	73	(16%)
North America Off-Highway	7	55	(87%)
Defense	115	113	2%
Outside North America On-Highway	305	262	16%
Outside North America Off-Highway	12	35	(66%)
Service Parts, Support Equipment and Other	378	389	(3%)
Total Net Sales	<u>\$ 1,840</u>	<u>\$ 1,986</u>	(7%)

North America On-Highway end market net sales were down 9% for the year ended December 31, 2016 compared to the year ended December 31, 2015, principally driven by lower demand for Rugged Duty Series and Highway Series, partially offset by higher demand for Pupil Transport/Shuttle models.

North America Hybrid-Propulsion Systems for Transit Bus end market net sales were down 16% for the year ended December 31, 2016 compared to the year ended December 31, 2015, principally driven by lower demand due to engine emissions improvements and other alternative technologies.

North America Off-Highway end market net sales were down 87% for the year ended December 31, 2016 compared to the year ended December 31, 2015, principally driven by the previously contemplated impact of low energy prices.

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Defense end market net sales were up 2% for the year ended December 31, 2016 compared to the year ended December 31, 2015, principally driven by higher demand for Wheeled Defense, partially offset by lower demand for Tracked Defense.

Outside North America On-Highway end market net sales were up 16% for the year ended December 31, 2016 compared to the year ended December 31, 2015, principally driven by higher demand in Europe and Japan, partially offset by lower demand in China.

Outside North America Off-Highway end market net sales were down 66% for the year ended December 31, 2016 compared to the year ended December 31, 2015, principally driven by lower demand in the mining and energy sectors.

Service parts, support equipment & other end market net sales were down 3% for the year ended December 31, 2016 compared to the year ended December 31, 2015, principally driven by lower demand for North America Off-Highway service parts.

Key Components of our Results of Operations

Net sales

We generate our net sales primarily from the sale of transmissions, transmission parts, support equipment, defense kits, engineering services, royalties and Extended Transmission Coverage to a wide array of OEMs, distributors and the U.S. government. Sales are recorded net of provisions for customer allowances and other rebates. Engineering services are recorded as net sales in accordance with the terms of the contract. The associated costs are recorded in cost of sales. We also have royalty agreements with third parties that provide net sales as a result of joint efforts in developing marketable products.

Cost of sales

Our primary components of cost of sales are purchased parts, the overhead expense related to our manufacturing operations and direct labor associated with the manufacture and assembly of transmissions and parts. For the year ended December 31, 2016, direct material costs were approximately 67%, overhead costs were approximately 26% and direct labor costs were approximately 7% of total cost of sales. We are subject to changes in our cost of sales caused by movements in underlying commodity prices. We seek to hedge against this risk by using commodity swap contracts and LTSA's. See Part II, Item 7A, "Quantitative and Qualitative Disclosures about Market Risk—Commodity Price Risk" included in this Annual Report on Form 10-K.

Selling, general and administrative

The principal components of our selling, general and administrative expenses are salaries and benefits for our office personnel, advertising and promotional expenses, product warranty expense, expenses relating to certain information technology systems and amortization of our intangibles.

Engineering — research and development

We incur costs in connection with research and development programs that are expected to contribute to future earnings. Such costs are expensed as incurred.

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Non-GAAP Financial Measures

We use Adjusted Earnings before Interest, Taxes, Depreciation, and Amortization (“EBITDA”) and Adjusted EBITDA margin to measure our operating profitability. We believe that Adjusted EBITDA and Adjusted EBITDA margin provide management, investors and creditors with useful measures of the operational results of our business and increase the period-to-period comparability of our operating profitability and comparability with other companies. Adjusted EBITDA margin is also used in the calculation of management’s incentive compensation program. The most directly comparable GAAP measure to Adjusted EBITDA is Net income. Adjusted EBITDA is calculated as the earnings before interest expense, income tax expense, amortization of intangible assets, depreciation of property, plant and equipment and other adjustments as defined by our Senior Secured Credit Facility. Adjusted EBITDA margin is calculated as Adjusted EBITDA divided by net sales.

We use Adjusted free cash flow to evaluate the amount of cash generated by our business that, after the capital investment needed to maintain and grow our business and certain mandatory debt service requirements, can be used for repayment of debt, stockholder distributions and strategic opportunities, including investing in our business and strengthening our balance sheet. We believe that Adjusted free cash flow enhances the understanding of the cash flows of our business for management, investors and creditors. Adjusted free cash flow is also used in the calculation of management’s incentive compensation program. The most directly comparable GAAP measure to Adjusted free cash flow is Net cash provided by operating activities.

The following is a reconciliation of Net income to Adjusted EBITDA and Adjusted EBITDA margin and a reconciliation of Net cash provided by operating activities to Adjusted free cash flow:

(unaudited, in millions)	For the years ended December 31,		
	2016	2015	2014
Net income (GAAP)	\$ 214.9	\$ 182.3	\$ 228.6
plus:			
Interest expense, net	100.9	114.5	138.4
Income tax expense	126.4	106.5	139.5
Amortization of intangible assets	92.4	97.1	98.8
Depreciation of property, plant and equipment	83.5	88.3	93.8
Expenses related to long-term debt refinancing (a)	11.7	25.3	—
Stock-based compensation expense (b)	9.4	9.8	14.7
Stockholder activism expenses (c)	3.9	—	—
Unrealized (gain) loss on commodity hedge contracts (d)	(1.7)	1.1	(1.0)
Dual power inverter module units extended coverage (e)	1.3	(2.1)	1.0
Technology-related investment expense (f)	1.0	—	2.0
Unrealized loss on foreign exchange (g)	0.6	1.4	5.2
Environmental remediation (h)	—	14.0	—
Loss associated with impairment of long-lived assets (i)	—	1.3	15.4
Trade name impairment (j)	—	80.0	—
Loss on repayments of long-term debt (k)	—	0.3	0.5
Public offering expenses (l)	—	—	1.4
Restructuring charge (m)	—	—	0.7
Adjusted EBITDA (Non-GAAP)	\$ 644.3	\$ 719.8	\$ 739.0
Net sales (GAAP)	\$1,840.2	\$1,985.8	\$2,127.4
Adjusted EBITDA margin (Non-GAAP)	35.0%	36.2%	34.7%
Net cash provided by operating activities (GAAP)	\$ 590.8	\$ 579.9	\$ 573.3
(Deductions) or additions to reconcile to Adjusted free cash flow:			
Additions of long-lived assets	(70.6)	(58.1)	(64.1)
Excess tax benefit from stock-based compensation (n)	6.4	8.4	24.6
Stockholder activism expenses (c)	3.7	—	—
Technology-related license expenses (o)	—	0.2	6.1
Adjusted free cash flow (Non-GAAP)	\$ 530.3	\$ 530.4	\$ 539.9

(a) Represents expenses related to the refinancing of ATI’s Senior Secured Credit Facility in the third quarter of 2016 and ATI’s tender offer and redemption of its 7.125% senior notes due May 2019 (“7.125% Senior Notes”) in the second quarter of 2015.

(b) Represents stock-based compensation expense (recorded in Cost of sales, Selling, general and administrative, and Engineering – research and development).

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- (c) Represents expenses of \$3.9 million (recorded in Selling, general and administrative) and payments of \$3.7 million for the year ended December 31, 2016, directly associated with stockholder activism activity including the notice, and subsequent withdrawal, of director nomination and governance proposals by Ashe Capital Management, LP.
- (d) Represents unrealized (gains) losses (recorded in Other income (expense), net) on the mark-to-market of our commodity hedge contracts.
- (e) Represents adjustments (recorded in Selling, general and administrative) associated with the Dual Power Inverter Module (“DPIM”) extended coverage program liability. The DPIM liability will continue to be reviewed for any changes in estimates as additional claims data and field information become available.
- (f) Represents a charge (recorded in Other income (expense), net) for investments in co-development agreements to expand our position in transmission technologies.
- (g) Represents losses (recorded in Other income (expense), net) on intercompany financing transactions related to investments in plant assets for our India facility and on the mark-to-market of our foreign currency hedge contracts.
- (h) Represents environmental remediation expenses for ongoing operating, monitoring and maintenance activities at our Indianapolis, Indiana manufacturing facilities.
- (i) Represents a charge associated with the impairment of long-lived assets related to the production of the H3000 and H4000 hybrid-propulsion systems.
- (j) Represents a charge associated with the impairment of our trade name as a result of lower forecasted net sales for certain of our end markets.
- (k) Represents losses (recorded in Other income (expense), net) realized on the repayments of ATI’s long-term debt.
- (l) Represents fees and expenses (recorded in Other income (expense), net) related to our secondary offerings in September 2014, June 2014, April 2014, and February 2014.
- (m) Represents a charge (recorded in Selling, general and administrative) related to employee headcount reductions in the second quarter of 2014.
- (n) Represents the amount of tax benefit (recorded in Income tax expense) related to stock-based compensation adjusted from cash flows from operating activities to cash flows from financing activities.
- (o) Represents payments (recorded in Engineering - research and development) for licenses to expand our position in transmission technologies.

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Results of Operations

The following tables set forth certain financial information for the years ended December 31, 2016 and 2015 and for the years ended December 31, 2015 and 2014. The following tables and discussion should be read in conjunction with the information contained in our consolidated financial statements and the notes thereto included in Part II, Item 8 of this Annual Report on Form 10-K.

Comparison of years ended December 31, 2016 and 2015

<i>(dollars in millions)</i>	Years ended December 31,			
	2016	% of net sales	2015	% of net sales
Net sales	\$1,840.2	100%	\$1,985.8	100%
Cost of sales	976.0	53	1,052.0	53
Gross profit	864.2	47	933.8	47
Operating expenses:				
Selling, general and administrative	323.9	17	317.1	16
Engineering — research and development	88.8	5	92.5	5
Trade name impairment	—	—	80.0	4
Environmental remediation	—	—	14.0	1
Loss associated with impairment of long-lived assets	—	—	1.3	0
Total operating expenses	412.7	22	504.9	26
Operating income	451.5	25	428.9	21
Other expense, net:				
Interest expense, net	(100.9)	(5)	(114.5)	(6)
Expenses related to long-term debt refinancing	(11.7)	(1)	(25.3)	(1)
Other income (expense), net	2.4	0	(0.3)	(0)
Total other expense, net	(110.2)	(6)	(140.1)	(7)
Income before income taxes	341.3	19	288.8	14
Income tax expense	(126.4)	(7)	(106.5)	(5)
Net income	\$ 214.9	12%	\$ 182.3	9%

Net sales

Net sales for the year ended December 31, 2016 were \$1,840.2 million compared to \$1,985.8 million for the year ended December 31, 2015, a decrease of 7%. The decrease was principally driven by a \$97.0 million, or 9%, decrease in net sales in the North America On-Highway end market driven by lower demand from Rugged Duty Series and Highway Series models partially offset by higher demand for Pupil Transport/Shuttle models, a \$48.0 million, or 87%, decrease in net sales in the North American Off-Highway end market driven by the previously contemplated impact of low energy prices, a \$23.0 million, or 66%, decrease in net sales in the Outside North America Off-Highway end market driven by lower demand in the mining and energy sectors, a \$12.0 million, or 16%, decrease in net sales in the North America Hybrid-Propulsion Systems for Transit Bus end market driven by lower demand due to engine emissions improvements and other alternative technologies, and an \$11.0 million, or 3%, decrease in net sales in the Service Parts, Support Equipment and Other end market driven by lower demand for North America Off-Highway service parts, partially offset by a \$43.0 million, or 16%, increase in net sales in the Outside North America On-Highway end market driven by higher demand in Europe and Japan partially offset by lower demand in China and a \$2.0 million, or 2%, increase in net sales in the Defense end market principally driven by higher demand for Wheeled Defense partially offset by lower demand for Tracked Defense. See “Trends Impacting Our Business” above for additional information on net sales by end markets.

Cost of sales

Cost of sales for the year ended December 31, 2016 was \$976.0 million compared to \$1,052.0 million for the year ended December 31, 2015, a decrease of 7%. The decrease was principally driven by \$51.0 million of decreased direct material costs and \$22.0 million of lower manufacturing expense, in each case consistent with historical trends and management’s expectations given the respective change in sales volume, and \$10.0 million of favorable direct material costs, partially offset by \$7.0 million of higher incentive compensation expense.

Gross profit

Gross profit for the year ended December 31, 2016 was \$864.2 million compared to \$933.8 million for the year ended December 31, 2015, a decrease of 7%. The decrease was principally driven by \$98.0 million related to decreased net sales and \$7.0 million of higher incentive compensation expense, partially offset by \$22.0 million of lower manufacturing expense commensurate with decreased net sales, \$10.0 million of favorable direct material costs and \$3.0 million resulting from price increases on certain products. Gross profit as a percent of net sales was flat for the year compared to 2015 principally driven by favorable direct material costs and price increases on certain products, offset by unfavorable sales volume and higher incentive compensation expense.

Selling, general and administrative

Selling, general and administrative for the year ended December 31, 2016 were \$323.9 million compared to \$317.1 million for the year ended December 31, 2015, an increase of 2%. The increase was principally driven by \$14.5 million of higher incentive compensation expense, \$3.9 million of stockholder activism expenses and \$3.4 million of unfavorable adjustments related to the DPIM extended coverage program, partially offset by \$4.7 million of lower product warranty expense, \$4.6 million of lower intangible asset amortization, \$2.2 million of unfavorable 2015 product warranty adjustments and reduced global commercial spending activities.

Engineering — research and development

Engineering expenses for the year ended December 31, 2016 were \$88.8 million compared to \$92.5 million for the year ended December 31, 2015, a decrease of 4%. The decrease was principally driven by the cadence of certain product initiatives, partially offset by \$3.2 million of higher incentive compensation expense.

Trade name impairment

During the fourth quarter of 2015, we recorded a trade name impairment charge of \$80.0 million as a result of lower forecasted net sales for certain of our end markets. Refer to NOTE 5, “Goodwill and Other Intangible Assets” in Part II, Item 8, of this Annual Report on Form 10-K. No trade name impairment charges were recorded in 2016.

Environmental remediation

During the third quarter of 2015, we recorded approximately \$14.0 million for environmental remediation expenses as a result of the EPA determining that GM’s environmental remediation activities at our Indianapolis, Indiana manufacturing facilities were complete, and our assumption of responsibility for future operating, monitoring and maintenance activities. Refer to NOTE 17 “Commitments and Contingencies” in Part II, Item 8, of this Annual Report on Form 10-K.

Loss associated with impairment of long-lived assets

During the first quarter of 2015, we recorded approximately \$1.3 million of losses associated with impairment of certain of our long-lived assets related to the production of the H3000 and H4000 hybrid-propulsion systems.

Interest expense, net

Interest expense, net for the year ended December 31, 2016 was \$100.9 million compared to \$114.5 million for the year ended December 31, 2015, a decrease of 12%. The decrease was principally driven by \$13.7 million of favorable mark-to-market adjustments for our interest rate derivatives, \$9.3 million of lower interest expense as a result of the repurchase and redemption of ATI’s 7.125% Senior Notes in the second quarter of 2015, \$8.1 million of lower interest expense on ATI’s Term B-3 Loan due primarily to the repayment of \$1,200 million of principal in the third quarter of 2016, and \$1.2 million of lower amortization of deferred financing fees, partially offset by \$13.6 million of interest expense on ATI’s 5.0% Senior Notes issued in September 2016 and \$6.5 million of interest expense for our interest rate derivatives that became effective in August 2016.

Expenses related to long-term debt refinancing

In September 2016, we refinanced our Senior Secured Credit Facility, resulting in expenses of \$11.7 million for the year ended December 31, 2016. In April 2015, we completed a cash tender offer to purchase any and all of the outstanding 7.125% Senior Notes. The tender offer resulted in the repurchase of \$420.9 million of the 7.125% Senior Notes in April 2015. In May 2015, we redeemed the remaining \$50.4 million of the outstanding 7.125% Senior Notes, resulting in premiums and expenses totaling \$25.3 million for the year ended December 31, 2015.

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Other income (expense), net

Other income (expense), net for the year ended December 31, 2016 was \$2.4 million compared to (\$0.3) million for the year ended December 31, 2015. The change was principally driven by \$3.1 million of net gains on derivative contracts and \$1.1 million of lower foreign exchange losses on intercompany financing, partially offset by \$1.0 million of technology-related investment expense and \$0.5 million of miscellaneous expense, net.

Income tax expense

Income tax expense for the year ended December 31, 2016 was \$126.4 million compared to \$106.5 million for the year ended December 31, 2015, resulting in an effective tax rate of 37% for each of the years ended December 31, 2016 and 2015.

Comparison of years ended December 31, 2015 and 2014

<i>(dollars in millions)</i>	Years ended December 31,			
	2015	% of net sales	2014	% of net sales
Net sales	\$1,985.8	100%	\$2,127.4	100%
Cost of sales	1,052.0	53	1,151.5	54
Gross profit	933.8	47	975.9	46
Operating expenses:				
Selling, general and administrative	317.1	16	344.6	16
Engineering — research and development	92.5	5	103.8	5
Trade name impairment	80.0	4	—	—
Environmental remediation	14.0	1	—	—
Loss associated with impairment of long-lived assets	1.3	0	15.4	1
Total operating expenses	504.9	26	463.8	22
Operating income	428.9	21	512.1	24
Other expense, net:				
Interest expense, net	(114.5)	(6)	(138.4)	(7)
Premiums and expenses on tender offer and redemption of long-term debt	(25.3)	(1)	—	—
Other expense, net	(0.3)	(0)	(5.6)	(0)
Total other expense, net	(140.1)	(7)	(144.0)	(7)
Income before income taxes	288.8	14	368.1	17
Income tax expense	(106.5)	(5)	(139.5)	(7)
Net income	\$ 182.3	9%	\$ 228.6	10%

Net sales

Net sales for the year ended December 31, 2015 were \$1,985.8 million compared to \$2,127.4 million for the year ended December 31, 2014, a decrease of 7%. The decrease was principally driven by a \$55.0 million, or 12%, decrease in net sales of parts and other products principally driven by lower demand for North American service parts, a \$46.0 million, or 57%, decrease in net sales of Outside North America off-highway products principally driven by lower demand from the energy and mining sectors, a \$45.0 million, or 45%, decrease in net sales of North American off-highway products principally driven by lower demand from hydraulic fracturing applications, a \$44.0 million, or 28%, decrease in net sales of defense products driven by lower U.S. defense spending and the recognition of previously deferred revenue in 2014 related to shipment of certain tracked transmissions at the request of the U.S. government, a \$20.0 million, or 22%, decrease in net sales of North America hybrid-propulsion systems for transit buses driven by lower demand due to engine emissions improvements and non-hybrid alternatives that generally require a fully-automatic transmission, and a \$2.0 million, or 1%, decrease in net sales of Outside North America on-highway products principally driven by lower demand in China partially offset by higher demand in Europe, partially offset by a \$71.0 million, or 7%, increase in net sales of North American on-highway products principally driven by higher demand from Rugged Duty Series and Highway Series models.

Cost of sales

Cost of sales for the year ended December 31, 2015 was \$1,052.0 million compared to \$1,151.5 million for the year ended December 31, 2014, a decrease of 9%. The decrease was principally driven by approximately \$59.0 million of decreased direct material costs commensurate with decreased sales, \$14.0 million of favorable direct material costs, \$7.5 million of lower incentive compensation expense, and lower manufacturing cost commensurate with decreased sales and consistent with historical trends and management's expectations given the respective change in sales volume.

Gross profit

Gross profit for the year ended December 31, 2015 was \$933.8 million compared to \$975.9 million for the year ended December 31, 2014, a decrease of 4%. The decrease was principally driven by \$93.0 million related to decreased sales volume and \$1.0 million of unfavorable foreign exchange, partially offset by \$26.0 million resulting from price increases on certain products, \$14.0 million of favorable material costs, \$7.5 million of lower incentive compensation expense and \$5.0 million of lower depreciation expense. Gross profit as a percentage of net sales increased 1%, principally driven by price increases on certain products and favorable material costs.

Selling, general and administrative

Selling, general and administrative expenses for the year ended December 31, 2015 were \$317.1 million compared to \$344.6 million for the year ended December 31, 2014, a decrease of 8%. The decrease was principally driven by \$9.6 million of lower incentive compensation expense, \$4.4 million of lower stock-based compensation expense, a \$3.1 million favorable adjustment related to the DPIM extended coverage program, \$1.7 million of lower intangible asset amortization and reduced global commercial spending activities.

Engineering — research and development

Engineering expenses for the year ended December 31, 2015 were \$92.5 million compared to \$103.8 million for the year ended December 31, 2014, a decrease of 11%. The decrease was principally driven by \$5.9 million of lower technology-related license expenses to expand our position in transmission technologies, \$4.2 million of lower incentive compensation expense and decreased product initiatives spending.

Trade name impairment

During the fourth quarter of 2015, we recorded a trade name impairment charge of \$80.0 million as a result of lower forecasted net sales for certain of our end markets. Refer to NOTE 5, “Goodwill and Other Intangible Assets” in Part II, Item 8, of this Annual Report on Form 10-K.

Environmental remediation

During the third quarter of 2015, we recorded approximately \$14.0 million for environmental remediation expenses as a result of the EPA determining that GM’s environmental remediation activities at our Indianapolis, Indiana manufacturing facilities were complete, and our assumption of responsibility for future operating, monitoring and maintenance activities. Refer to NOTE 17 “Commitments and Contingencies” in Part II, Item 8, of this Annual Report on Form 10-K.

Loss associated with impairment of long-lived assets

During the first quarter of 2015 and the fourth quarter of 2014, we recorded approximately \$1.3 million and \$15.4 million, respectively, of losses associated with impairment of certain of our long-lived assets related to the production of the H3000 and H4000 hybrid-propulsion systems.

Interest expense, net

Interest expense, net for the year ended December 31, 2015 was \$114.5 million compared to \$138.4 million for the year ended December 31, 2014, a decrease of 17%. The decrease was principally driven by \$24.3 million of lower interest expense as a result of the repurchase and redemption of ATI’s 7.125% Senior Notes during the second quarter of 2015, \$18.8 million of lower interest expense as a result of the maturity of \$950.0 million of interest rate derivatives, \$5.5 million of lower interest expense as a result of debt repayments, \$3.9 million of lower interest expense as a result of lower interest rates and \$0.9 million of lower amortization of deferred financing charges, partially offset by \$17.5 million of unfavorable mark-to-market adjustments for our interest rate derivatives and \$11.8 million of higher interest expense as a result of the addition of \$470.0 million to ATI’s Term B-3 Loan in April 2015.

Premiums and expenses on tender offer and redemption of long-term debt

In April 2015, we completed a cash tender offer to purchase any and all of ATI’s outstanding 7.125% Senior Notes. The tender offer resulted in the repurchase of \$420.9 million of the 7.125% Senior Notes in April 2015. In May 2015, we redeemed the remaining \$50.4 million of the outstanding 7.125% Senior Notes, resulting in premiums and expenses of \$25.3 million for the year ended December 31, 2015.

Other expense, net

Other expense, net for the year ended December 31, 2015 was \$0.3 million compared to \$5.6 million for the year ended December 31, 2014, a decrease of 95%. The decrease was principally driven by \$3.6 million of lower foreign exchange losses on intercompany financing, a \$2.9 million gain as a result of a vendor settlement, \$2.4 million of gains related to foreign exchange, \$2.0 million of 2014 losses on impairment of technology-related investments, \$1.4 million of 2014 public offering fees and expenses, and \$0.2 million of lower expenses related to debt repayments, partially offset by \$2.6 million of 2014 cost-share grant program income, \$2.2 million of higher expenses related to unrealized and realized losses on derivative contracts, a \$2.0 million 2014 gain related to the negotiation of a commercial agreement and \$0.4 million of higher miscellaneous expenses.

Income tax expense

Income tax expense for the year ended December 31, 2015 was \$106.5 million compared to \$139.5 million for the year ended December 31, 2014, resulting in effective tax rates of 37% and 38% for the years ended December 31, 2015 and 2014, respectively.

Liquidity and Capital Resources

We generate cash primarily from operations to fund our operating, investing and financing activities. Our principal uses of cash are operating expenses, capital expenditures, debt service, stock repurchases, dividends on common stock and working capital needs. We had total available cash and cash equivalents of \$204.7 million and \$251.6 million as of December 31, 2016 and 2015, respectively. Of the available cash and cash equivalents, approximately \$123.5 million and \$151.6 million were deposited in operating accounts while approximately \$81.2 million and \$100.0 million were invested in U.S. government backed securities as of December 31, 2016 and 2015, respectively.

As of December 31, 2016, the total of cash and cash equivalents held by foreign subsidiaries was \$56.7 million, the majority of which was located in Europe and China. The geographic location of our cash aligns with our business growth strategy. We manage our worldwide cash requirements considering available funds among the subsidiaries through which we conduct our business and the cost effectiveness with which those funds can be accessed. As a result, we do not anticipate that local liquidity restrictions will preclude us from funding our targeted expectations or operating needs with local resources. As of December 31, 2016, we had approximately \$53.0 million of undistributed earnings in foreign subsidiaries permanently reinvested outside the United States. If we distribute our foreign earnings to the U.S. or to other foreign subsidiaries, we could be required to accrue and pay U.S. taxes.

Our liquidity requirements are significant, primarily due to our debt service requirements. In September 2016, ATI completed an offering of \$1,000.0 million of 5.0% Senior Notes. The 5.0% Senior Notes were offered in a private placement exempt from registration under the Securities Act of 1933, as amended. The proceeds from the offering, together with cash on hand, were used to repay \$1,200.0 million of the Term B-3 Loan plus accrued and unpaid interest and related transaction expenses. In September 2016, ATI entered into an amendment with the term loan lenders under the Senior Secured Credit Facility to reduce the existing Term B-3 Loan commitments by \$1,200.0 million, reduce the revolving credit facility commitments by \$15.0 million, extend the maturity of the existing Term B-3 Loan from 2019 to September 2022 and extend the maturity of the revolving credit facility from 2019 to September 2021. As of December 31, 2016, we had outstanding \$1,187.6 million of indebtedness associated with ATI's Term B-3 Loan and \$1,000.0 million of indebtedness associated with ATI's 5.0% Senior Notes. The minimum required quarterly principal payment on ATI's Term B-3 Loan is \$3.0 million and remains through its maturity date of September 2022. There are no required quarterly principal payments on ATI's 5.0% Senior Notes.

Our ability to make payments on and to refinance our indebtedness and to fund planned capital expenditures will depend on our ability to generate cash in the future. This is subject to general economic, financial, competitive, legislative, regulatory and other factors that may be beyond our control. We made net principal payments of \$215.2 million, \$116.5 million and \$157.6 million on our long-term debt for the years ended December 31, 2016, 2015 and 2014, respectively.

The Senior Secured Credit Facility also provides for a \$450.0 million revolving credit facility, net of an allowance for up to \$75.0 million in outstanding letters of credit commitments. As of December 31, 2016, we had \$432.2 million available under the revolving credit facility, net of \$17.8 million in letters of credit. Additionally, within the terms of the Senior Secured Credit Facility, a senior secured leverage ratio at or below 4.00x results in the elimination of excess cash flow payments on the Senior Secured Credit Facility for the applicable year. As of December 31, 2016, the senior secured leverage ratio was 1.53x. The Senior Secured Credit Facility provides certain financial incentives based on our total leverage ratio. A total leverage ratio at or below 4.00x results in a 25 basis point reduction to the applicable margin on our revolving credit facility, and a total leverage ratio at or below 3.50x results in a 12.5 basis point reduction to the revolving credit facility commitment fee and an additional 25 basis point reduction to the applicable margin on our revolving credit facility. These reductions would remain in effect as long as we achieve a total leverage ratio at or below the related threshold. As of December 31, 2016, the total leverage ratio was 3.08x.

In addition the Senior Secured Credit Facility and the indenture governing the 5.0% Senior Notes include, among other things, customary restrictions (subject to certain exceptions) on our ability to incur certain indebtedness or liens, make certain investments, declare or pay certain dividends, or repurchase shares of our common stock. As of December 31, 2016, we are in compliance with all covenants under the Senior Secured Credit Facility and indenture governing the 5.0% Senior Notes.

Our credit ratings are reviewed regularly by major debt ratings agencies such as Moody's Investors Service ("Moody's") and Fitch Ratings ("Fitch"). In September 2016, our credit ratings were reviewed by Moody's and Fitch. Moody's held our corporate rating at 'Ba2' and assigned 'Ba1' to the Term B-3 Loan and 'Ba3' to the 5.0% Senior Notes. Fitch held our corporate rating at 'BB' and assigned 'BB+' to the Term B-3 Loan and 'BB' to the 5.0% Senior Notes.

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During 2016, we repurchased approximately \$194.5 million and \$61.7 million of our common stock under the 2014 Repurchase Program and 2016 Repurchase Program, respectively. All of the repurchase transactions during 2016 were settled in cash during the same period. The 2014 Repurchase Program was completed in November 2016. As of December 31, 2016, we had \$938.3 million available under the 2016 Repurchase Program.

The following table shows our sources and uses of funds for the years ended December 31, 2016, 2015 and 2014 (in millions):

<i>Statement of Cash Flows Data</i>	Years ended December 31,		
	2016	2015	2014
Cash flows from operating activities	\$ 590.8	\$ 579.9	\$ 573.3
Cash flows used for investing activities	(71.4)	(59.7)	(67.9)
Cash flows used for financing activities	(564.7)	(528.7)	(424.1)

Generally, cash provided by operating activities has been adequate to fund our operations. Due to fluctuations in our cash flows and the growth in our operations, it may be necessary from time to time in the future to borrow under the Senior Secured Credit Facility to meet cash demands. We anticipate cash provided by operating activities, cash and cash equivalents and borrowing capacity under the Senior Secured Credit Facility will be sufficient to meet our cash requirements for the next twelve months.

As of December 31, 2016 and 2015, we had \$0.0 million and approximately \$97.4 million, respectively, of net operating loss carryforwards for U.S. federal income tax purposes. With the full utilization of our remaining U.S. federal net operating loss carryforwards during 2016, we expect our cash requirement for taxes to increase in future periods. As of December 31, 2016, our U.S. federal income tax deductions related to our intangible assets will be approximately \$316.0 million annually through 2021 and approximately \$184.0 million in 2022.

Cash provided by operating activities

Operating activities for the year ended December 31, 2016 generated \$590.8 million of cash compared to \$579.9 million for the year ended December 31, 2015. The increase was principally driven by higher accounts payable, lower inventories, lower incentive compensation payments, decreased excess tax benefit from stock-based compensation, lower interest paid as a result of debt repayments and refinancing, lower manufacturing expense, favorable direct material costs and higher other liabilities, net, partially offset by decreased net sales and higher accounts receivable.

Operating activities for the year ended December 31, 2015 generated \$579.9 million of cash compared to \$573.3 million for the year ended December 31, 2014. The increase was principally driven by lower cash interest expense, lower accounts receivable commensurate with decreased net sales and decreased excess tax benefit from stock-based compensation, partially offset by lower accounts payable, lower other liabilities, net, and higher inventories.

Cash used for investing activities

Investing activities for the year ended December 31, 2016 used \$71.4 million of cash compared to \$59.7 million for the year ended December 31, 2015. The increase was principally driven by an increase of \$12.5 million in capital expenditures. The increase in capital expenditures was principally driven by spending related to investments in productivity and replacement programs and higher product initiatives spending.

Investing activities for the year ended December 31, 2015 used \$59.7 million of cash compared to \$67.9 million for the year ended December 31, 2014. The decrease was principally driven by a decrease of \$6.0 million in capital expenditures and a decrease of \$3.9 million in investments in technology-related initiatives. The decrease in capital expenditures was principally driven by lower product initiatives spending.

Cash used for financing activities

Financing activities for the year ended December 31, 2016 used \$564.7 million of cash compared to \$528.7 million for the year ended December 31, 2015. The increase was principally driven by \$77.5 million of increased payments, net on long-term debt, \$12.1 million of increased debt financing fees associated with the issuance of the 5.0% Senior Notes and the amendments to the Senior Secured Credit Facility in the third quarter of 2016, and \$2.0 million of decreased excess tax benefit from stock-based compensation, partially offset by \$49.6 million of lower stock repurchases, \$5.0 million of decreased dividend payments, and \$0.8 million of increased proceeds from the exercise of stock options.

Financing activities for the year ended December 31, 2015 used \$528.7 million of cash compared to \$424.1 million for the year ended December 31, 2014. The increase was principally driven by \$56.0 million related to increased repurchases of our common stock, \$36.7 million of decreased proceeds from the exercise of stock options, \$16.2 million of decreased excess tax benefit from stock-based compensation, \$14.0 million of increased dividend payments and \$8.1 million of increased debt financing fees, partially offset by \$19.9 million of decreased payments related to our long-term debt and \$6.5 million of lower taxes paid related to net share settlement of equity awards.

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Contractual Obligations, Contingent Liabilities and Commitments

The following table summarizes our contractual obligations as of December 31, 2016 (dollars in millions):

	Payments due by period				
	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
Senior Secured Credit Facility(1)	\$1,403.8	\$ 50.4	\$ 99.7	\$ 98.1	\$ 1,155.6
5.0% Senior Notes(2)	1,387.5	50.0	100.0	100.0	1,137.5
Operating leases	12.5	4.2	4.6	2.3	1.4
Pension & OPEB liabilities(3)	40.6	9.7	15.5	15.4	see (3) below
Total(4)	<u>\$2,844.4</u>	<u>\$ 114.3</u>	<u>\$219.8</u>	<u>\$215.8</u>	<u>\$ 2,294.5</u>

- (1) Senior Secured Credit Facility includes principal payments and estimated interest payments, excluding the effects of our interest rate swaps. Interest on the Term B-3 Loan is equal to the LIBOR (which may not be less than 0.75%) plus 2.50%. For the purposes of this table the rate has been calculated using LIBOR as of December 31, 2016, resulting in an applied rate of 3.26%. Actual payments will vary.
- (2) 5.0% Senior Notes include principal and interest payments based on a fixed interest rate of 5.00%.
- (3) Estimated pension funding and post-retirement benefit payments are based on an increasing discount rate and effective interest rate for funding purposes between 3.6% - 4.4%. Pension funding and post-retirement benefit payments are excluded from the table beyond year 5, though we expect funding and payments to continue beyond year 5. See NOTE 13 "Employee Benefit Plans" of Notes to Consolidated Financial Statements included in Part II, Item 8, of this Annual Report on Form 10-K for the funding status of our pension plans and other post-retirement plan as of December 31, 2016.
- (4) Estimated warranty obligations, sales allowance programs and defense price reduction reserves, which total \$62.7 million, \$24.1 million and \$55.6 million, respectively, as of December 31, 2016 have been excluded from this table as timing of any payments are uncertain.

Critical Accounting Policies and Significant Accounting Estimates

The preparation of the consolidated financial statements in accordance with GAAP requires management to make estimates and assumptions that affect the reported amounts of some assets and liabilities and, in some instances, the reported amounts of net sales and expenses during the applicable reporting period. Differences between actual amounts and estimates are recorded in the period identified. Estimates can require a significant amount of judgment, and a different set of judgments could result in changes to our reported results. A summary of our critical accounting estimates is included below.

Revenue Recognition

Revenue recognition contains uncertainties because it requires management to make assumptions and to apply judgment to estimate the amount of sales incentives and provision for government price reductions. Distributor and customer sales incentives, consisting of allowances and other rebates, are estimated at the time of sale based upon history and experience and are recorded as a reduction to net sales. Incentive programs are generally product specific or region specific. Some factors used in estimating the cost of incentives include the number of transmissions that will be affected by the incentive program and the rate of acceptance of any incentive program. If the actual number of affected transmissions differs from this estimate, or if a different mix of incentives is actually paid, the impact on net sales would be recorded in the period that the change was identified. Assuming our current mix of sales incentives, a 10% change in sales incentives would have affected our earnings by approximately \$5.0 million to \$7.0 million per year for each of the prior three fiscal years.

Under terms of certain previous U.S. government contracts, there were price reduction clauses and provisions for potential price reductions which are estimated at the time of sale based upon history and experience, and finalized after completion of U.S. government audits. Potential reductions may be attributed to a change in projected sales volumes or plant efficiencies which impact overall costs. Given our current price reduction reserve for government contracts, a 10% adjustment in our price reduction reserve would have affected our earnings by approximately \$6.0 million per year for each of the prior three fiscal years. Beginning in 2014, we now enter into firm fixed price contracts with the U.S. government, which do not contain price reduction clauses and provisions.

Further information is provided in NOTE 2 “Summary of Significant Accounting Policies” of Notes to Consolidated Financial Statement included in Part II, Item 8, of this Annual Report on Form 10-K.

Goodwill and Other Intangible Assets

Goodwill is tested for impairment at the reporting unit level, which is the same as our one operating and reportable segment. We have elected to perform our annual impairment test on October 31 of every year. A multi-step impairment test is performed on goodwill. In Step 0, we have the option to evaluate various qualitative factors to determine the likelihood of impairment. If we determine that the fair value is more likely than not less than the carrying value, then we are required to perform Step 1. If we do not elect to perform Step 0, we can voluntarily proceed directly to Step 1. In Step 1, we perform a quantitative analysis to compare the fair value of our reporting unit to our carrying value including goodwill. If the fair value of the reporting unit exceeds the carrying value of the net assets assigned to that unit, goodwill is not considered impaired, and we are not required to perform further testing. If the carrying value of the net assets assigned to the reporting unit exceeds the fair value of the reporting unit, then we must perform Step 2 of the impairment test in order to determine the implied fair value of the reporting unit’s goodwill. If the carrying value of a reporting unit’s goodwill exceeds its implied fair value, then we would record an impairment loss equal to the difference.

A qualitative assessment contains uncertainties because it requires management to make assumptions and to apply judgment to assess business changes, economic outlook, financial trends and forecasts, growth rates, credit ratings, equity ratings, discount rates, industry data and other relevant qualitative factors.

A quantitative analysis contains uncertainties because it is performed utilizing a discounted cash flow model which includes key assumptions, such as net sales growth derived from market information, industry reports, marketing programs and future new product introductions; operating margin improvements derived from cost reduction programs and fixed cost leverage driven by higher sales volumes; and a risk-adjusted discount rate.

Events or circumstances that could unfavorably impact the key assumptions include lower net sales driven by market conditions, our inability to execute on marketing programs and/or a delay in the introduction of new products, lower gross margins as a result of market conditions or failure to obtain forecasted cost reductions, or a higher discount rate as a result of market conditions.

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Goodwill impairment testing for 2016 was performed using the Step 1 quantitative analysis, which indicated that the fair value of the reporting unit exceeded its carrying value by approximately 121%, indicating no impairment. The fair value was determined utilizing a discounted cash flow model which includes key assumptions, such as net sales growth derived from market information, industry reports, marketing programs and certain growth initiatives; operating margin improvements derived from cost reduction programs and fixed cost leverage driven by higher sales volumes; and a risk-adjusted discount rate. Events or circumstances that could unfavorably impact the key assumptions include lower net sales driven by market conditions, our inability to execute on marketing programs and/or growth initiatives, lower gross margins as a result of market conditions or failure to obtain forecasted cost reductions, or a higher discount rate as a result of market conditions. While unpredictable and inherently uncertain, management believes the forecast estimates were reasonable and incorporate assumptions that similar market participants would use in their estimates of fair value.

Other intangible assets have both indefinite and finite useful lives. Intangible assets with indefinite useful lives are not amortized but are tested annually for impairment. We have elected to perform our annual trade name impairment test on October 31 of every year and follow a similar multi-step impairment test that is performed on goodwill. Using the relief-from-royalty method under the income valuation approach, our 2016 annual trade name impairment test indicated that the fair value of the trade name exceeded its carrying value by approximately 13%, indicating no impairment. Events or circumstances that could unfavorably impact the key assumptions include lower net sales driven by market conditions, our inability to execute on marketing programs and/or growth initiatives, and higher discount rate as a result of market conditions. While unpredictable and inherently uncertain, we believe the forecast estimates are reasonable and incorporate those assumptions that similar market participants would use in their estimates of fair value.

Intangible assets with finite lives are amortized over their estimated useful lives and reviewed for impairment when circumstances change that would create a triggering event. Assumptions and estimates about future values and remaining useful lives of our intangible and other long-lived assets are complex and subjective. They can be affected by a variety of factors, including external factors such as industry and economic trends, and internal factors, such as changes in our business strategy and internal forecasts. Although management believes the historical assumptions and estimates are reasonable and appropriate, different assumptions and estimates could materially impact our reported financial results. Further information is provided in NOTE 2 “Summary of Significant Accounting Policies” and NOTE 5 “Goodwill and Other Intangible Assets” of Notes to Consolidated Financial Statements included in Part II, Item 8, of this Annual Report on Form 10-K.

Impairment of Long-Lived Assets

The carrying value of long-lived assets is evaluated whenever events or circumstances indicate that the carrying value of a long-lived asset may not be recoverable. Events or circumstances that would result in an impairment review primarily include a significant change in the use of an asset, or the planned sale or disposal of an asset. The asset would be considered impaired when there is no future use planned for the asset or the future net undiscounted cash flows generated by the asset or asset group are less than its carrying value. An impairment loss would be recognized based on the amount by which the carrying value exceeds fair value.

Assumptions and estimates used to determine cash flows in the evaluation of impairment and the fair values used to determine the impairment are subject to a degree of judgment and complexity. Any changes to the assumptions and estimates resulting from changes in actual results or market conditions from those anticipated may affect the carrying value of long-lived assets and could result in an impairment charge. There were no impairment charges in 2016.

As a result of events and circumstances in the first quarter of 2015, we reviewed certain of our long-lived assets related to the production of the H3000 and H4000 hybrid-propulsion systems, resulting in a \$1.3 million loss recorded for the year ended December 31, 2015. Deteriorating market conditions for hybrid-propulsion vehicles, principally as a result of decreased fuel costs, alternative fuels and other technologies, significantly contributed to the future cash flows of the related assets being less than the carrying value of those assets.

As a result of events and circumstances in the fourth quarter of 2014, we reviewed certain of our long-lived assets related to the production of the H3000 and H4000 hybrid-propulsion systems, resulting in a \$15.4 million loss recorded for the year ended December 31, 2014. The loss, determined by using future net discounted cash flows, included approximately \$1.7 million of accrued expenses related to the impairment of the long-lived assets.

Warranty

Provisions for estimated expenses related to product warranties are made at the time products are sold. Warranty claims arise when a transmission fails while in service during the relevant warranty period. The warranty reserve is adjusted in Selling, general and administrative based on our current and historical warranty claims paid and associated repair costs. These estimates are established using historical information including the nature, frequency, and average cost of warranty claims and are adjusted as actual information becomes available. From time to time, we may initiate a specific field action program. As a result of the uncertainty surrounding the nature and frequency of specific field action programs, the liability for such programs is recorded when we commit to an action. We review and assess the liability for these programs on a quarterly basis. We also assess our ability to recover certain costs from our suppliers and record a receivable from the supplier when we believe a recovery is probable. Warranty costs may differ from those estimated if actual claim rates are higher or lower than our historical rates. Further information is provided in NOTE 9 “Product Warranty Liabilities” of Notes to Consolidated Financial Statements included in Part II, Item 8, of this Annual Report on Form 10-K which contains a summary of the activity in our warranty liability account for 2016, 2015 and 2014 including adjustments to pre-existing warranties.

Pension and Post-retirement Benefit Plans

Pension and OPEB costs are based upon various actuarial assumptions and methodologies as prescribed by authoritative accounting guidance. These assumptions include discount rates, expected return on plan assets, health care cost trend rates, inflation, rate of compensation increases, population demographics, mortality rates and other factors. We review all actuarial assumptions on an annual basis.

A change in the discount rate can have a significant impact on determining our benefit obligations. Our current discount rate is determined by matching the plans’ projected cash flows to a yield curve based on long-term, fixed income debt instruments available as of the measurement date of December 31, 2016. The effect of a one percentage point decrease in the assumed discount rate would result in an increase in the December 31, 2016 defined benefit pension plans obligation of approximately \$18.5 million. Similarly, a one percentage point decrease in the assumed discount rate would result in an increase in the December 31, 2016 OPEB obligation of approximately \$25.9 million.

Further information is provided in NOTE 13 “Employee Benefit Plans” of Notes to Consolidated Financial Statements included in Part II, Item 8, of this Annual Report on Form 10-K, which contains our review on various actuarial assumptions.

Income Taxes

Income taxes are accounted for under the asset and liability method. Deferred tax assets and liabilities are recognized for the expected future tax consequences attributable to temporary differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. The future tax benefits associated with operating loss and tax credit carryforwards are recognized as deferred tax assets. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled.

Excluding net operating loss carryforwards, our expected tax payments would have increased by approximately \$36.0 million for the year ended December 31, 2016. As of December 31, 2016, we had utilized all of our federal net operating loss carryforwards.

The need to establish a valuation allowance against the deferred tax assets is assessed periodically based on a more-likely-than-not realization threshold, in accordance with the Financial Accounting Standard Board’s (“FASB”) authoritative accounting guidance on income taxes. Appropriate consideration is given to all positive and negative evidence related to that realization. This assessment considers, among other matters, the nature, frequency and severity of recent losses, forecasts of future profitability, the duration of statutory carryforward periods, and experience with tax attributes expiring unused and tax planning alternatives. The weight given to these considerations depends upon the degree to which they can be objectively verified.

Further information on income taxes is provided in NOTE 15 “Income Taxes” of Notes to Consolidated Financial Statements included in Part II, Item 8, of this Annual Report on Form 10-K.

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Off-Balance Sheet Arrangements

We are not a party to any off-balance sheet arrangements.

Recently Adopted Accounting Pronouncements

Refer to NOTE 2, “Summary of Significant Accounting Policies” in Part II, Item 8, of this Annual Report on Form 10-K.

ITEM 7A. Quantitative and Qualitative Disclosures About Market Risk

Our exposure to market risk consists of changes in interest rates, foreign currency rate fluctuations and movements in commodity prices.

Interest Rate Risk

We are subject to interest rate market risk in connection with a portion of our long-term debt. Our principal interest rate exposure relates to outstanding amounts under our Senior Secured Credit Facility. Our Senior Secured Credit Facility provides for variable rate borrowings of up to \$1,619.8 million including \$432.2 million under our revolving credit facility, net of \$17.8 million of letters of credit. A one-eighth percent increase or decrease in assumed interest rates for the Senior Secured Credit Facility, if fully drawn, as of December 31, 2016 would have an impact of approximately \$2.0 million or \$0.7 million, respectively on interest expense. As of December 31, 2016, we had no outstanding borrowings against the revolving credit facility.

From time to time, we enter into interest rate swap agreements to hedge our variable interest rate debt. Below is a list of our interest rate swaps as of December 31, 2016:

	<u>Counterparty</u>	<u>Effective Date</u>	<u>Notional Amount (in millions)</u>	<u>LIBOR Fixed Rate</u>
Interest Rate Swap L	Barclays	Aug 2016-Aug 2019	\$ 75.0	3.44%*
Interest Rate Swap M	JP Morgan	Aug 2016-Aug 2019	\$ 100.0	3.43%*
Interest Rate Swap N	Bank of America	Aug 2016-Aug 2019	\$ 75.0	3.37%*
Interest Rate Swap O	Deutsche Bank	Aug 2016-Aug 2019	\$ 75.0	3.19%*
Interest Rate Swap P	Barclays	Aug 2016-Aug 2019	\$ 75.0	3.08%*
Interest Rate Swap Q	Barclays	Aug 2016-Aug 2019	\$ 50.0	2.99%*
Interest Rate Swap R	Deutsche Bank	Aug 2016-Aug 2019	\$ 50.0	2.98%*
Interest Rate Swap S	Deutsche Bank	Aug 2016-Aug 2019	\$ 50.0	2.73%*
Interest Rate Swap T	Bank of America	Aug 2016-Aug 2019	\$ 75.0	2.74%*
Interest Rate Swap U	Fifth Third Bank	Aug 2016-Aug 2019	\$ 50.0	2.66%*
Interest Rate Swap V	Fifth Third Bank	Aug 2016-Aug 2019	\$ 50.0	2.60%*
Interest Rate Swap W	Fifth Third Bank	Aug 2016-Aug 2019	\$ 25.0	2.40%*
Interest Rate Swap X	Huntington Bank	Aug 2016-Aug 2019	\$ 50.0	2.25%*

* includes LIBOR floor of 1.00%

We are exposed to increased interest expense if a counterparty defaults. Refer to NOTE 7 “Debt” and NOTE 8 “Derivatives” of Notes to Consolidated Financial Statements included in Part II, Item 8, of this Annual Report on Form 10-K.

Exchange Rate Risk

While our net sales and costs are denominated primarily in U.S. Dollars, net sales, costs, assets and liabilities are generated in other currencies including Japanese Yen, Euro, Indian Rupee, Brazilian Real, Chinese Yuan Renminbi, Canadian Dollar and Hungarian Forint. The expansion of our business outside North America may further increase the risk that cash flows resulting from these activities may be adversely affected by changes in currency exchange rates.

Assuming current levels of foreign currency transactions, a 10% aggregate increase or decrease in the Japanese Yen, Euro, Indian Rupee, Chinese Yuan Renminbi and Canadian Dollar would correspondingly change our earnings, net of tax, by an estimated \$2.0 million per year. All other exposure to foreign currencies is considered immaterial.

Commodity Price Risk

We are subject to changes in our cost of sales caused by movements in underlying commodity prices. Approximately two-thirds of our cost of sales consists of purchased components with significant raw material content. A substantial portion of the purchased parts are made of aluminum and steel. The cost of aluminum parts include an adjustment factor on future purchases for fluctuations in aluminum prices based on accepted industry indices. In addition, a substantial amount of steel-based contracts also include an index-based component. As our costs change, we are able to pass through a portion of the changes in commodity prices to certain of our customers according to our LTSAs. We historically have not entered into long-term purchase contracts related to the purchase of aluminum and steel. We currently hold commodity swaps that are intended to hedge forecasted aluminum purchases. Based on our forecasted demand for 2017 and 2018, as of December 31, 2016, the hedge contracts cover approximately 24% and 0% of our aluminum requirements, respectively. We do not hold financial instruments for trading or speculative purposes.

Assuming current levels of commodity purchases, a 10% increase or decrease in the price of aluminum and steel would correspondingly change our earnings by approximately \$1 million and \$3 million per year, respectively. This includes the partial offset of our hedging contracts described above.

Many of our LTSAs have incorporated a cost-sharing arrangement related to potential future commodity price fluctuations. Our hedging policy is that we hedge our exposure and do not hedge any portion of the customers' exposure. For purposes of the sensitivity analysis above, the impact of these cost sharing arrangements has not been included.

ITEM 8. Financial Statements and Supplementary Data

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of
Allison Transmission Holdings, Inc.

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of comprehensive income, of stockholders' equity and of cash flows present fairly, in all material respects, the financial position of Allison Transmission Holdings, Inc. and its subsidiaries at December 31, 2016 and December 31, 2015, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2016 in conformity with accounting principles generally accepted in the United States of America. In addition, in our opinion, the financial statement schedule listed in the index appearing under Item 15(a)(2) presents fairly, in all material respects, the information set forth therein when read in conjunction with the related consolidated financial statements. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for these financial statements and financial statement schedule, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control Over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on these financial statements, on the financial statement schedule, and on the Company's internal control over financial reporting based on our integrated audits. We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

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

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

/s/ PricewaterhouseCoopers LLP
Indianapolis, Indiana
February 24, 2017

Allison Transmission Holdings, Inc.
Consolidated Balance Sheets
(dollars in millions, except share data)

	December 31, 2016	December 31, 2015
ASSETS		
Current Assets		
Cash and cash equivalents	\$ 204.7	\$ 251.6
Accounts receivable — net of allowance for doubtful accounts of \$0.4 and \$0.4, respectively	196.9	195.0
Inventories	125.6	141.4
Other current assets	20.4	28.8
Total Current Assets	547.6	616.8
Property, plant and equipment, net	464.1	479.7
Intangible assets, net	1,242.4	1,334.8
Goodwill	1,941.0	1,941.0
Other non-current assets	23.5	36.1
TOTAL ASSETS	\$ 4,218.6	\$ 4,408.4
LIABILITIES		
Current Liabilities		
Accounts payable	\$ 127.9	\$ 126.2
Product warranty liability	24.9	24.9
Current portion of long-term debt	11.9	24.5
Deferred revenue	27.3	22.9
Other current liabilities	150.2	106.1
Total Current Liabilities	342.2	304.6
Product warranty liability	37.8	53.4
Deferred revenue	66.3	56.4
Long-term debt	2,146.8	2,352.7
Deferred income taxes	311.9	204.6
Other non-current liabilities	233.3	248.1
TOTAL LIABILITIES	3,138.3	3,219.8
Commitments and Contingencies (see NOTE 17)		
STOCKHOLDERS' EQUITY		
Common stock, \$0.01 par value, 1,880,000,000 shares authorized, 163,795,604 shares issued and outstanding and 171,157,004 shares issued and outstanding, respectively	1.6	1.7
Non-voting common stock, \$0.01 par value, 20,000,000 shares authorized, none issued and outstanding	—	—
Preferred stock, \$0.01 par value, 100,000,000 shares authorized, none issued and outstanding	—	—
Paid in capital	1,728.0	1,690.2
Accumulated deficit	(586.4)	(444.5)
Accumulated other comprehensive loss, net of tax	(62.9)	(58.8)
TOTAL STOCKHOLDERS' EQUITY	1,080.3	1,188.6
TOTAL LIABILITIES & STOCKHOLDERS' EQUITY	\$ 4,218.6	\$ 4,408.4

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

Allison Transmission Holdings, Inc.
Consolidated Statements of Comprehensive Income
(dollars in millions, except per share data)

	Years ended December 31,		
	2016	2015	2014
Net sales	\$1,840.2	\$1,985.8	\$2,127.4
Cost of sales	976.0	1,052.0	1,151.5
Gross profit	864.2	933.8	975.9
Selling, general and administrative	323.9	317.1	344.6
Engineering — research and development	88.8	92.5	103.8
Trade name impairment (see NOTE 5)	—	80.0	—
Environmental remediation	—	14.0	—
Loss associated with impairment of long-lived assets	—	1.3	15.4
Operating income	451.5	428.9	512.1
Interest income	0.7	0.7	0.9
Interest expense	(101.6)	(115.2)	(139.3)
Expenses related to long-term debt refinancing	(11.7)	(25.3)	—
Other income (expense), net	2.4	(0.3)	(5.6)
Income before income taxes	341.3	288.8	368.1
Income tax expense	(126.4)	(106.5)	(139.5)
Net income	\$ 214.9	\$ 182.3	\$ 228.6
Basic earnings per share attributable to common stockholders	\$ 1.28	\$ 1.03	\$ 1.27
Diluted earnings per share attributable to common stockholders	\$ 1.27	\$ 1.03	\$ 1.25
Dividends declared per common share	\$ 0.60	\$ 0.60	\$ 0.51
Other comprehensive (loss) income, net of tax:			
Foreign currency translation	(5.8)	(11.5)	(7.4)
Pension and OPEB liability adjustment	2.5	(3.0)	(9.1)
Available-for-sale securities	(0.8)	(4.8)	(2.0)
Total other comprehensive loss, net of tax	(4.1)	(19.3)	(18.5)
Comprehensive income	\$ 210.8	\$ 163.0	\$ 210.1

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

Allison Transmission Holdings, Inc.
Consolidated Statements of Cash Flows
(dollars in millions)

	Years ended December 31,		
	2016	2015	2014
CASH FLOWS FROM OPERATING ACTIVITIES:			
Net income	\$ 214.9	\$ 182.3	\$ 228.6
Adjustments to reconcile net income to net cash provided by operating activities:			
Deferred income taxes	114.2	96.0	131.8
Amortization of intangible assets	92.4	97.1	98.8
Depreciation of property, plant and equipment	83.5	88.3	93.8
Expenses related to long-term debt refinancing	11.0	25.3	—
Stock-based compensation	9.4	9.8	14.7
Amortization of deferred financing costs	6.8	8.0	8.1
Excess tax benefit from stock-based compensation	(6.4)	(8.4)	(24.6)
Unrealized (gain) loss on derivatives	(1.4)	14.7	(4.7)
Impairment loss on investments in technology-related initiatives	1.0	—	2.0
Trade name impairment	—	80.0	—
Loss associated with impairment of long-lived assets	—	1.3	15.4
Loss on repayments of long-term debt	—	0.3	0.5
Other	0.7	2.0	5.2
Changes in assets and liabilities:			
Accounts receivable	(3.7)	9.0	(35.8)
Inventories	15.4	(2.2)	12.7
Accounts payable	1.9	(25.1)	2.1
Other assets and liabilities	51.1	1.5	24.7
Net cash provided by operating activities	<u>590.8</u>	<u>579.9</u>	<u>573.3</u>
CASH FLOWS FROM INVESTING ACTIVITIES:			
Additions of long-lived assets	(70.6)	(58.1)	(64.1)
Investments in technology-related initiatives	(1.0)	(1.9)	(5.8)
Proceeds from disposal of assets	0.2	0.3	0.3
Collateral for interest rate derivatives	—	—	1.7
Net cash used for investing activities	<u>(71.4)</u>	<u>(59.7)</u>	<u>(67.9)</u>
CASH FLOWS FROM FINANCING ACTIVITIES:			
Payments on long-term debt	(1,215.2)	(116.5)	(157.6)
Issuance of long-term debt	1,000.0	470.0	—
Repurchases of common stock	(256.2)	(305.8)	(249.8)
Dividend payments	(100.6)	(105.6)	(91.6)
Proceeds from exercise of stock options	23.7	22.9	59.6
Debt financing fees	(21.1)	(9.0)	(0.9)
Excess tax benefit from stock-based compensation	6.4	8.4	24.6
Taxes paid related to net share settlement of equity awards	(1.7)	(1.9)	(8.4)
Repurchases and redemption of long-term debt	—	(491.2)	—
Net cash used for financing activities	<u>(564.7)</u>	<u>(528.7)</u>	<u>(424.1)</u>
Effect of exchange rate changes on cash	(1.6)	(2.9)	(3.0)
Net (decrease) increase in cash and cash equivalents	<u>(46.9)</u>	<u>(11.4)</u>	<u>78.3</u>
Cash and cash equivalents at beginning of period	251.6	263.0	184.7
Cash and cash equivalents at end of period	<u>\$ 204.7</u>	<u>\$ 251.6</u>	<u>\$ 263.0</u>
Supplemental disclosures:			
Interest paid	\$ 78.3	\$ 97.1	\$ 140.0
Income taxes paid	\$ 12.8	\$ 5.2	\$ 5.0

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

Allison Transmission Holdings, Inc.
Consolidated Statements of Stockholders' Equity
(dollars in millions)

	Common Stock	Non- voting Common Stock	Preferred Stock	Treasury Stock	Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss, net of tax	Stockholders' Equity
Balance at December 31, 2013	\$ 1.8	\$ 0.0	\$ —	\$ —	\$1,631.8	\$ (173.8)	\$ (21.0)	\$ 1,438.8
Stock-based compensation	—	—	—	—	14.7	—	—	14.7
Pension and OPEB liability adjustment	—	—	—	—	—	—	(9.1)	(9.1)
Foreign currency translation adjustment	—	—	—	—	—	—	(7.4)	(7.4)
Available-for-sale securities	—	—	—	—	—	—	(2.0)	(2.0)
Issuance of common stock	0.0	—	—	—	51.0	—	—	51.0
Repurchase of common stock	(0.0)	(0.0)	—	—	(71.1)	(178.7)	—	(249.8)
Dividends on common stock	—	—	—	—	—	(91.6)	—	(91.6)
Excess tax benefit from stock-based compensation	—	—	—	—	24.6	—	—	24.6
Net income	—	—	—	—	—	228.6	—	228.6
Balance at December 31, 2014	\$ 1.8	\$ —	\$ —	\$ —	\$1,651.0	\$ (215.5)	\$ (39.5)	\$ 1,397.8
Stock-based compensation	—	—	—	—	9.8	—	—	9.8
Pension and OPEB liability adjustment	—	—	—	—	—	—	(3.0)	(3.0)
Foreign currency translation adjustment	—	—	—	—	—	—	(11.5)	(11.5)
Available-for-sale securities	—	—	—	—	—	—	(4.8)	(4.8)
Issuance of common stock	0.0	—	—	—	21.0	—	—	21.0
Repurchase of common stock	(0.1)	—	—	—	—	(305.7)	—	(305.8)
Dividends on common stock	—	—	—	—	—	(105.6)	—	(105.6)
Excess tax benefit from stock-based compensation	—	—	—	—	8.4	—	—	8.4
Net income	—	—	—	—	—	182.3	—	182.3
Balance at December 31, 2015	\$ 1.7	\$ —	\$ —	\$ —	\$1,690.2	\$ (444.5)	\$ (58.8)	\$ 1,188.6
Stock-based compensation	—	—	—	—	9.4	—	—	9.4
Pension and OPEB liability adjustment	—	—	—	—	—	—	2.5	2.5
Foreign currency translation adjustment	—	—	—	—	—	—	(5.8)	(5.8)
Available-for-sale securities	—	—	—	—	—	—	(0.8)	(0.8)
Issuance of common stock	0.0	—	—	—	22.0	—	—	22.0
Repurchase of common stock	(0.1)	—	—	—	—	(256.2)	—	(256.3)
Dividends on common stock	—	—	—	—	—	(100.6)	—	(100.6)
Excess tax benefit from stock-based compensation	—	—	—	—	6.4	—	—	6.4
Net income	—	—	—	—	—	214.9	—	214.9
Balance at December 31, 2016	\$ 1.6	\$ —	\$ —	\$ —	\$1,728.0	\$ (586.4)	\$ (62.9)	\$ 1,080.3

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

Allison Transmission Holdings, Inc.

Notes to Consolidated Financial Statements

NOTE 1. OVERVIEW

Overview

Allison Transmission Holdings, Inc. and its subsidiaries (“Allison,” the “Company” or “we”) design and manufacture commercial and defense fully-automatic transmissions. The business was founded in 1915 and has been headquartered in Indianapolis, Indiana since inception. Allison was an operating unit of General Motors Corporation (“Old GM”) from 1929 until 2007, when Allison once again became a stand-alone company. In March 2012, Allison began trading on the New York Stock Exchange under the symbol, “ALSN”.

The Company has approximately 2,600 employees and 13 different transmission product lines. Although approximately 78% of revenues were generated in North America in 2016, the Company has a global presence by serving customers in Europe, Asia, South America and Africa. The Company serves customers through an independent network of approximately 1,400 independent distributor and dealer locations worldwide.

NOTE 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation and Principles of Consolidation

The consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America (“GAAP”). The information herein reflects all normal recurring material adjustments, which are, in the opinion of management, necessary for the fair statements of the results for the periods presented. The consolidated financial statements herein consist of all wholly-owned domestic and foreign subsidiaries with all significant intercompany transactions eliminated.

These consolidated financial statements present the financial position, results of comprehensive income, cash flows and statements of equity. Certain immaterial reclassifications have been made in the consolidated financial statements of prior periods to conform to the current period presentation.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities and the reported amounts of revenue and expenses. Estimates include, but are not limited to, allowance for doubtful accounts, sales allowances, government price adjustments, fair market values and future cash flows associated with goodwill, indefinite-life intangibles, long-lived asset impairment tests, useful lives for depreciation and amortization, warranty liabilities, environmental liabilities, determination of discount and other assumptions for pension and other postretirement benefit expense, income taxes and deferred tax valuation allowances, derivative valuation, and contingencies. The Company’s accounting policies involve the application of judgments and assumptions made by management that include inherent risks and uncertainties. Actual results could differ materially from these estimates. Changes in estimates are recorded in results of operations in the period that the events or circumstances giving rise to such changes occur.

Segment Reporting

In accordance with the Financial Accounting Standards Board’s (“FASB”) authoritative accounting guidance on segment reporting, the Company has one operating segment and reportable segment. The Company is in one line of business, which is the manufacture and distribution of fully-automatic transmissions.

Cash and Cash Equivalents

Cash equivalents are defined as short-term, highly-liquid investments with original maturities of 90 days or less. Under the Company’s cash management system, checks issued but not presented to banks may result in book overdraft balances for accounting purposes and are classified within Accounts payable in the Consolidated Balance Sheets. The change in book overdrafts is reported as a component of operating cash flows for Accounts payable.

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Marketable Securities

The Company determines the appropriate classification of all marketable securities as “held-to-maturity,” “available-for-sale” or “trading” at the time of purchase, and re-evaluates such classifications as of each balance sheet date. As of December 31, 2016, the Company’s marketable securities are classified as either available-for-sale or trading.

Available-for-sale securities are carried at fair value with the unrealized gain or loss reported in Accumulated other comprehensive loss (“AOCL”). Unrealized gains or losses considered to be “other-than-temporary” are recognized in income. Trading securities are carried at fair value with the unrealized gain or loss recognized in Other income (expense), net. The fair value of the Company’s investment securities is determined by currently available market prices. See NOTE 6 “Fair Value of Financial Instruments” for more details.

Inventories

Inventories are stated at the lower of cost or market. The Company determines cost using the first-in, first-out method. The Company analyzes inventory on a quarterly basis to determine whether it is excess or obsolete inventory. Any decline in carrying value of estimated excess or obsolete inventory is recorded as a reduction of inventory and as an expense included in Cost of sales in the period it is identified.

Property, Plant and Equipment

Property, plant and equipment are recorded at cost less accumulated depreciation. Depreciation expense is recorded using the straight-line method over the following estimated lives:

	<u>Range in Years</u>
Land improvements	5 – 30
Buildings and building improvements	10 – 40
Machinery and equipment	2 – 20
Software	2 – 5
Special tools	2 – 10

Software represents the costs of software developed or obtained for internal use. Software costs are amortized on a straight-line basis over their estimated useful lives. Software assets are reviewed for impairment when events or circumstances indicate that the carrying value may not be recoverable over the remaining lives of the assets. Upgrades and enhancements are capitalized if they result in added functionality, which enables the software to perform tasks it was previously incapable of performing. Software maintenance, training, data conversion and business process reengineering costs are expensed in the period in which they are incurred.

Special tooling represents the costs to design and develop tools, dies, jigs and other items owned by the Company and used in the manufacture of components by suppliers under long-term supply agreements. Special tooling is depreciated over the tool’s expected life. Special tooling used in the development of new technology is expensed as incurred. Engineering, testing and other costs incurred in the design and development of production parts are expensed as incurred.

Impairment of Long-Lived Assets

The carrying value of long-lived assets is evaluated whenever events or circumstances indicate that the carrying value of an asset may not be recoverable. Events or circumstances that would result in an impairment review primarily include a significant change in the use of an asset, or the planned sale or disposal of an asset. The asset would be considered impaired when there is no future use planned for the asset or the future net undiscounted cash flows generated by the asset or asset group are less than its carrying value. An impairment loss would be recognized based on the amount by which the carrying value exceeds fair value.

Assumptions and estimates used to determine cash flows in the evaluation of impairment and the fair values used to determine the impairment are subject to a degree of judgment and complexity. Any changes to the assumptions and estimates resulting from changes in actual results or market conditions from those anticipated may affect the carrying value of long-lived assets and could result in an impairment charge.

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As a result of events and circumstances in the fourth quarter of 2014, the Company reviewed certain of its long-lived assets related to the production of the H3000 and H4000 hybrid-propulsion systems, resulting in a \$15.4 million loss recorded for the year ended December 31, 2014. The loss, determined by using future net discounted cash flows, included approximately \$1.7 million of accrued expenses related to the impairment of the long-lived assets. The Company also recorded a \$1.3 million impairment loss during the first quarter of 2015. Deteriorating market conditions for hybrid-propulsion vehicles, principally as a result of decreased fuel costs, alternative fuels and other technologies, significantly contributed to the future cash flows of the related assets being less than the carrying value of those assets. There were no impairment charges for the year ended December 31, 2016.

Goodwill and Other Intangible Assets

Goodwill represents the excess of purchase price paid over the fair value of net assets acquired. In accordance with the FASB's authoritative accounting guidance on goodwill, the Company does not amortize goodwill but rather evaluates it for impairment on an annual basis, or more often if events or circumstances change that could cause goodwill to become impaired. Goodwill is tested for impairment at the reporting unit level, which is the same as the Company's one operating and reportable segment. The Company has elected to perform its annual goodwill impairment test on October 31 of every year using a multi-step impairment test. In Step 0, the Company has the option to evaluate various qualitative factors to determine the likelihood of impairment. If determined that the fair value is more likely than not less than the carrying value, then the Company is required to perform Step 1. If the Company does not elect to perform Step 0, it can voluntarily proceed directly to Step 1. In Step 1, the Company performs a quantitative analysis to compare the fair value of its reporting unit to its carrying value including goodwill. If the fair value of the reporting unit exceeds the carrying value of the net assets assigned to that unit, goodwill is not considered impaired, and the Company is not required to perform further testing. If the carrying value of the net assets assigned to the reporting unit exceeds the fair value of the reporting unit, then the Company must perform Step 2 of the impairment test in order to determine the implied fair value of the reporting unit's goodwill. If the carrying value of a reporting unit's goodwill exceeds its implied fair value, then the Company would record an impairment loss equal to the difference.

Goodwill impairment testing for 2016 was performed using the Step 1 quantitative analysis. The fair value was determined utilizing a discounted cash flow model which includes key assumptions, such as net sales growth derived from market information, industry reports, marketing programs and certain growth initiatives; operating margin improvements derived from cost reduction programs and fixed cost leverage driven by higher sales volumes; and a risk-adjusted discount rate. Events or circumstances that could unfavorably impact the key assumptions include lower net sales driven by market conditions, our inability to execute on marketing programs and/or growth initiatives, lower gross margins as a result of market conditions or failure to obtain forecasted cost reductions, or a higher discount rate as a result of market conditions. While unpredictable and inherently uncertain, the Company believes the forecast estimates were reasonable and incorporate assumptions that similar market participants would use in their estimates of fair value. Refer to NOTE 5 "Goodwill and Other Intangible Assets" for further information.

Other intangible assets have both indefinite and finite useful lives. Intangible assets with indefinite useful lives are not amortized but are tested annually for impairment. The Company has elected to perform its annual trade name impairment test on October 31 of every year and follow a similar multi-step impairment test that is performed on goodwill. Using the relief-from-royalty method under the income valuation approach, the Company performed its 2016 annual trade name impairment test using the Step 1 quantitative analysis, and determined that the fair value of the trade name exceeded its carrying value, indicating no impairment. The relief-from-royalty method requires assumptions be made concerning forecasted revenue, a discount rate, and a royalty rate. The underlying concept of the relief-from-royalty method is that the value of the trade name can be estimated by determining the cost savings the Company achieves by not having to license the trade name. Events or circumstances that could unfavorably impact the key assumptions include lower net sales driven by market conditions, the Company's inability to execute on marketing programs and/or growth initiatives, and higher discount rate as a result of market conditions. While unpredictable and inherently uncertain, the Company believes the forecast estimates were reasonable and incorporate those assumptions that similar market participants would use in their estimates of fair value. Refer to NOTE 5 "Goodwill and Other Intangible Assets" for further information.

Intangible assets with finite lives are amortized over their estimated useful lives and reviewed for impairment when circumstances change that would create a triggering event. Customer relationships are amortized over the life in which expected benefits are to be consumed. The other remaining finite life intangibles are amortized on a straight-line basis over their useful lives. The Company evaluates the remaining useful life of the other intangible assets on a periodic basis to determine whether events or circumstances warrant a revision to the remaining useful life. Assumptions and estimates about future values and remaining useful lives of the Company's intangible and other long-lived assets are complex and subjective. They can be affected by a variety of factors, including external factors such as industry and economic trends, and internal factors, such as changes in the Company's business strategy and internal forecasts. Although management believes the historical assumptions and estimates are reasonable and appropriate, different assumptions and estimates could materially impact the Company's reported financial results.

NOTE 5 “Goodwill and Other Intangible Assets” provides further information.

Deferred Financing Costs

The debt issuance costs related to line-of-credit arrangements is presented as a component of other non-current assets. Deferred financing costs continue to be amortized over the life of the related debt using the effective interest method. Amortization of deferred financing costs is recorded as part of interest expense and totaled \$6.8 million, \$8.0 million and \$8.1 million for the years ended December 31, 2016, 2015 and 2014, respectively.

Financial Instruments

The Company’s cash equivalents are invested in U.S. Government backed securities and recorded at fair value in the Consolidated Balance Sheets. The carrying values of accounts receivable and accounts payable approximate fair value due to their short-term nature. The Company’s financial derivative instruments, including interest rate swaps and foreign currency and commodity forward contracts are carried at fair value on the Consolidated Balance Sheets. Refer to NOTE 6 “Fair Value of Financial Instruments” for more detail. The Company’s long-term debt obligations are carried at historical amounts with the Company providing fair value disclosure in NOTE 7 “Debt”.

Insurable Liabilities

The Company records liabilities for its medical, workers’ compensation, long-term disability, product, general and auto liabilities. The determination of these liabilities and related expenses is dependent on claims experience. For most of these liabilities, claims incurred but not yet reported are estimated based upon historical claims experience.

Revenue Recognition

The Company records sales when title has transferred to the customer, there is evidence of an agreement, the sales price is fixed or determinable, delivery has occurred or services have been rendered, and collectability is reasonably assured. The Company sells Extended Transmission Coverage (“ETC”) for which sales are deferred. ETC sales are recognized ratably over the period of the ETC, which typically ranges from two to five years after initial sale. Costs associated with ETC programs are recorded as incurred during the extended period. Distributor and customer sales incentives, consisting of allowances and other rebates, are estimated at the time of sale based upon the Company’s history and experience and are recorded as a reduction to Net sales. Incentive programs are generally product specific or region specific. Some factors used in estimating the cost of incentives include the number of transmissions that will be affected by the incentive program and rate of acceptance of any incentive program. If the actual number of affected transmissions differs from this estimate, or if a different mix of incentives is actually paid, the impact on Net sales would be recorded in the period that the change was identified. Consideration given to commercial customers recorded as a reduction of Net sales in the Consolidated Statements of Comprehensive Income included \$58.1 million, \$46.7 million, and \$66.9 million for the years ended December 31, 2016, 2015 and 2014, respectively.

Sales under U.S. government production contracts are recorded when the product is accepted, title has transferred to the U.S. government, the sales price is fixed or determinable, and delivery has occurred. Deferred revenue arises from cash received in advance of the culmination of the earnings process and is recognized as revenue in future periods when the applicable revenue recognition criteria have been met. Under the terms of previous U.S. government contracts, there were certain price reduction clauses and provisions for potential price reductions which were estimated at the time of sale based upon the Company’s history and experience and were recorded as a reduction to Net sales. Potential reductions may be attributed to a change in projected sales volumes or plant efficiencies which impact overall costs. As of December 31, 2016 and 2015, the Company had \$55.6 million and \$55.1 million recorded in the price reduction reserve account, respectively.

Due to requests from the U.S. government, the Company billed, but did not ship certain tracked transmissions during 2013. Based on the lack of a fixed delivery date from the U.S. government, the Company deferred approximately \$8.8 million of Net sales for these transmissions until they were shipped in 2014. See NOTE 10 “Deferred Revenue” for additional details.

The Company classifies shipping and handling billed to customers in Net sales and shipping and handling costs in Cost of sales, in accordance with authoritative accounting guidance.

The Company contracts with various third parties to provide engineering services. These services are recorded as Net sales in accordance with the terms of the contract. The saleable engineering recorded was \$2.5 million, \$4.2 million and \$7.4 million for the years ended December 31, 2016, 2015 and 2014, respectively. The associated costs are recorded in Cost of sales.

Warranty

Provisions for estimated expenses related to product warranties are made at the time products are sold. Warranty claims arise when a transmission fails while in service during the relevant warranty period. The warranty reserve is adjusted in Selling, general and administrative based on the Company's current and historical warranty claims paid and associated repair costs. These estimates are established using historical information including the nature, frequency, and average cost of warranty claims and are adjusted as actual information becomes available. From time to time, the Company may initiate a specific field action program. As a result of the uncertainty surrounding the nature and frequency of specific field action programs, the liability for such programs is recorded when the Company commits to an action. The Company reviews and assesses the liability for these programs on a quarterly basis. The Company also assesses its ability to recover certain costs from its suppliers and records a receivable from the supplier when it believes a recovery is probable. Warranty costs may differ from those estimated if actual claim rates are higher or lower than our historical rates.

Research and Development

The Company incurs costs in connection with research and development programs that are expected to contribute to future earnings. Such costs are charged to Engineering — research and development as incurred.

Environmental

The Company accrues costs related to environmental matters when it is probable that the Company has incurred a liability related to a contaminated site and the costs can be reasonably estimated. For additional information, see NOTE 17 "Commitments and Contingencies".

Foreign Currency Translation

Most of the subsidiaries outside the United States prepare financial statements in currencies other than the U.S. Dollar. The functional currency for all these subsidiaries is the local currency, except for the Company's Hong Kong and Middle East subsidiaries which currently use the U.S. Dollar as their functional currency. Balances are translated at period-end exchange rates for assets and liabilities and monthly weighted-average exchange rates for revenues and expenses. The translation gains and losses are stated as a component of AOCL as disclosed in NOTE 16 "Other Comprehensive Loss".

Derivative Instruments

In the normal course of business, the Company is exposed to fluctuations in interest rates, foreign currency exchange rates, and commodity prices. The risk is managed through the use of financial derivative instruments including interest rate swaps and commodity and foreign currency forward contracts. Despite the fact that the Company either has not elected or does not qualify for hedge accounting treatment on all of its derivative instruments, the contracts are used strictly as an economic hedge and not for speculative purposes. As necessary, the Company adjusts the values of the derivative instruments for counter-party or credit risk. NOTE 8 "Derivatives" provides further information on the accounting treatment of the Company's derivative instruments.

Income Taxes

Income taxes are accounted for under the asset and liability method. Deferred tax assets and liabilities are recognized for the expected future tax consequences attributable to temporary differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. The future tax benefits associated with operating loss and tax credit carryforwards are recognized as deferred tax assets. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled.

The need to establish a valuation allowance against the deferred tax assets is assessed periodically based on a more-likely-than-not realization threshold, in accordance with the FASB's authoritative accounting guidance on income taxes. Appropriate consideration is given to all positive and negative evidence related to that realization. This assessment considers, among other matters, the nature, frequency and severity of recent losses, forecasts of future profitability, the duration of statutory carryforward periods, and experience with tax attributes expiring unused and tax planning alternatives. The weight given to these considerations depends upon the degree to which they can be objectively verified.

Stock-Based Compensation

The Company maintains a stock-based compensation plan which allows employees (including executive officers), consultants and directors to receive equity awards. The Company follows the FASB's authoritative accounting guidance on share-based payments and recognizes the fair value of the awards as compensation expense over the vesting period. The accounting guidance also requires that forfeitures be estimated over the vesting period of an award instead of being recognized as a reduction of compensation expense when the forfeiture actually occurs.

Pension and Post-retirement Benefit Plans

For pension and other post-retirement benefits (“OPEB”) plans in which employees participate, costs are determined within the FASB’s authoritative accounting guidance set forth in employers’ defined benefit pensions including accounting for settlements and curtailments of defined benefit pension plans, termination of benefits and accounting for post-retirement benefits other than pensions. In accordance with the authoritative accounting guidance, the Company recognizes the funded status of its defined benefit pension plans and OPEB plan in its Consolidated Balance Sheets with a corresponding adjustment to AOCL, net of tax.

Post-retirement benefit costs consist of service cost and interest cost on accrued obligations. Actuarial gains and losses on liabilities together with any prior service costs are charged (or credited) to income over the average remaining service lives of employees.

The benefit cost components shown in the Consolidated Statements of Comprehensive Income are based upon various actuarial assumptions and methodologies as prescribed by authoritative accounting guidance. These assumptions include discount rates, expected return on plan assets, health care cost trend rates, inflation, rate of compensation increases, population demographics, mortality rates and other factors. The Company reviews all actuarial assumptions on an annual basis. Changes in key economic indicators can change these assumptions. These assumptions, along with the actual value of assets at the measurement date, will impact the calculation of pension expenses for the year.

Recently Issued Accounting Pronouncements

In January 2017, the FASB issued authoritative accounting guidance on evaluation of goodwill for impairment. The guidance modifies the approach to assessing impairment from testing the implied fair value goodwill to testing the fair value of the reporting unit carrying the goodwill, which eliminates Step 2 of the current evaluation guidance. The intent of this amendment is to reduce the cost and complexity of evaluating goodwill. The guidance will be effective for the Company in fiscal year 2020, but early adoption is permitted. Management is currently evaluating the impact of this guidance on the Company’s consolidated financial statements.

In October 2016, the FASB issued authoritative accounting guidance on the income tax consequences of intra-company transfers other than inventory. This guidance addresses the timing of the recognition of current and deferred income taxes. Under this guidance, the recognition of current or deferred income taxes will occur at the time of the transfer of the asset. The guidance will be effective for the Company in fiscal year 2018, but early adoption is permitted. Management is currently evaluating the impact of this guidance on the Company’s consolidated financial statements.

In August 2016, the FASB issued authoritative accounting guidance on the presentation and classification of certain cash receipts and cash payments on the statement of cash flows. The guidance specifically addresses cash flow issues with the objective of reducing the diversity in practice. The guidance will be effective for the Company in fiscal year 2018, but early adoption is permitted. Management is currently evaluating the impact of this guidance on the Company’s consolidated financial statements.

In March 2016, the FASB issued authoritative accounting guidance on share-based payment awards to employees. The guidance involves several aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. The guidance was adopted by the Company effective in fiscal year 2017. Commencing on that date, management will record any excess tax benefit or tax deficiency in income tax expense and as a component of operating cash flows and will make the accounting policy election to account for forfeitures as they occur.

In February 2016, the FASB issued authoritative accounting guidance on lease accounting. The guidance requires lessees to present right-of-use assets and lease liabilities on the balance sheet for all leases not considered short-term leases. Short-term leases are leases with a lease term of 12 months or less as long as the leases do not include options to purchase the underlying assets that the lessee is reasonably certain to exercise. The new guidance also introduces new disclosure requirements for leasing arrangements. The guidance will be effective for the Company in fiscal year 2019, but early adoption is permitted. Management is currently evaluating the impact of this guidance on the Company’s consolidated financial statements.

In January 2016, the FASB issued authoritative accounting guidance on the classification of equity securities with readily determinable fair values into different categories (e.g. trading or available-for-sale) and the requirement for equity securities to be measured at fair value with changes in fair value recognized in net income. The guidance will be effective prospectively for the Company in fiscal year 2018 and early adoption is limited to certain provisions. Upon adoption, a cumulative-effect adjustment to retained earnings in the consolidated balance sheets will be reclassified to beginning retained earnings. Management expects the unrealized gains and losses for fair value measurement of the Company’s available-for-sale securities to be recognized in net income upon adoption.

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In July 2015, the FASB issued authoritative accounting guidance to simplify the measurement of inventory. The guidance requires that inventory be measured at the lower of cost and net realizable value. When evidence exists that the net realizable value of inventory is lower than its cost, the difference shall be recognized as a loss in earnings in the period in which it occurs. Inventory measured using last-in, first-out and the retail inventory method are not impacted by the new guidance. The guidance was adopted by the Company effective in fiscal year 2017. The adoption of this guidance did not have a material impact on the Company's consolidated financial statements.

In May 2014, the FASB issued authoritative accounting guidance on a company's accounting for revenue from contracts with customers, which guidance has subsequently been amended. The guidance applies to all companies that enter into contracts with customers to transfer goods, services or nonfinancial assets. The guidance requires these companies to recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The guidance also requires disclosures regarding the nature, timing, amount and uncertainty of revenue that is recognized. The guidance allows either full or modified retrospective adoption. The guidance will be effective for the Company for the annual and interim periods beginning in fiscal year 2018, and the Company will not early adopt. Management has determined that the revenue streams that could be impacted by the guidance relate to non-standard transmission coverages. Certain contracts are also being reviewed individually for potential impact. The adoption method has not yet been determined.

NOTE 3. INVENTORIES

Inventories consisted of the following components (dollars in millions):

	December 31, 2016	December 31, 2015
Purchased parts and raw materials	\$ 57.0	\$ 69.5
Work in progress	4.5	5.1
Service parts	43.3	45.8
Finished goods	20.8	21.0
Total inventories	<u>\$ 125.6</u>	<u>\$ 141.4</u>

Inventory components shipped to third parties, primarily cores, parts to re-manufacturers, and parts to contract manufacturers, which the Company has an obligation to buy back, are included in purchased parts and raw materials, with an offsetting liability in Other current liabilities. See NOTE 12, "Other Current Liabilities" for more information.

NOTE 4. PROPERTY, PLANT AND EQUIPMENT

The cost and accumulated depreciation of property, plant and equipment are as follows (dollars in millions):

	December 31, 2016	December 31, 2015
Land and land improvements	\$ 25.4	\$ 25.0
Buildings and building improvements	303.4	293.8
Machinery and equipment	589.6	585.7
Software	127.6	121.3
Special tools	157.1	160.0
Construction in progress	45.6	28.8
Total property, plant and equipment	<u>1,248.7</u>	<u>1,214.6</u>
Accumulated depreciation	<u>(784.6)</u>	<u>(734.9)</u>
Property, plant and equipment, net	<u>\$ 464.1</u>	<u>\$ 479.7</u>

Depreciation of property, plant and equipment was \$83.5 million, \$88.3 million and \$93.8 million for the years ended December 31, 2016, 2015 and 2014, respectively.

During 2015 and 2014, the Company recorded an impairment of certain machinery and equipment, and special tools associated with the production of the H3000 and H4000 hybrid-propulsion systems. See NOTE 2 "Summary of Significant Accounting Policies", *Impairment of Long-Lived Assets* for more information.

NOTE 5. GOODWILL AND OTHER INTANGIBLE ASSETS

As of December 31, 2016 and 2015, the carrying amount of the Company's Goodwill was \$1,941.0 million.

The following presents a summary of other intangible assets (dollars in millions):

	December 31, 2016			December 31, 2015		
	Intangible assets, gross	Accumulated amortization	Intangible assets, net	Intangible assets, gross	Accumulated amortization	Intangible assets, net
Other intangible assets:						
Trade name	\$ 790.0	\$ —	\$ 790.0	\$ 790.0	\$ —	\$ 790.0
Customer relationships - defense	62.3	(34.7)	27.6	62.3	(31.3)	31.0
Customer relationships - commercial	831.8	(526.1)	305.7	831.8	(477.3)	354.5
Proprietary technology	476.3	(358.2)	118.1	476.3	(320.1)	156.2
Non-compete agreement	17.3	(16.3)	1.0	17.3	(14.6)	2.7
Patented technology - defense	28.2	(28.2)	—	28.2	(27.9)	0.3
Tooling rights	4.5	(4.5)	—	4.5	(4.4)	0.1
Patented technology - commercial	260.6	(260.6)	—	260.6	(260.6)	—
Total	<u>\$ 2,471.0</u>	<u>\$ (1,228.6)</u>	<u>\$1,242.4</u>	<u>\$ 2,471.0</u>	<u>\$ (1,136.2)</u>	<u>\$1,334.8</u>

Amortization of intangible assets was \$92.4 million, \$97.1 million and \$98.8 million for the years ended December 31, 2016, 2015 and 2014, respectively.

As of December 31, 2015, the Company recorded a trade name impairment charge of \$80.0 million. The impairment charge was a result of a decline in forecasted net sales for certain of the Company's end markets. The trade name impairment did not result in any other charges to goodwill, other intangible assets or long-lived assets.

As of December 31, 2016, the net carrying value of the Company's Goodwill and Other intangible assets, net was \$3,183.4 million. The Company's 2016 annual goodwill impairment test indicated that the fair value of the reporting unit exceeded its carrying value, indicating no impairment.

Amortization expense related to other intangible assets for the next five years and thereafter is expected to be (dollars in millions):

	2017	2018	2019	2020	2021	Thereafter
Amortization expense	\$89.7	\$87.2	\$85.7	\$49.9	\$44.7	\$ 95.2

NOTE 6. FAIR VALUE OF FINANCIAL INSTRUMENTS

In accordance with the FASB's authoritative accounting guidance on fair value measurements, fair value is the price (exit price) that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The Company utilizes market data or assumptions that market participants would use in pricing the asset or liability, including assumptions about risk and the risks inherent in the inputs to the valuation technique. These inputs can be readily observable, market corroborated, or generally unobservable. The Company primarily applies the market approach for recurring fair value measurements and utilizes the best available information that maximizes the use of observable inputs and minimizes the use of unobservable inputs. The Company is able to classify fair value balances based on the observability of those inputs. The accounting guidance establishes a fair value hierarchy that prioritizes the inputs used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurement) and the lowest priority to unobservable inputs (Level 3 measurement). The three levels of the fair value hierarchy defined by the relevant guidance are as follows:

Level 1 — Quoted prices are available in active markets for identical assets or liabilities as of the reporting date. Active markets are those in which transactions for the asset or liability occur in sufficient frequency and volume to provide pricing information on an ongoing basis. Level 1 primarily consists of financial instruments such as exchange-traded derivatives, listed equities and publicly traded bonds.

Level 2 — Pricing inputs are other than quoted prices in active markets included in Level 1, which are either directly or indirectly observable as of the reported date. Level 2 includes financial instruments that are valued using quoted prices in markets that are not active and those financial instruments that are valued using models or other valuation methodologies. These models are primarily industry standard models that consider various assumptions, including quoted forward prices for commodities, time value, volatility factors, and current market and contractual prices for the underlying instruments, as well as other relevant economic measures. Substantially all of these assumptions are observable in the marketplace throughout the full term of the instrument, can be derived from observable data or are supported by observable levels at which transactions are executed in the marketplace.

Level 3 — Pricing inputs include significant inputs that are generally less observable from objective sources. These inputs may be used with internally developed methodologies that result in management's best estimate of fair value. At each balance sheet date, the Company performs an analysis of all instruments subject to authoritative accounting guidance and includes, in Level 3, all of those whose fair value is based on significant unobservable inputs. As of December 31, 2016 and 2015, the Company did not have any Level 3 financial assets or liabilities.

The Company's assets and liabilities that are measured at fair value include cash and cash equivalents, available-for-sale securities, derivative instruments, assets held in a rabbi trust and a deferred compensation obligation. The Company's cash equivalents consist of short-term U.S. government backed securities. The Company's available-for-sale securities consist of ordinary shares of Torotrak plc ("Torotrak") associated with a license and exclusivity agreement with Torotrak. Torotrak's listed shares are traded on the London Stock Exchange under the ticker symbol "TRK." The Company's derivative instruments consist of interest rate swaps, foreign currency swaps and commodity swaps. The Company's assets held in the rabbi trust consist principally of publicly available mutual funds and target date retirement funds. The Company's deferred compensation obligation is directly related to the fair value of assets held in the rabbi trust.

The Company's valuation techniques used to calculate the fair value of cash and cash equivalents, available-for-sale securities, assets held in the rabbi trust and the deferred compensation obligation represent a market approach in active markets for identical assets that qualify as Level 1 in the fair value hierarchy. The Company's valuation techniques used to calculate the fair value of derivative instruments represent a market approach with observable inputs that qualify as Level 2 in the fair value hierarchy.

The commodity swaps consist of forward rate contracts which are intended to hedge exposure of transactions involving purchases of component parts and energy to power our facilities, reducing the impact of commodity price volatility on the Company's financial results.

For the fair value measurement of commodity derivatives, the Company uses forward prices received from the issuing financial institution. These rates are periodically corroborated by comparing to third-party broker quotes. The commodity derivatives are accounted for within the authoritative accounting guidance set forth on accounting for derivative instruments and hedging activities and have been recorded at fair value based upon quoted market rates. The fair values are included in Other current and non-current assets and liabilities in the Consolidated Balance Sheets. The Company has not qualified for hedge accounting treatment for these commodity swaps, and as a result, unrealized fair value adjustments and realized gains and losses are recorded in Other income (expense), net in the Consolidated Statements of Comprehensive Income.

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For the fair value measurement of interest rate derivatives, the Company uses valuations from the issuing financial institution. The Company corroborates the valuation through the use of third-party valuation services using a standard replacement valuation model. The floating-to-fixed interest rate swaps are based on the London Interbank Offered Rate (“LIBOR”) which is observable at commonly quoted intervals. The fair values are included in other current and non-current assets and liabilities in the Consolidated Balance Sheets. The Company has not qualified for hedge accounting treatment for the interest rate swaps and, as a result, fair value adjustments are charged directly to Interest expense in the Consolidated Statements of Comprehensive Income.

The following table summarizes the fair value of the Company’s financial assets and (liabilities) as of December 31 (dollars in millions):

	Fair Value Measurements Using					
	Quoted Prices in Active Markets for Identical Assets (Level 1)		Significant Other Observable Inputs (Level 2)		TOTAL	
	2016	2015	2016	2015	2016	2015
Cash equivalents	\$ 81.2	\$ 100.0	\$ —	\$ —	\$ 81.2	\$100.0
Available-for-sale securities	1.6	2.9	—	—	1.6	2.9
Rabbi trust assets	5.3	4.8	—	—	5.3	4.8
Deferred compensation obligation	(5.3)	(4.8)	—	—	(5.3)	(4.8)
Derivative assets	—	—	0.3	0.0	0.3	0.0
Derivative liabilities	—	—	(29.0)	(30.1)	(29.0)	(30.1)
Total	\$ 82.8	\$ 102.9	\$ (28.7)	\$ (30.1)	\$ 54.1	\$ 72.8

NOTE 7. DEBT

Long-term debt and maturities are as follows (dollars in millions):

	<u>December 31,</u> <u>2016</u>	<u>December 31,</u> <u>2015</u>
Long-term debt:		
Senior Secured Credit Facility Term B-3 Loan, variable, due 2022	\$ 1,187.6	\$ —
Senior Notes, fixed 5.0%, due 2024	1,000.0	—
Senior Secured Credit Facility Term B-3 Loan, variable, due 2019	—	2,402.8
Total long-term debt	<u>\$ 2,187.6</u>	<u>\$ 2,402.8</u>
Less: current maturities of long-term debt	11.9	24.5
deferred financing costs, net (see NOTE 2)	28.9	25.6
Total long-term debt, net	<u>\$ 2,146.8</u>	<u>\$ 2,352.7</u>

Principal payments required on long-term debt during the next five years are as follows:

(dollars in millions)	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>Thereafter</u>
Payments	\$11.9	\$11.9	\$11.9	\$11.9	\$11.9	\$2,128.1

As of December 31, 2016, the Company had \$2,187.6 million of indebtedness associated with Allison Transmission, Inc.'s ("ATI"), the Company's wholly-owned subsidiary, Senior Secured Credit Facility Term B-3 Loan due 2022 (previously due 2019 and as refinanced in September 2016, the "Term B-3 Loan", and together with the revolving credit facility, defined as the "Senior Secured Credit Facility"), and ATI's 5.0% Senior Notes due September 2024 ("5.0% Senior Notes").

The fair value of the Company's long-term debt obligations as of December 31, 2016 was \$2,212.4 million. The fair value is based on quoted Level 2 market prices of the Company's debt as of December 31, 2016. It is not expected that the Company would be able to repurchase a significant amount of its debt at these levels. The difference between the fair value and carrying value of the long-term debt is driven primarily by trends in the financial markets.

Senior Secured Credit Facility

In September 2016, ATI entered into an amendment with the term loan lenders under its Senior Secured Credit Facility to reduce the existing Term B-3 Loan commitments by \$1,200.0 million and the revolving credit facility commitments by \$15.0 million. The amendment also reduced the Term B-3 Loan minimum LIBOR from 1.00% to 0.75%, extended the maturity of the existing Term B-3 Loan from 2019 to September 2022, and extended the revolving credit facility termination date from 2019 to September 2021. With the exception of the items noted above, the terms of the extended Term B-3 Loan and revolving credit facility are materially the same as the terms of the prior Term B-3 Loan and revolving credit facility. As a result of the amendment to the Senior Secured Credit Facility, the Company expensed \$11.0 million of prior deferred financing fees and recorded \$7.4 million as new deferred financing fees in the Condensed Consolidated Statements of Comprehensive Income and Condensed Consolidated Balance Sheets, respectively.

The Senior Secured Credit Facility is collateralized by a lien on substantially all assets of the Company including all of ATI's capital stock and all of the capital stock or other equity interest held by the Company, ATI and each of the Company's existing and future U.S. subsidiary guarantors (subject to certain limitations for equity interests of foreign subsidiaries and other exceptions set forth in the terms of the Senior Secured Credit Facility). Interest on the Term B-3 Loan, as of December 31, 2016, is either (a) 2.50% over the LIBOR (which may not be less than 0.75%) or (b) 1.50% over the greater of the prime lending rate as quoted by the administrative agent or the federal funds effective rate published by the Federal Reserve Bank of New York plus 0.5%, provided that neither is below 1.75%. As of December 31, 2016, the Company elected to pay the lowest all-in rate of LIBOR (which may not be less than 0.75%) plus the applicable margin, or 3.26%, on the Term B-3 Loan. The Senior Secured Credit Facility requires minimum quarterly principal payments on the Term B-3 Loan as well as prepayments from certain net cash proceeds of non-ordinary course asset sales and casualty and condemnation events and from a percentage of excess cash flow, if applicable. The minimum required quarterly principal payment on the Term B-3 Loan is \$3.0 million and remains through its maturity date of September 2022. As of December 31, 2016, there had been no payments required for certain net cash proceeds of non-ordinary course asset sales and casualty and condemnation events. The remaining principal balance is due upon maturity.

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The Senior Secured Credit Facility also provides a revolving credit facility. As of December 31, 2016, the Company had \$432.2 million available under the revolving credit facility, net of \$17.8 million in letters of credit. Revolving credit borrowings bear interest at a variable base rate plus an applicable margin based on the Company's total leverage ratio. In addition, there is an annual commitment fee, based on the Company's total leverage ratio, on the average unused revolving credit borrowings available under the Senior Secured Credit Facility. Revolving credit borrowings are payable at the option of the Company throughout the term of the Senior Secured Credit Facility with the balance due in September 2021.

The revolving credit facility requires the Company to maintain a specified maximum total senior secured leverage ratio of 5.50x when revolving loan commitments remain outstanding at the end of a fiscal quarter. As of December 31, 2016, the Company had no revolving loans outstanding; however, the Company would have been in compliance with the maximum total senior secured leverage ratio, achieving a 1.53x ratio. Additionally, within the terms of the Senior Secured Credit Facility, a senior secured leverage ratio at or below 4.00x results in the elimination of excess cash flow payments on the Senior Secured Credit Facility for the applicable year. The Senior Secured Credit Facility also provides certain financial incentives based on our total leverage ratio. A total leverage ratio at or below 4.00x results in a 25 basis point reduction to the applicable margin on the revolving credit facility, and a total leverage ratio at or below 3.50x results in a 12.5 basis point reduction to the revolving credit facility commitment fee and an additional 25 basis point reduction to the applicable margin on the revolving credit facility. These reductions would remain in effect as long as the Company achieves a total leverage ratio at or below the related threshold. As of December 31, 2016, the total leverage ratio was 3.08x.

In addition, the Senior Secured Credit Facility, among other things, includes customary restrictions (subject to certain exceptions) on the Company's ability to incur certain indebtedness, grant certain liens, make certain investments, declare or pay certain dividends, or repurchase shares of the Company's common stock. As of December 31, 2016, the Company is in compliance with all covenants under the Senior Secured Credit Facility.

5.0% Senior Notes

In September 2016, ATI completed an offering of \$1,000.0 million of the 5.0% Senior Notes. The 5.0% Senior Notes were offered in a private placement exempt from registration under the Securities Act of 1933, as amended. The proceeds from the offering, together with cash on hand, were used to repay \$1,200.0 million of the Term B-3 Loan plus accrued and unpaid interest and related transaction expenses. As a result of the offering, the Company recorded approximately \$12.8 million as deferred financing fees in the Condensed Consolidated Balance Sheets.

ATI may from time to time seek to retire the 5.0% Senior Notes through cash purchases and/or exchanges for equity securities, in open market purchases, privately negotiated transactions, contractual redemptions or otherwise. Such repurchases or exchanges, if any, will depend on prevailing market conditions, liquidity requirements, contractual restrictions and other factors. The amounts involved may be material. Prior to October 1, 2019, ATI may redeem up to 40% of the 5.0% Senior Notes by paying a price equal to 100% of the principal amount being redeemed plus the applicable "make-whole" premium. At any time on or after October 1, 2019, ATI may redeem some or all of the 5.0% Senior Notes at specified redemption prices in the governing indenture.

The 5.0% Senior Notes are unsecured and are guaranteed by each of ATI's domestic subsidiaries that is a borrower under or guarantees the Senior Secured Credit Facility and are unconditionally guaranteed, jointly and severally, by any of ATI's future domestic subsidiaries that are borrowers under or guarantee the Senior Secured Credit Facility. None of ATI's domestic subsidiaries currently guarantee its obligations under the Senior Secured Credit Facility, and therefore none of the ATI's domestic subsidiaries currently guarantee the 5.0% Senior Notes. The indenture governing the 5.0% Senior Notes contains negative covenants restricting or limiting the Company's ability to, among other things: incur or guarantee additional indebtedness, incur liens, pay dividends on, redeem or repurchase the Company's capital stock, make certain investments, permit payment or dividend restrictions on certain of the Company's subsidiaries, sell assets, engage in certain transactions with affiliates, and consolidate or merge or sell all or substantially all of the Company's assets.

NOTE 8. DERIVATIVES

The Company is exposed to certain financial risk from volatility in interest rates, foreign exchange rates and commodity prices. The risk is managed through the use of financial derivative instruments including interest rate swaps, foreign currency swaps and commodity swaps. The Company's current derivative instruments are used strictly as an economic hedge and not for speculative purposes. As necessary, the Company adjusts the values of the derivative instruments for counter-party or credit risk.

Interest Rate

The Company is subject to interest rate risk related to the Senior Secured Credit Facility and enters into interest rate swap contracts that are based on the LIBOR to manage a portion of this exposure. The Company has not elected hedge accounting treatment for these derivatives, and as a result, fair value adjustments are charged directly to Interest expense in the Consolidated Statements of Comprehensive Income. A summary of the Company's interest rate derivatives as of December 31, 2016 and December 31, 2015 follows (dollars in millions):

	December 31, 2016		December 31, 2015	
	Notional Amount	Fair Value	Notional Amount	Fair Value
3.44% Interest Rate Swap L, Aug 2016 – Aug 2019*	\$ 75.0	(3.6)	\$ 75.0	(3.6)
3.43% Interest Rate Swap M, Aug 2016 – Aug 2019*	100.0	(4.7)	100.0	(4.8)
3.37% Interest Rate Swap N, Aug 2016 – Aug 2019*	75.0	(3.4)	75.0	(3.5)
3.19% Interest Rate Swap O, Aug 2016 – Aug 2019*	75.0	(3.1)	75.0	(3.1)
3.08% Interest Rate Swap P, Aug 2016 – Aug 2019*	75.0	(2.9)	75.0	(2.8)
2.99% Interest Rate Swap Q, Aug 2016 – Aug 2019*	50.0	(1.8)	50.0	(1.7)
2.98% Interest Rate Swap R, Aug 2016 – Aug 2019*	50.0	(1.8)	50.0	(1.7)
2.73% Interest Rate Swap S, Aug 2016 – Aug 2019*	50.0	(1.4)	50.0	(1.4)
2.74% Interest Rate Swap T, Aug 2016 – Aug 2019*	75.0	(2.2)	75.0	(2.1)
2.66% Interest Rate Swap U, Aug 2016 – Aug 2019*	50.0	(1.3)	50.0	(1.2)
2.60% Interest Rate Swap V, Aug 2016 – Aug 2019*	50.0	(1.3)	50.0	(1.2)
2.40% Interest Rate Swap W, Aug 2016 – Aug 2019*	25.0	(0.5)	25.0	(0.5)
2.25% Interest Rate Swap X, Aug 2016 – Aug 2019*	50.0	(0.8)	50.0	(0.8)
	<u>\$ 800.0</u>	<u>\$ (28.8)</u>	<u>\$ 800.0</u>	<u>\$ (28.4)</u>

* includes LIBOR floor of 1.00%

Commodity

The Company's business is subject to commodity price risk, primarily with component suppliers. As a result, the Company enters into various commodity swap contracts that qualify as derivatives under the authoritative accounting guidance to manage certain of these exposures. Swap contracts are used to hedge forecasted transactions either of the commodity or of components containing the commodity. The Company has not qualified for hedge accounting treatment for these commodity swaps, and as a result, unrealized fair value adjustments and realized gains and losses associated with these contracts were charged directly to Other income (expense), net in the Consolidated Statements of Comprehensive Income during the period of change.

The following table summarizes the outstanding commodity swaps as of December 31, 2016 and December 31, 2015 (dollars in millions):

	December 31, 2016			December 31, 2015		
	Notional Amount	Quantity	Fair Value	Notional Amount	Quantity	Fair Value
Aluminum	\$ 6.8	4,000 metric tons	\$ (0.0)	\$ 13.7	8,150 metric tons	\$ (1.7)
Natural Gas	\$ 0.5	170,000 MMBtu	0.1	\$ 0.2	70,000 MMBtu	0.0
			<u>\$ 0.1</u>			<u>\$ (1.7)</u>

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The following tabular disclosures further describe the Company's derivative instruments and their impact on the financial condition of the Company (dollars in millions):

	December 31, 2016		December 31, 2015	
	Balance Sheet Location	Fair Value	Balance Sheet Location	Fair Value
Derivatives not designated as hedging instruments				
	Other current and non-current assets	\$ 0.3	Other current and non-current assets	\$ —
Commodity swaps	Other current liabilities	(0.2)	Other current and non-current liabilities	(1.7)
Interest rate swaps	Other current and non-current liabilities	(28.8)	Other non-current liabilities	(28.4)
Total derivatives not designated as hedging instruments		(28.7)		(30.1)

The fair values of the derivatives are recorded between Other current and non-current assets and Other current and non-current liabilities as appropriate in the Consolidated Balance Sheets. As of December 31, 2016, the amounts recorded to Other current and non-current assets for commodity swaps were \$0.3 million and \$0.0 million, respectively. The amount recorded to Other current liabilities for commodity swaps was (\$0.2) million. The amounts recorded to Other current and non-current liabilities for interest rate swaps were (\$11.1) million and (\$17.7) million, respectively.

As of December 31, 2015, the amounts recorded to Other current and non-current liabilities for commodity swaps were (\$1.1) million and (\$0.6) million, respectively. The amounts recorded to Other current and non-current liabilities for interest rate swaps were (\$3.9) million and (\$24.5) million, respectively.

The impact on the Company's Consolidated Statements of Comprehensive Income related to foreign currency and commodity swaps can be found in NOTE 11 "Other Income (Expense), Net", and the following tabular disclosure describes the location and impact on the Company's results of operations related to unrealized (loss) gain on interest rate derivatives (dollars in millions):

	December 31, 2016	December 31, 2015	December 31, 2014
Location of impact on results of operations			
Interest expense	\$ (0.3)	\$ (14.0)	\$ 3.5

NOTE 9. PRODUCT WARRANTY LIABILITIES

As of December 31, 2016, the current and non-current product warranty liabilities were \$24.9 million and \$37.8 million, respectively. As of December 31, 2015, the current and non-current product warranty liabilities were \$24.9 million and \$53.4 million, respectively. Product warranty liability activities consist of the following (dollars in millions):

	Year ended December 31, 2016	Year ended December 31, 2015	Year ended December 31, 2014
Beginning balance	\$ 78.3	\$ 83.6	\$ 90.5
Payments	(34.9)	(32.5)	(35.0)
Increase in liability (warranty issued during period)	16.1	21.2	26.8
Net adjustments to liability	2.9	5.5	0.7
Accretion (for predecessor liabilities)	0.3	0.5	0.6
Ending balance	<u>\$ 62.7</u>	<u>\$ 78.3</u>	<u>\$ 83.6</u>

During 2016 and 2015, the Company recorded approximately \$0.6 million and \$9.2 million, respectively, of adjustments to the product warranty liabilities as a result of specific field action programs. As a result of the uncertainty surrounding the nature and frequency of specific field action programs, these liabilities will change as additional field information becomes available.

The remaining adjustments to the total liability in 2016, 2015 and 2014, excluding the Dual Power Inverter Module (“DPIM”) as discussed below, were the result of general changes in estimates for various products as additional claims data and field information became available.

Dual Power Inverter Module

During June 2007, Old GM recognized the estimated cost of replacing the DPIM used on H 40/50 EP hybrid systems. Certain units were falling short of their expected service life and the Company’s predecessor, Allison Transmission, an operating unit of General Motors Corporation, decided to cover repair or replacement for an extended period. The Company is responsible for the first \$12.0 million of qualified cost while General Motors Company (“GM”) is responsible for the next \$34.0 million of costs, with any amount over \$46.0 million being shared one-third by the Company and two-thirds by GM for shipments through June 30, 2009. As of December 31, 2016 and 2015, the Company’s remaining DPIM liability was \$6.4 million and \$10.7 million, respectively, and the related receivable owed by GM to the Company was \$2.6 million and \$7.1 million, respectively.

NOTE 10. DEFERRED REVENUE

As of December 31, 2016, the current and non-current deferred revenue were \$27.3 million and \$66.3 million, respectively. As of December 31, 2015, the current and non-current deferred revenue were \$22.9 million and \$56.4 million, respectively. Deferred revenue for ETC activity (dollars in millions):

	Year ended December 31, 2016	Year ended December 31, 2015	Year ended December 31, 2014
Beginning balance	\$ 79.3	\$ 69.0	\$ 63.6
Increases	36.5	31.9	26.2
Revenue earned	(23.2)	(21.6)	(20.8)
Ending balance	<u>\$ 92.6</u>	<u>\$ 79.3</u>	<u>\$ 69.0</u>

Deferred revenue recorded in current liabilities related to unearned net sales for defense contracts for the years ended December 31, 2016, 2015 and 2014 was approximately \$1.0 million, \$0.0 million and \$0.3 million, respectively.

Due to requests from the U.S. government, the Company billed, but did not ship certain tracked transmissions during 2013. Based on the lack of a fixed delivery date from the U.S. government, the Company deferred approximately \$8.8 million of net sales for these transmissions until they were shipped in 2014.

NOTE 11. OTHER INCOME (EXPENSE), NET

Other income (expense), net consists of the following (dollars in millions):

	Years ended December 31,		
	2016	2015	2014
Unrealized gain (loss) on derivative contracts (see NOTE 8)	\$ 1.8	\$(0.8)	\$ 1.2
Gain (loss) on foreign exchange	1.3	1.4	(1.0)
Impairment loss on investments in technology-related initiatives	(1.0)	—	(2.0)
Vendor settlement	0.8	2.9	—
Realized loss on derivative contracts (see NOTE 8)	(0.8)	(1.3)	(1.0)
Loss on intercompany foreign exchange	(0.6)	(1.7)	(5.4)
Loss on repayments and repurchases of long-term debt (see NOTE 7)	—	(0.3)	(0.5)
Grant program income	—	—	2.6
Gain on negotiation of commercial agreement	—	—	2.0
Public offering fees and expenses	—	—	(1.4)
Other	0.9	(0.5)	(0.1)
Total	<u>\$ 2.4</u>	<u>\$(0.3)</u>	<u>\$(5.6)</u>

NOTE 12. OTHER CURRENT LIABILITIES

Other current liabilities consist of the following (dollars in millions):

	As of December 31, 2016	As of December 31, 2015
Payroll and related costs	\$ 52.4	\$ 31.5
Sales allowances	24.1	24.3
Accrued interest payable	16.5	0.6
Vendor buyback obligation	13.4	12.1
Derivative liabilities	11.3	5.0
Taxes payable	9.9	12.6
Defense price reduction reserve	9.2	8.7
Environmental liabilities	0.5	0.5
Other accruals	12.9	10.8
Total	<u>\$ 150.2</u>	<u>\$ 106.1</u>

NOTE 13. EMPLOYEE BENEFIT PLANS

The Company's hourly defined benefit pension plan generally provides benefits of negotiated, stated amounts for each year of service as well as significant supplemental benefits for employees who retire with 30 years of service before normal retirement age. For all hourly employees hired after May 18, 2008, the defined benefit pension plan was replaced with a defined contribution pension plan, and the company-sponsored retiree healthcare was also eliminated for those hired after May 18, 2008. The charge to expense for the hourly defined contribution pension plan was \$1.5 million, \$1.5 million and \$1.3 million for the years ended December 31, 2016, 2015 and 2014, respectively.

The Company's salaried defined benefit plan covering salaried employees with a service date prior to January 1, 2001 is generally based on years of service and compensation history. Any difference between actual and expected returns on assets during a year and actuarial gains and losses on liabilities together with any prior service costs are charged (or credited) to income over the average remaining service lives of employees. The benefit cost components shown in the Consolidated Statements of Comprehensive Income are based upon certain data specific to the Company, actuarial assumptions that were used for OPEB accounting disclosures, and certain allocation methodologies such as population demographics.

The Company's salaried defined contribution retirement savings plan requires the Company to match employee contributions up to certain predefined limits based upon eligible base salary. In addition to the matching contribution, the Company is required to make a contribution equal to 1% of eligible base salary for salaried employees with a service date on or after January 1, 1993 to cover certain benefits in retirement that are different from salaried employees with a service date prior to January 1, 1993. In addition, for salaried employees with a service date on or after January 1, 2001, the Company is required to contribute to its defined contribution retirement savings plan an amount equal to 4% of eligible base salary under the program. The charge to expense for the salaried defined contribution retirement savings plan was \$6.0 million, \$5.7 million and \$5.4 million for the years ended December 31, 2016, 2015 and 2014, respectively.

The Company is also responsible for OPEB costs (medical, dental, vision, and life insurance) for hourly employees hired prior to May 19, 2008. Post-retirement benefit costs consist of service cost and interest cost on accrued obligations. Actuarial gains and losses on liabilities and any prior service costs are charged (or credited) to income over the average remaining service lives of employees. The benefit cost components shown in the Consolidated Statements of Comprehensive Income are based upon certain data specific to the Company, actuarial assumptions that were used for OPEB accounting disclosures, and certain allocation methodologies such as population demographics. The plan is unfunded and any future payments will be funded by the Company's operating cash flows. As of December 31, 2016 and 2015, the Company had an estimated OPEB liability for hourly employees hired prior to May 19, 2008, excluding those employees eligible to retire at the time of the sale of the Company ("Acquisition Transaction"), of \$143.9 million and \$147.3 million, respectively.

As part of the Health Care Reform Act enacted in 2010, the Company has evaluated the impact on "High-cost Health Plans" in which employers offering health plan coverage exceeding certain thresholds must pay an excise tax equal to 40% of the value of the plan that exceeds the threshold amount. As a result of the excise tax, the Company has recorded \$2.0 million in its OPEB liability as of December 31, 2016 with a corresponding adjustment to AOCL, net of tax. This includes an adjustment for the delay in the start date from 2018 to 2020 as a result of the Bipartisan Budget Act of 2015.

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The Company provides contributions to certain international benefit plans; however, these contributions are not material for periods presented.

For all pension and OPEB plans in which employees participate, costs are determined within the FASB's authoritative accounting guidance set forth on employers' defined benefit pensions including accounting for settlements and curtailments of defined benefit pension plans, termination of benefits and accounting for post-retirement benefits other than pensions. In accordance with the authoritative accounting guidance, the Company recognizes the funded status of its defined benefit pension plans and OPEB plan in its Consolidated Balance Sheets with a corresponding adjustment to AOCL, net of tax.

Information about the net periodic benefit cost and other changes recognized in AOCL for the pension and post-retirement benefit plans is as follows (dollars in millions):

	Pension Plans			Post-retirement Benefits		
	Year ended December 31, 2016	Year ended December 31, 2015	Year ended December 31, 2014	Year ended December 31, 2016	Year ended December 31, 2015	Year ended December 31, 2014
Net Periodic Benefit Cost:						
Service cost	\$ 12.4	\$ 14.4	\$ 13.2	\$ 2.1	\$ 2.2	\$ 2.2
Interest cost	6.1	5.2	5.0	6.7	5.4	5.9
Expected return on assets	(6.7)	(8.5)	(7.7)	—	—	—
Prior service cost (credit)	0.2	0.1	0.1	(3.6)	(3.6)	(3.6)
Gain	(0.3)	(0.1)	—	—	—	(0.7)
Net Periodic Benefit Cost	\$ 11.7	\$ 11.1	\$ 10.6	\$ 5.2	\$ 4.0	\$ 3.8
Other changes recognized in other comprehensive income:						
Prior service (credit) cost	\$ (5.0)	\$ 0.2	\$ —	\$ —	\$ —	\$ —
Net loss (gain)	7.9	(4.4)	2.1	(10.9)	4.4	7.8
Amortizations	0.1	(0.0)	(0.1)	3.6	3.6	4.3
Total recognized – other comprehensive income	\$ 3.0	\$ (4.2)	\$ 2.0	\$ (7.3)	\$ 8.0	\$ 12.1

The table below provides the weighted-average actuarial assumptions used to determine the net periodic benefit cost.

	Pension Plans			Post-retirement Benefits		
	Year ended December 31, 2016	Year ended December 31, 2015	Year ended December 31, 2014	Year ended December 31, 2016	Year ended December 31, 2015	Year ended December 31, 2014
Discount rate	4.40%	3.90%	4.80%	4.60%	4.00%	4.90%
Rate of compensation increase (salaried)	3.00%	3.00%	3.00%	N/A	N/A	N/A
Expected return on assets	4.70%	6.25%	6.80%	N/A	N/A	N/A

The table below provides the weighted-average actuarial assumptions used to determine the benefit obligations of the Company's plans.

	Pension Plans		Post-retirement Benefits	
	As of December 31,			
	2016	2015	2016	2015
Discount rate	4.10%	4.40%	4.30%	4.60%
Rate of compensation increase (salaried)	3.00%	3.00%	N/A	N/A

The Company's pension and OPEB costs are calculated using various actuarial assumptions and methodologies as prescribed by authoritative accounting guidance. These assumptions include discount rates, expected return on plan assets, health care cost trend rates, inflation, rate of compensation increases, mortality rates and other factors. The Company reviews all actuarial assumptions on an annual basis.

The discount rate is used to determine the present value of the Company's benefit obligations. The Company's discount rate is determined by matching the plans' projected cash flows to a yield curve based on long-term, fixed income debt instruments available as of the measurement date of December 31, 2016.

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The overall expected rate of return on plan assets is based upon historical and expected future returns consistent with the expected benefit duration of the plan for each asset group adjusted for investment and administrative fees.

Health care cost trends are used to project future post-retirement benefits payable from the Company's plans. For the Company's December 31, 2016 obligations, future post-retirement medical care costs were forecasted assuming an initial annual increase of 5.20%, decreasing to 4.50% by the year 2036. Future post-retirement prescription drug costs were forecasted assuming an initial annual increase of 4.80%, decreasing to 4.50% by the year 2036.

As health care costs trends have a significant effect on the amounts reported, an increase and decrease of one-percentage-point would have the following effects in the year ended December 31, 2016 (dollars in millions):

	1% Increase	1% Decrease
Effect on total of service and interest cost	\$ 2.0	\$ (1.6)
Effect on post-retirement benefit obligation	\$ 32.7	\$ (23.3)

The following table provides a reconciliation of the changes in the net benefit obligations and fair value of plan assets for the years ended December 31, 2016, 2015 and 2014 (dollars in millions):

	Pension Plans			Post-retirement Benefits		
	Year ended December 31, 2016	Year ended December 31, 2015	Year ended December 31, 2014	Year ended December 31, 2016	Year ended December 31, 2015	Year ended December 31, 2014
Benefit Obligations:						
Net benefit obligation at beginning of year	\$ 140.4	\$ 133.5	\$ 105.9	\$ 147.3	\$ 136.0	\$ 120.7
Service cost	12.4	14.4	13.2	2.1	2.2	2.2
Interest cost	6.1	5.2	5.0	6.8	5.4	5.9
Plan Amendments	(5.0)	0.2	—	—	—	—
Benefits paid	(6.6)	(2.0)	(1.5)	(1.4)	(0.7)	(0.6)
Actuarial (gain) loss	7.5	(10.9)	10.9	(10.9)	4.4	7.8
Net benefit obligation at end of year	<u>\$ 154.8</u>	<u>\$ 140.4</u>	<u>\$ 133.5</u>	<u>\$ 143.9</u>	<u>\$ 147.3</u>	<u>\$ 136.0</u>
Fair Value of Plan Assets:						
Fair value of plan assets at beginning of year	\$ 140.1	\$ 135.3	\$ 108.6	\$ —	\$ —	\$ —
Actual return on plan assets	6.3	2.0	16.4	—	—	—
Employer contributions	10.5	4.8	11.8	1.4	0.7	0.6
Benefits paid	(6.6)	(2.0)	(1.5)	(1.4)	(0.7)	(0.6)
Fair value of plan assets at end of year	<u>\$ 150.3</u>	<u>\$ 140.1</u>	<u>\$ 135.3</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>
Net Funded Status	<u>\$ (4.5)</u>	<u>\$ (0.3)</u>	<u>\$ 1.8</u>	<u>\$ (143.9)</u>	<u>\$ (147.3)</u>	<u>\$ (136.0)</u>

The Company's pension plan assets mostly consist of diversified equity securities and diversified debt securities. The fair values of plan assets for the Company's pension plans as of December 31, 2016 and 2015 are as follows (dollars in millions):

	Fair Value Measurements Using					
	Quoted Prices in Active Markets for Identical Assets (Level 1)		Significant Other Observable Inputs (Level 2)		TOTAL	
	2016	2015	2016	2015	2016	2015
Cash equivalents	\$ 4.0	\$ 3.0	\$ —	\$ —	\$ 4.0	\$ 3.0
Diversified equity securities	22.2	21.1	—	—	22.2	21.1
Diversified debt securities	12.1	21.9	112.0	94.1	124.1	116.0
Total	<u>\$ 38.3</u>	<u>\$ 46.0</u>	<u>\$ 112.0</u>	<u>\$ 94.1</u>	<u>\$150.3</u>	<u>\$140.1</u>

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The Company's investment strategy with respect to pension plan assets is to invest the assets in accordance with laws and regulations. The long-term primary objectives for the Company's pension assets are to provide results that meet or exceed the plans' actuarially assumed long-term rate of return without subjecting the funds to undue risk. To achieve these objectives the Company has established the following targets:

Asset Category	Target	
	Hourly	Salary
Cash equivalents	2%	2%
Diversified equity securities	15	15
Diversified debt securities	83	83
Total	<u>100%</u>	<u>100%</u>

Through 2016, the Company's investment committee has continued to evaluate the investments and take steps toward the established targets.

The following table discloses the amounts recognized in the balance sheet and in AOCL at December 31, 2016 and 2015, on a pre-tax basis (dollars in millions):

	Pension Plans		Post-retirement Benefits	
	As of December 31,			
	2016	2015	2016	2015
Amounts Recognized in Balance Sheet:				
Noncurrent assets	\$ —	\$ 6.6	\$ —	\$ —
Current liabilities	—	—	(2.0)	(1.6)
Noncurrent liabilities	(4.5)	(6.9)	(141.9)	(145.7)
Total (liability) asset	<u>\$(4.5)</u>	<u>\$(0.3)</u>	<u>\$ (143.9)</u>	<u>\$ (147.3)</u>
Accumulated Other Comprehensive Loss:				
Prior service credit (cost)	\$ 4.8	\$(0.3)	\$ 14.5	\$ 18.1
Actuarial (loss) gain	(3.2)	5.0	15.1	4.2
Total	<u>\$ 1.6</u>	<u>\$ 4.7</u>	<u>\$ 29.6</u>	<u>\$ 22.3</u>

The amounts in AOCL expected to be amortized and recognized as a component of net periodic benefit cost in 2017 are as follows (dollars in millions):

	2017	
	Pension Plans	Post-retirement Benefits
Prior service credit	\$ 0.4	\$ 3.6
Actuarial (loss) gain	(0.1)	0.1
Total	<u>\$ 0.3</u>	<u>\$ 3.7</u>

The accumulated benefit obligation for the Company's pension plans as of December 31, 2016 and 2015 was \$151.3 million and \$136.6 million, respectively.

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As of December 31, 2016 and 2015, the projected benefit obligation, the accumulated benefit obligation, and the fair value of plan assets for pension plans with a projected benefit obligation in excess of plan assets and for pension plans with an accumulated benefit obligation in excess of plan assets were as follows (dollars in millions):

	Hourly Plan		Salary Plan	
	As of December 31,			
	2016	2015	2016	2015
Plans with projected benefit obligation in excess of plan assets:				
Projected benefit obligation	\$76.4	N/A ¹	\$78.4	\$74.6
Fair value of plan assets	\$75.0	N/A ¹	\$75.3	\$67.7
Plans with accumulated benefit obligation in excess of plan assets:				
Accumulated benefit obligation	\$76.4	N/A ¹	N/A ₁	\$70.8
Fair value of plan assets	\$75.0	N/A ¹	N/A ₁	\$67.7

¹ As of December 31, 2016, the salary defined benefit pension plan had plan assets greater than the accumulated benefit obligation. As of December 31, 2015, the hourly defined benefit pension plan had plan assets greater than both the projected benefit obligation and accumulated benefit obligation.

Information about expected cash flows for the Company's pension and post-retirement benefit plans is as follows (dollars in millions):

	Pension Plans	Post-retirement Benefits
Employer Contributions:		
2017 expected contributions	\$ 7.6	\$ 2.1
Expected Benefit Payments:		
2017	7.2	2.1
2018	8.2	2.8
2019	9.3	3.5
2020	10.3	4.2
2021	11.3	4.9
2022-2026	64.0	31.5

Expected benefit payments for pension and post-retirement benefits will be paid from plan trusts or corporate assets. The Company's funding policy is to contribute amounts annually that are at least equal to the amounts required by applicable laws and regulations or to directly fund payments to plan participants. Additional discretionary contributions will be made when deemed appropriate to meet the Company's long-term obligation to the plans.

In June 2012, the Company established a non-qualified deferred compensation plan ("Deferred Compensation Plan") for a select group of management. Under the terms of the plan, the Company has utilized a rabbi trust to accumulate assets to fund its promise to pay benefits under the Deferred Compensation Plan. The rabbi trust is an irrevocable trust, which restricts any use of funds (operational or otherwise) by the Company other than to pay benefits under the Deferred Compensation Plan, and prevents immediate taxation of contributed amounts. Funds are accumulated through both employee deferrals and a company match. Funds can be invested by the employee into a diversified group of investment options, which have been selected by the Company's investment committee, that are all categorized as Level 1 in the fair value hierarchy. The company match resulted in a charge of \$0.3 million, \$0.2 million, and \$0.2 million to the Consolidated Statements of Comprehensive Income for the years ended December 31, 2016, 2015 and 2014, respectively, and the fair value of the rabbi trust plan assets and deferred compensation obligation was \$5.3 million and \$4.8 million as of December 31, 2016 and 2015, respectively.

NOTE 14. STOCK-BASED COMPENSATION

In March 2015, the Company's Board of Directors adopted and, in May 2015, the Company's stockholders approved the Allison Transmission Holdings, Inc. 2015 Equity Incentive Award Plan ("2015 Plan"), which became effective on May 14, 2015. Under the 2015 Plan, certain employees (including executive officers), consultants and directors are eligible to receive equity-based compensation, including non-qualified stock options, incentive stock options, restricted stock, dividend equivalents, stock payments, restricted stock units ("RSU"), performance awards, stock appreciation rights and other equity-based awards, or any combination thereof. The 2015 Plan limits the aggregate number of shares of common stock available for issue to 15.3 million and will expire on, and no option or other equity award may be granted pursuant to the 2015 Plan after, the tenth anniversary of the date the 2015 Plan was approved by the Board of Directors.

Prior to the adoption of the 2015 Plan, the Company's equity-based awards were granted under the Allison Transmission Holdings, Inc. 2011 Equity Incentive Award Plan ("2011 Plan") and the Equity Incentive Plan of Allison Transmission Holdings, Inc. ("Equity Plan" and, together with the 2011 Plan, the "Prior Plans"). As of the effective date of the 2015 Plan, no new awards will be granted under the Prior Plans, but the Prior Plans will continue to govern the equity awards issued under the Prior Plans.

Restricted Stock Units

RSUs were issued to certain employees in 2016 under the 2015 Plan and in 2015 and 2014 under the 2011 Plan, and to certain directors in 2016 and 2015 under the 2015 Plan and in 2014 under the 2011 Plan, at fair market value at the date of grant. These awards entitle the holder to receive one common share for each RSU upon vesting, which generally occurs over one to three years upon continued performance of services by the RSU holders. A summary of RSU activity as of December 31, 2016, 2015 and 2014, and changes during the period then ended is presented below:

Non-vested RSUs:	RSUs (in millions)	Weighted-Average Grant-Date Fair Value
Non-vested as of December 31, 2013	0.8	\$ 20.90
Granted	0.0	29.85
Vested	(0.6)	20.32
Non-vested as of December 31, 2014	0.2	\$ 26.57
Granted	0.1	31.96
Vested	(0.1)	23.95
Non-vested as of December 31, 2015	0.2	\$ 30.61
Granted	0.2	24.93
Vested	(0.1)	30.22
Non-vested as of December 31, 2016	0.3	\$ 26.62

As of December 31, 2016 and 2015, there were \$3.1 million and \$2.8 million, respectively, of unrecognized compensation cost related to non-vested RSUs granted under the 2015 Plan and 2011 Plan. This cost is expected to be recognized, on a straight line basis, over a period of approximately two years. RSU incentive compensation expense recorded was \$3.5 million, \$3.0 million and \$9.8 million for the years ended December 31, 2016, 2015 and 2014, respectively. The total fair value of RSUs vested during the years ended December 31, 2016, 2015 and 2014 was approximately \$2.7 million, \$3.8 million and \$20.2 million, respectively.

Pursuant to the share withholding provisions of the 2015 Plan and 2011 Plan and the related RSU award agreement, certain employees, in lieu of paying withholding taxes on the vesting of RSUs, authorized the withholding of an aggregate of approximately 0.1 million, 0.1 million and 0.3 million shares of the Company's common stock to satisfy their minimum statutory tax withholding requirements related to such vesting events during 2016, 2015 and 2014, respectively. The withheld shares were recorded as a reduction to equity on the applicable vesting dates of approximately \$0.8 million, \$1.4 million and \$8.4 million during 2016, 2015 and 2014, respectively.

Restricted Stock Awards

Restricted stock was granted to certain employees in 2015 and 2014 under the 2011 Plan at fair market value on the date of grant. The restrictions lapse upon continued performance by the restricted stock holders on the vest date which generally occurs over one, two or three years. A summary of restricted stock activity as of December 31, 2016, 2015, and 2014, and changes during the period then ended is presented below:

Non-vested Shares:	Restricted Stock (in millions)	Weighted-Average Grant-Date Fair Value
Non-vested as of December 31, 2013	—	\$ —
Granted	0.2	29.47
Vested	—	—
Non-vested as of December 31, 2014	0.2	\$ 29.47
Granted	0.0	32.05
Vested	(0.0)	29.08
Non-vested as of December 31, 2015	0.2	\$ 30.27
Granted	—	—
Vested	(0.1)	29.79
Non-vested as of December 31, 2016	0.1	\$ 30.73

As of December 31, 2016 and 2015, there was \$0.6 million and \$2.8 million, respectively, of unrecognized compensation cost related to non-vested restricted stock awards granted under the 2011 Plan. This cost is expected to be recognized, on a straight line basis, over a period of approximately two years. Restricted stock incentive compensation expense recorded was \$2.2 million, \$2.2 million, and \$1.6 million for the years ended December 31, 2016, 2015, and 2014, respectively. The total fair value of restricted stock awards vested for the years ended December 2016, 2015, and 2014 was \$2.6 million, \$1.3 million, and \$0.0 million, respectively

Pursuant to the share withholding provisions of the 2011 Plan and the related restricted stock award agreement, certain employees, in lieu of paying withholding taxes on the vesting of restricted stock, authorized the withholding of the Company's common stock to satisfy their minimum statutory tax withholding requirements related to such vesting events during 2016. The withheld shares were recorded as a reduction to equity on the applicable vesting dates of approximately \$0.9 million during 2016.

Performance Awards

Performance awards were granted to certain employees in 2016 under the 2015 Plan and in 2015 under the 2011 Plan. In accordance with the FASB's authoritative accounting guidance on stock compensation, each performance award granted is to be recorded at fair value. The Company records the fair value of each performance award based on a Monte-Carlo pricing model using the assumptions noted in the following table:

	2016	2015
Expected volatility	18%-38%	18%-34%
Expected term (in years)	2.9	2.9
Risk-free rate	0.9%	1.0%

The restrictions lapse on the date the Compensation Committee of the Board of Directors determines the number of shares that shall vest based on the total stockholder return of the Company relative to the specified peer group. A summary of performance award activity as of December 31, 2016, and changes during the period ended December 31, 2016 and 2015 is presented below:

Non-vested Shares:	Performance award (in millions)	Weighted-Average Grant-Date Fair Value
Non-vested as of December 31, 2014	—	\$ —
Granted	0.1	\$ 36.53
Vested	—	\$ —
Non-vested as of December 31, 2015	0.1	\$ 36.53
Granted	0.0	\$ 25.73
Vested	—	\$ —
Non-vested as of December 31, 2016	0.1	\$ 30.01

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As of December 31, 2016 and 2015, there was \$2.2 million and \$1.7 million, respectively, of unrecognized compensation cost related to non-vested performance awards granted under the 2015 Plan and the 2011 Plan. This cost is expected to be recognized, on a straight line basis, over a period of approximately three years. Performance award incentive compensation expense recorded was \$1.2 million and \$0.7 million for the years ended December 31, 2016 and 2015, respectively.

Stock Options

Stock options granted under the Equity Plan after the completion of the Acquisition Transaction and through March 2012, have a per share exercise price based on the fair market value of the Company at the date of grant. Stock options granted under the 2015 Plan and 2011 Plan have a per share exercise price based on the closing price of a share of the Company's common stock as reported by the NYSE on the date of grant. All stock options expire 10 years after the grant date. The options vest upon the continued performance of services by the option holder over time, with either 20% or 33% of the award vesting on each anniversary of the grant date over three to five years for awards under the Equity Plan, 100% of the award vesting in December of the year that is two years after the year of grant or the third anniversary of the grant date under the 2011 Plan and 100% of the award vesting on the third anniversary of the grant date for awards under the 2015 Plan. Upon termination of employment for reasons other than cause, retirement before the age of 65 with less than 90 points (calculated as age plus years of service), death or disability, the options shall cease to be exercisable ninety days following the date of the optionees' termination of service. Upon termination of employment for cause, the options shall not be exercisable on the date of such termination. Upon termination of employment for retirement at or after the age of 65, the options shall cease to be exercisable three years following such date. Upon termination of employment for retirement before the age of 65 with 90 or more points, the options shall cease to be exercisable two years following such date. Upon termination of employment for death or disability, the options shall cease to be exercisable twelve months following such date.

In accordance with the FASB's authoritative accounting guidance on stock compensation, each option grant is to be recorded at fair value. When options are granted, the Company uses a Black-Scholes option pricing model to calculate the fair value of each option award using the assumptions noted in the following table:

	2016	2015	2014
Expected volatility	29%	31%	38%
Expected dividend yield	2.5%	1.9%	1.6%
Expected term (in years)	6.0	6.0	5.5
Risk-free rate	1.6%	1.5%	1.7%

Expected volatility is based on "the average volatilities of otherwise similar public entities" as defined by authoritative accounting guidance. The Company currently pays a \$0.15 dividend per quarter. The expected term is derived from the average of the weighted vesting life and the contractual term. The risk-free rate for periods within the contractual life of the option is based on the U.S. Treasury yield curve in effect at the time of grant.

A summary of option activity as of December 31, 2016, 2015 and 2014, and changes during the period then ended is presented below:

	Options (in millions)	Weighted- Average Exercise Price	Weighted-Average Remaining Contractual Term
Outstanding as of December 31, 2013	8.7	\$ 15.33	4.30 years
Exercisable as of December 31, 2013	8.1	\$ 14.79	3.94 years
Granted	0.4	\$ 30.23	
Exercised	(4.2)	—	
Outstanding as of December 31, 2014	4.9	\$ 17.49	4.19 years
Exercisable as of December 31, 2014	3.9	\$ 15.32	3.08 years
Granted	0.2	\$ 32.13	
Exercised	(1.5)	—	
Outstanding as of December 31, 2015	3.6	\$ 19.47	4.12 years
Exercisable as of December 31, 2015	3.0	\$ 16.87	3.12 years
Granted	0.3	\$ 23.59	
Exercised	(1.4)	—	
Outstanding as of December 31, 2016	2.5	\$ 21.57	4.73 years
Exercisable as of December 31, 2016	2.0	\$ 20.11	3.71 years

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The total fair value of stock options vested during the years ended December 31, 2016, 2015 and 2014 was \$4.8 million, \$5.9 million and \$0.0 million, respectively. The total intrinsic value of stock options exercised during the years ended December 31, 2016, 2015 and 2014 was \$20.2 million, \$25.8 million and \$82.3 million, respectively. The aggregate intrinsic value of stock options outstanding and exercisable was \$30.3 million and \$27.2 million as of December 31, 2016, and \$23.1 million and \$27.1 million as of December 31, 2015, respectively.

A summary of the status of the Company's non-vested stock options as of December 31, 2016, 2015 and 2014, and changes during the period ended December 31, 2016, 2015 and 2014 is presented below:

<u>Non-vested Stock Options:</u>	<u>Options (in millions)</u>	<u>Weighted-Average Grant-Date Fair Value</u>
Non-vested at December 31, 2013	0.6	\$ 9.06
Granted	0.4	9.51
Vested	—	—
Non-vested at December 31, 2014	1.0	\$ 9.44
Granted	0.2	8.39
Vested	(0.6)	9.76
Non-vested at December 31, 2015	0.6	\$ 9.12
Granted	0.3	5.28
Vested	(0.4)	9.52
Non-vested at December 31, 2016	0.5	\$ 6.59

As of December 31, 2016 and 2015, there was \$1.7 million and \$2.9 million, respectively, of unrecognized compensation cost related to non-vested stock option compensation arrangements granted under the 2015 Plan and the 2011 Plan. This cost is expected to be recognized, on a straight line basis, over a period of approximately two to three years. Stock option incentive compensation expense recorded was \$2.5 million, \$3.9 million and \$3.3 million for the years ended December 31, 2016, 2015 and 2014, respectively.

NOTE 15. INCOME TAXES

Income before income taxes included the following (dollars in millions):

	Years ended December 31,		
	2016	2015	2014
U.S. income	\$309.4	\$260.5	\$355.1
Foreign income	31.9	28.3	13.0
Total	<u>\$341.3</u>	<u>\$288.8</u>	<u>\$368.1</u>

The provision for income tax expense was estimated as follows (dollars in millions):

	Years ended December 31,		
	2016	2015	2014
Estimated current income taxes:			
U.S. federal	\$ 1.8	\$ 3.0	\$ 1.6
Foreign	8.6	5.4	6.3
U.S. state and local	1.8	2.1	(0.2)
Total Current	<u>12.2</u>	<u>10.5</u>	<u>7.7</u>
Deferred income tax expense (credit), net:			
U.S. federal	106.6	89.7	125.6
Foreign	0.3	(0.1)	(0.3)
U.S. state and local	7.3	6.4	6.5
Total Deferred	<u>114.2</u>	<u>96.0</u>	<u>131.8</u>
Total income tax expense	<u>\$126.4</u>	<u>\$106.5</u>	<u>\$139.5</u>

A reconciliation of the provision for income tax expense compared with the amounts at the U.S. federal statutory rate is as follows (dollars in millions):

	Years ended December 31,		
	2016	2015	2014
Tax at U.S. statutory income tax rate	\$119.5	\$101.1	\$128.9
Foreign rate differential	(4.9)	(3.0)	(2.3)
Non-deductible expenses	4.6	3.9	3.9
Valuation allowance	1.2	(0.8)	2.6
State tax expense	6.0	5.4	4.0
Adjustment to deferred tax expense	—	1.2	2.4
Other adjustments	(0.0)	(1.3)	(0.0)
Total income tax expense	<u>\$126.4</u>	<u>\$106.5</u>	<u>\$139.5</u>

Deferred income tax assets and liabilities for 2016 and 2015 reflect the effect of temporary differences between amounts of assets, liabilities, and equity for financial reporting purposes and the bases of such assets, liabilities, and equity as measured by tax laws, as well as tax loss and tax credit carry forwards.

The Company has not recognized any deferred tax liabilities associated with earnings in foreign subsidiaries as they are intended to be permanently reinvested and used to support foreign operations. As of December 31, 2016, the Company estimates it had approximately \$53.0 million of undistributed earnings in foreign subsidiaries permanently reinvested outside the United States. The amount of the unrecorded deferred income tax liability on the remittance of such undistributed earnings in foreign subsidiaries is not practicable to determine due to the complexities in tax laws and assumptions necessary to compute the tax.

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Temporary differences and carryforwards that gave rise to deferred tax assets and liabilities included the following (dollars in millions):

	As of December 31, 2016	As of December 31, 2015
Deferred tax assets:		
Inventories	\$ 5.7	\$ 5.4
Warranty accrual	22.2	26.3
Sales allowances and rebates	6.5	6.8
Deferred revenue	34.6	29.4
Post-retirement	11.6	11.2
Intangibles	64.3	71.8
Other accrued liabilities	33.9	24.1
Unrealized loss on interest rate derivatives	11.1	13.4
Operating loss carryforwards	13.6	48.6
Tax credits	7.7	6.2
Environmental remediation	5.0	5.2
Stock based compensation	7.8	7.4
Technology-related investments	9.4	10.2
Other	9.1	13.8
Total Deferred tax assets	242.5	279.8
Valuation allowances	(5.3)	(4.2)
Deferred tax liabilities:		
Property, plant and equipment	(14.6)	(19.0)
Goodwill	(408.7)	(365.0)
Trade name	(121.6)	(91.3)
Other	(2.2)	(3.0)
Total Deferred tax liabilities	(547.1)	(478.3)
Net Deferred tax liability	\$ (309.9)	\$ (202.7)

The estimated net operating loss carryforwards as of December 31, 2016 relate solely to U.S. state net operating loss carryforwards. Substantially all State operating loss carryforwards will not expire until 2027-2032.

Management has determined, based on an evaluation of available objective and subjective evidence, that it is more likely than not that certain foreign deferred tax assets will not be realized and therefore continue to offset these deferred tax assets with a valuation allowance of \$5.3 million and \$4.2 million as of December 31, 2016 and 2015, respectively.

In accordance with the FASB's authoritative accounting guidance on accounting for income taxes, the Company records uncertain tax positions on the basis of a two-step process whereby (1) it is determined whether it is more likely than not that the tax position will be sustained based on the technical merits of the position and (2) for those tax positions that meet the more-likely-than-not recognition threshold, we recognize the largest amount of tax benefit that is greater than 50 percent likely to be realized upon ultimate settlement with the related tax authority. Based upon this process, the Company has recognized a liability for uncertain tax benefits at December 31, 2016, and 2015. Management does not anticipate any significant changes in the balance within the coming year. The change in the liability for unrecognized tax benefits are as follows (dollars in millions):

December 31, 2014	\$ 2.5
Increases in unrecognized tax benefits as a result of current year activity	—
December 31, 2015	\$ 2.5
Increases in unrecognized tax benefits as a result of current year activity	—
December 31, 2016	<u>\$ 2.5</u>

For the years ended December 31, 2016, 2015 and 2014, the Company recognized no interest and penalties in the Consolidated Statements of Comprehensive Income because either no uncertain tax positions were identified or no penalties and interest are anticipated because of the net operating loss offset. The Company follows a policy of recording any interest or penalties in Income tax expense.

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Management does not anticipate any significant changes in unrecognized tax benefits within the coming year. As of December 31, 2016 and 2015, there were \$2.5 million and \$2.5 million, respectively, of unrecognized tax benefits that, if recognized, would affect the annual effective tax rate. All of the Company's returns (when filed) will remain subject to examination by the various taxing authorities for the duration of the applicable statute of limitations (generally three years from the earlier of the date of filing or the due date of the return).

NOTE 16. ACCUMULATED OTHER COMPREHENSIVE LOSS

The changes in components of accumulated other comprehensive loss consisted of the following (dollars in millions):

	<u>Before Tax</u>	<u>Tax (Expense) Benefit</u>	<u>After Tax</u>
Balance at December 31, 2013	\$ 30.3	\$ (51.3)	\$ (21.0)
Foreign currency translation	(7.4)	—	(7.4)
Pension and OPEB liability adjustment	(14.6)	5.5	(9.1)
Available-for-sale securities	(3.2)	1.2	(2.0)
Net current period other comprehensive loss	\$ (25.2)	\$ 6.7	\$ (18.5)
Balance at December 31, 2014	\$ 5.1	\$ (44.6)	\$ (39.5)
Foreign currency translation	(11.5)	—	(11.5)
Pension and OPEB liability adjustment	(3.4)	0.4	(3.0)
Available-for-sale securities	(7.6)	2.8	(4.8)
Net current period other comprehensive loss	\$ (22.5)	\$ 3.2	\$ (19.3)
Balance at December 31, 2015	\$ (17.4)	\$ (41.4)	\$ (58.8)
Foreign currency translation	(5.8)	—	(5.8)
Pension and OPEB liability adjustment	4.1	(1.6)	2.5
Available-for-sale securities	(1.3)	0.5	(0.8)
Net current period other comprehensive loss	\$ (3.0)	\$ (1.1)	\$ (4.1)
Balance at December 31, 2016	\$ (20.4)	\$ (42.5)	\$ (62.9)

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The following table shows the location in the Consolidated Statements of Comprehensive Income affected by reclassifications from AOCL (dollars in millions):

	<u>For the year ended December 31, 2014</u>	
AOCL Components	<u>Amount reclassified from AOCL</u>	<u>Affected line item in the consolidated statements of comprehensive income</u>
Amortization of defined benefit pension items:		
Prior service credit	\$ 3.2	Cost of sales
	0.2	Selling, general and administrative
	0.1	Engineering – research and development
Actuarial gain	<u>0.1</u>	Cost of sales
Total reclassifications, before tax	3.6	Income before income taxes
Income tax expense	<u>(1.3)</u>	Tax expense
Total reclassifications	<u>\$ 2.3</u>	Net of tax
	<u>For the year ended December 31, 2015</u>	
AOCL Components	<u>Amount reclassified from AOCL</u>	<u>Affected line item in the consolidated statements of comprehensive income</u>
Amortization of defined benefit pension items:		
Prior service credit	\$ 3.2	Cost of sales
	0.2	Selling, general and administrative
	0.1	Engineering – research and development
Actuarial gain	<u>0.1</u>	Cost of sales
	0.0	Selling, general and administrative
	<u>0.0</u>	Engineering – research and development
Total reclassifications, before tax	3.6	Income before income taxes
Income tax expense	<u>(1.3)</u>	Tax expense
Total reclassifications	<u>\$ 2.3</u>	Net of tax
	<u>For the year ended December 31, 2016</u>	
AOCL Components	<u>Amount reclassified from AOCL</u>	<u>Affected line item in the consolidated statements of comprehensive income</u>
Amortization of defined benefit pension items:		
Prior service credit	\$ 3.1	Cost of sales
	0.2	Selling, general and administrative
	0.0	Engineering – research and development
Actuarial gain	<u>0.3</u>	Cost of sales
Total reclassifications, before tax	3.6	Income before income taxes
Income tax expense	<u>(1.3)</u>	Tax expense
Total reclassifications	<u>\$ 2.3</u>	Net of tax

Prior service cost and actuarial loss are included in the computation of the Company’s net periodic benefit cost. Please see NOTE 13 “Employee Benefit Plans” for additional details.

NOTE 17. COMMITMENTS AND CONTINGENCIES***Operating Leases***

The Company leases certain facilities under various operating leases. Rent expense under the non-cancelable operating leases was \$5.1 million, \$5.1 million, and \$5.4 million for the years ended December 31, 2016, 2015 and 2014, respectively. Certain leases contain renewal options.

As of December 31, 2016, future payments under non-cancelable operating leases are as follows over each of the next five years and thereafter (dollars in millions):

2017	\$ 4.2
2018	2.9
2019	1.7
2020	1.4
2021	0.9
Thereafter	1.4
Total	<u>\$12.5</u>

Environmental Matters

Under the asset purchase agreement with Old GM, Old GM agreed to indemnify the Company against certain environmental liabilities, including pre-acquisition offsite waste disposal from the Company's facilities, former facilities associated with the business and any properties or facilities relating to the business that Old GM retained. While the Company is responsible for environmental liabilities that arise due to post-acquisition activities, GM, as successor to Old GM's obligations, performed remedial activities at the Company's Indianapolis, Indiana manufacturing facilities relating to historical soil and groundwater contamination at the facilities. GM's activities are referred to as the "Corrective Action" plan, pursuant to the asset purchase agreement, whereby it retained responsibility for completing all obligations covered by a voluntary Corrective Action Agreement that Old GM entered with the U.S. Environmental Protection Agency ("EPA"). By operation of the asset purchase agreement, once the EPA issued a final decision on GM's activities under the Corrective Action Plan, the Company assumed all responsibility for operating, monitoring and maintaining the ongoing Corrective Action and GM's indemnification obligations ceased.

During the third quarter of 2015, the EPA determined that GM's remedial activities were complete and that the migration of any contamination was under control, and published a public notice seeking comment on a draft final decision, the issuance of which resulted in the Company assuming responsibility for operating, monitoring and maintaining the ongoing Corrective Action activities through an agreed order of consent ("AOC") with the EPA.

As a result of the publishing of the draft final decision, the Company determined that appropriate liabilities for the operating, monitoring and maintaining the ongoing remedial activities could be reasonably estimated. As of September 30, 2015, the Company recorded approximately \$14.0 million for the estimated undiscounted liabilities to be paid out over the next 30 years, including approximately \$0.5 million recorded to Other current liabilities and approximately \$13.5 million to Other non-current liabilities. The recorded liabilities will be adjusted periodically as remediation efforts progress or as additional technical, regulatory or legal information becomes available. The Company has funded and expects to continue to fund the expenditures for these activities from operating cash flow.

On January 27, 2016, the EPA issued a final decision, and the Company assumed all responsibility for the Corrective Action. The Company entered into an administrative order of consent with the EPA that requires the Company to provide financial assurance to complete the operation, monitoring and maintenance in the event the Company fails to do so. On December 23, 2016, the Company issued a letter of credit to the EPA in the amount of \$14.9 million.

Claims, Disputes, and Litigation

The Company is party to various legal actions and administrative proceedings and subject to various claims arising in the ordinary course of business. These proceedings primarily involve commercial claims, product liability claims, personal injury claims and workers' compensation claims. The Company believes that the ultimate liability, if any, in excess of amounts already provided for in the consolidated financial statements or covered by insurance on the disposition of these matters will not have a material adverse effect on the financial position, results of operations or cash flows of the Company.

NOTE 18. CONCENTRATION OF RISK

As of December 31, 2016 and 2015, the Company employed approximately 2,600 employees with 89% of those employees in the U.S. Approximately 58% of the Company's U.S. employees were represented by unions and subject to a collective bargaining agreement as of December 31, 2016 and 2015. In addition, many of the hourly employees outside the U.S. are represented by various unions. The Company is currently operating under a collective bargaining agreement with the UAW Local 933 that expires in November 2017.

Three customers accounted for greater than 10% of net sales within the last three years presented.

% of net sales	Years ended December 31,		
	2016	2015	2014
Daimler AG	21%	21%	17%
Navistar, Inc.	9%	10%	10%
Volvo Group	8%	10%	8%

No other customers accounted for more than 10% of net sales of the Company during the years ended December 31, 2016, 2015 or 2014.

One customer accounted for greater than 10% of outstanding accounts receivable within the last two years presented.

% of accounts receivable	As of December 31, 2016	As of December 31, 2015
Daimler AG	19%	24%

No other customers accounted for more than 10% of the outstanding accounts receivable as of December 31, 2016 or December 31, 2015.

One supplier accounted for greater than 10% of materials purchased for the periods presented:

% of material purchased	Years ended December 31,		
	2016	2015	2014
Linamar Corporation Inc.	9%	8%	10%

No other supplier accounted for more than 10% of materials purchased during the years ended December 31, 2016, 2015 or 2014.

NOTE 19. CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

Senior Notes Held by Executive Officers

In May 2015, the Company redeemed \$100,000 and \$450,000 of ATI's 7.125% Senior Notes held by Lawrence E. Dewey, Chairman and Chief Executive Officer, and David S. Graziosi, President, Chief Financial Officer and Treasurer, respectively, at the specified redemption price in the governing indenture equal to 103.563% of the principal amount plus any accrued and unpaid interest.

Repurchase of Common Stock held by Sponsors

During 2014, the Company completed four secondary public offerings in September, June, April and February of 5,392,499, 40,250,000, 25,000,000, and 28,750,000 shares of its common stock held by investment funds affiliated with the Carlyle Group and Onex Corporation (collectively, the "Sponsors") at public offering prices, less underwriting discounts and commissions, of \$30.46, \$29.95, \$29.78 and \$29.17 per share, respectively. In connection with certain of the offerings, the Company repurchased from the underwriters 5,000,000 shares in June 2014 and 3,428,179 shares in February 2014 at the prices paid by the underwriters and subsequently retired those shares.

Sales to Customers Indirectly Owned by Director

During 2016, the Company had net sales of less than \$20 million to Gillig LLC ("Gillig") and less than \$5 million to General Dynamics Corporation ("GD"). James A. Star, a member of the Company's Board of Directors, has an indirect material interest in Gillig as a result of trusts for the benefit of his wife and children collectively owning an approximately 5% interest in the entities that directly and indirectly own Gillig LLC. In addition, all of the remaining direct and indirect interests in Gillig LLC are owned by trusts for the benefit of members of Mr. Star's wife's immediate and extended family. Mr. Star also has an indirect material interest in GD as a result of trusts for the benefit of his wife, children and members of his wife's family collectively owning approximately 10% of the outstanding shares of common stock of GD.

NOTE 20. COMMON STOCK

On October 30, 2014, the Board of Directors authorized the Company to repurchase up to \$500.0 million of its common stock pursuant to a stock repurchase program (“2014 Repurchase Program”). The terms of the 2014 Repurchase Program provided that the Company could repurchase shares of its common stock, from time to time depending on market conditions and corporate needs. The Company completed the \$500.0 million of authorized repurchases under the 2014 Repurchase Program in November 2016.

On November 14, 2016, the Board of Directors authorized the Company to repurchase up to \$1,000.0 million of its common stock pursuant to a stock repurchase program (“2016 Repurchase Program”). The terms of the 2016 Repurchase Program provide that the Company may repurchase shares of its common stock, from time to time, depending on market conditions and corporate needs. Unless earlier terminated by the Company’s Board of Directors, the 2016 Repurchase Program will expire on December 31, 2019.

During 2016, the Company purchased approximately \$194.5 million and \$61.7 million of its common stock under the 2014 Repurchase Program and 2016 Repurchase Program, respectively. All transactions during 2016 were settled in cash during the same period.

NOTE 21. EARNINGS PER SHARE

The Company presents both basic and diluted earnings per share (“EPS”) amounts. Basic EPS is calculated by dividing net income by the weighted average number of common shares outstanding during the reporting period. Diluted EPS is calculated by dividing net income by the weighted average number of common shares and common equivalent shares outstanding during the reporting period that are calculated using the treasury stock method for stock-based awards. The treasury stock method assumes that the Company uses the proceeds from the exercise of awards to repurchase common stock at the average market price during the period. The assumed proceeds under the treasury stock method include the purchase price that the grantee will pay in the future, compensation cost for future service that the Company has not yet recognized and any tax benefits that would be credited to additional paid-in-capital when the award generates a tax deduction. If there would be a shortfall resulting in a charge to additional paid-in-capital, such an amount would be a reduction of the proceeds to the extent of the gains. The diluted weighted-average common shares outstanding exclude the anti-dilutive effect of certain stock options since such options had an exercise price in excess of the monthly average market value of our common stock. As of December 31, 2016, 2015, and 2014, the Company had 0.2 million, 0.7 million, and 0.0 million outstanding stock options that were not included in the diluted EPS calculation because they were anti-dilutive.

The following table reconciles the numerators and denominators used to calculate basic EPS and diluted EPS (in millions, except per share data):

	Years ended December 31,		
	2016	2015	2014
Net income	<u>\$214.9</u>	<u>\$182.3</u>	<u>\$228.6</u>
Weighted average shares of common stock outstanding	<u>167.8</u>	175.9	179.8
Dilutive effect stock-based awards	<u>1.0</u>	1.3	2.5
Diluted weighted average shares of common stock outstanding	<u>168.8</u>	<u>177.2</u>	<u>182.3</u>
Basic earnings per share attributable to common stockholders	<u>\$ 1.28</u>	<u>\$ 1.03</u>	<u>\$ 1.27</u>
Diluted earnings per share attributable to common stockholders	<u>\$ 1.27</u>	<u>\$ 1.03</u>	<u>\$ 1.25</u>

NOTE 22. GEOGRAPHIC INFORMATION

The Company had the following net sales by country (dollars in millions):

	Years ended December 31,		
	2016	2015	2014
United States	<u>\$1,277.2</u>	\$1,459.8	\$1,578.0
Canada	<u>114.6</u>	95.5	85.1
Japan	<u>69.5</u>	48.7	45.8
Germany	<u>53.4</u>	39.6	38.1
China	<u>50.0</u>	63.9	128.7
Mexico	<u>41.3</u>	36.1	26.8
United Kingdom	<u>28.0</u>	44.0	36.8
Other	<u>206.2</u>	198.2	188.1
Total	<u>\$1,840.2</u>	<u>\$1,985.8</u>	<u>\$2,127.4</u>

The Company had the following net long-lived assets by country (dollars in millions):

	Years ended December 31,		
	2016	2015	2014
United States	<u>\$412.2</u>	\$419.2	\$442.6
India	<u>36.3</u>	43.2	51.5
Hungary	<u>11.2</u>	12.5	15.1
Others	<u>4.4</u>	4.8	5.4
Total	<u>\$464.1</u>	<u>\$479.7</u>	<u>\$514.6</u>

NOTE 23. QUARTERLY FINANCIAL INFORMATION

The following is a summary of the unaudited quarterly results of operations. The Company believes that all adjustments considered necessary for a fair presentation in accordance with GAAP have been included (unaudited, in millions, except per share data).

	Quarters ended,			
	March 31	June 30	September 30	December 31
2016				
Net sales	\$ 462.1	\$474.9	\$ 434.3	\$ 468.9
Gross profit	215.1	226.7	204.7	217.7
Operating income	110.7	127.1	104.0	109.7
Income before income taxes	76.5	99.1	71.0	94.7
Net income	48.3	60.8	44.6	61.2
Basic earnings per share	\$ 0.28	\$ 0.36	\$ 0.27	\$ 0.37
Diluted earnings per share	\$ 0.28	\$ 0.36	\$ 0.27	\$ 0.36
2015				
Net sales	\$ 503.6	\$511.0	\$ 493.0	\$ 478.2
Gross profit	239.2	236.3	236.1	222.2
Operating income	142.3	137.5	111.9	37.2
Income before income taxes	108.2	87.1	73.8	19.7
Net income	68.4	54.4	46.5	13.0
Basic earnings per share	\$ 0.38	\$ 0.30	\$ 0.27	\$ 0.08
Diluted earnings per share	\$ 0.38	\$ 0.30	\$ 0.27	\$ 0.08

The Company's 2015 quarterly results were affected by certain items. For the quarter ended December 31, 2015, the Company recorded \$80.0 million of trade name impairment charge as a result of lower forecasted net sales for certain of the Company's end markets.

NOTE 24. SUBSEQUENT EVENT

On February 3, 2017, the Company entered into a stock repurchase agreement with ValueAct Capital Master Fund, L.P., a related party, to repurchase 10,525,204 shares of the Company's common stock for approximately \$363.1 million. The purchase was funded with cash on hand and borrowings under the revolving credit facility, and the shares were subsequently retired. Subsequent to the transaction, the Company remains in compliance with its maximum senior secured leverage ratio covenant requirement under its Senior Secured Credit Facility.

Allison Transmission Holdings, Inc.
Schedule I—Parent Company only Balance Sheets
(dollars in millions)

	December 31, 2016	December 31, 2015
ASSETS		
Current Assets:		
Cash	\$ —	\$ —
Total Current Assets	—	—
Investments in and advances to subsidiaries	1,080.3	1,188.6
TOTAL ASSETS	<u>\$ 1,080.3</u>	<u>\$ 1,188.6</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities:		
Accounts payable	\$ —	\$ —
Total Current Liabilities	—	—
Capital stock	1.6	1.7
Paid-in-capital	1,728.0	1,690.2
Treasury stock	—	—
Accumulated deficit	(586.4)	(444.5)
Accumulated other comprehensive loss, net of tax	(62.9)	(58.8)
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	<u>\$ 1,080.3</u>	<u>\$ 1,188.6</u>

The accompanying note is an integral part of the Parent Company only financial statements.

Allison Transmission Holdings, Inc.
Schedule I—Parent Company only Statements of Comprehensive Income
(dollars in millions)

	Years ended December 31,		
	2016	2015	2014
Net sales	\$ —	\$ —	\$ —
General and administrative fees	—	—	—
Total operating income	—	—	—
Other income:			
Equity earnings of consolidated subsidiary	214.9	182.3	228.6
Income before income taxes	214.9	182.3	228.6
Income tax expense	—	—	—
Net income	<u>\$214.9</u>	<u>\$182.3</u>	<u>\$228.6</u>
Comprehensive income	<u>\$210.8</u>	<u>\$163.0</u>	<u>\$210.1</u>

The accompanying note is an integral part of the Parent Company only financial statements.

Allison Transmission Holdings, Inc.
Schedule I—Parent Company only Statements of Cash Flows
(dollars in millions)

	Years ended December 31,		
	2016	2015	2014
CASH FLOWS FROM OPERATING ACTIVITIES:			
Net income	\$ 214.9	\$ 182.3	\$ 228.6
Deduct items included in net income not providing cash:			
Equity in earnings in consolidated subsidiary	(214.9)	(182.3)	(228.6)
Net cash provided by operating activities	—	—	—
CASH FLOWS FROM INVESTING ACTIVITIES:			
Investments in subsidiaries	(23.7)	(22.9)	(59.6)
Dividends	100.6	105.6	91.6
Net cash provided by investing activities	76.9	82.7	32.0
CASH FLOWS FROM FINANCING ACTIVITIES:			
Capital contributions	23.7	22.9	59.6
Dividends	(100.6)	(105.6)	(91.6)
Net cash used in financing activities	(76.9)	(82.7)	(32.0)
Net increase (decrease) during period	—	—	—
Cash and cash equivalents at beginning of period	—	—	—
Cash and cash equivalents at end of period	\$ —	\$ —	\$ —

The accompanying note is an integral part of the Parent Company only financial statements.

Allison Transmission Holdings, Inc.
Schedule I—Parent Company only Footnote

NOTE 1—BASIS OF PRESENTATION

Allison Transmission Holdings, Inc. (the “Parent Company”) is a holding company that conducts all of its business operations through its subsidiaries. There are restrictions on the Parent Company’s ability to obtain funds from its subsidiaries through dividends (refer to NOTE 7 “Debt” of the Consolidated Financial Statements). The entire amount of our consolidated net assets was subject to restrictions on payment of dividends at the end of December 31, 2016, 2015 and 2014. Accordingly, these financial statements have been presented on a “parent-only” basis. Under a parent-only presentation, the Parent Company’s investments in its consolidated subsidiaries are presented under the equity method of accounting. These parent-only financial statements should be read in conjunction with Allison Transmission Holdings, Inc.’s audited Consolidated Financial Statements included elsewhere herein.

ITEM 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

ITEM 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act), as of December 31, 2016. In designing and evaluating the disclosure controls and procedures, management recognized that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. In addition, the design of disclosure controls and procedures must reflect the fact that there are resource constraints and that management is required to apply its judgment in evaluating the benefits of possible controls and procedures relative to their costs.

Based on the evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures as of December 31, 2016, the end of the period covered by this Annual Report on Form 10-K, were effective to provide reasonable assurance that information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

Management's Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act). Our 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.

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.

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we conducted an assessment of the effectiveness of our internal control over financial reporting as of December 31, 2016. In making this assessment, our management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in *Internal Control—Integrated Framework* (2013). Based on this assessment, management concluded that our internal control over financial reporting was effective as of December 31, 2016. PricewaterhouseCoopers LLP, our independent registered public accounting firm, has audited the effectiveness of our internal control over financial reporting as of December 31, 2016. Their report is included in Part II, Item 8, "Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the quarter ended December 31, 2016 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. Other Information

None.

PART III.

ITEM 10. Directors, Executive Officers and Corporate Governance

The information required by this Item concerning our executive officers, directors and nominees for director, Audit Committee members and financial expert(s) and disclosure of delinquent filers under Section 16(a) of the Exchange Act is incorporated herein by reference from our definitive Proxy Statement for our 2017 annual meeting of stockholders which will be filed with the SEC pursuant to Regulation 14A within 120 days after the end of our last fiscal year.

Code of Business Conduct

We have adopted the Allison Code of Business Conduct that applies to all of our directors and officers and other employees, including our principal executive officer, principal financial officer and principal accounting officer. This code is publicly available through the Investor Relations section of our website at www.allisontransmission.com. We will post on the Investor Relations section of our website any amendment to the code of business conduct, or any grant of a waiver from a provision of the code of business conduct.

ITEM 11. Executive Compensation

The information required by this Item concerning remuneration of our executive officers and directors, material transactions involving such executive officers and directors and Compensation Committee interlocks, as well as the Compensation Committee Report, are incorporated herein by reference to our definitive Proxy Statement for our 2017 annual meeting of stockholders which will be filed with the SEC pursuant to Regulation 14A within 120 days after the end of our last fiscal year.

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

The information required by this Item concerning the stock ownership of management, five percent beneficial owners and securities authorized for issuance under equity compensation plans is incorporated herein by reference to our definitive Proxy Statement for our 2017 annual meeting of stockholders which will be filed with the SEC pursuant to Regulation 14A within 120 days after the end of our last fiscal year.

ITEM 13. Certain Relationships and Related Transactions, and Director Independence

The information required by this Item concerning certain relationships and related person transactions, and director independence is incorporated herein by reference to our definitive Proxy Statement for our 2017 annual meeting of stockholders which will be filed with the SEC pursuant to Regulation 14A within 120 days after the end of our last fiscal year.

ITEM 14. Principal Accounting Fees and Services

The information required by this Item concerning the fees and services of our independent registered public accounting firm and our Audit Committee actions with respect thereto is incorporated herein by reference to our definitive Proxy Statement for our 2017 annual meeting of stockholders which will be filed with the SEC pursuant to Regulation 14A within 120 days after the end of our last fiscal year.

PART IV.

ITEM 15. Exhibits, Financial Statement Schedules

(a)(1) Financial Statements.

The response to this item is included in Part II, Item 8 of this Annual Report on Form 10-K.

(a)(2) Financial Statement Schedules.

Schedule I is included in Part II, Item 8 of this Annual Report on Form 10-K. All other schedules have been omitted because they are not required or because the information required is included in the consolidated financial statements and notes thereto.

(a)(3) Exhibits

See the response to Item 15(b) below.

(b) Exhibits

The following exhibits are filed as part of, or are incorporated by reference into, this Annual Report on Form 10-K:

<u>Exhibit No.</u>	<u>DESCRIPTION OF EXHIBIT</u>
3.1	Second Amended and Restated Certificate of Incorporation of Allison Transmission Holdings, Inc. (incorporated by reference to Exhibit 3.1 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2012 filed April 26, 2012)
3.2	Amendment to Second Amended and Restated Certificate of Incorporation of Allison Transmission Holdings, Inc. (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed May 18, 2016)
3.2	Fifth Amended and Restated Bylaws of Allison Transmission Holdings, Inc. (incorporated by reference to Exhibit 3.2 to the Registrant's Current Report on Form 8-K filed May 18, 2016)
4.1	Form of Stock Certificate (incorporated by reference to Exhibit 4.1 to Amendment No. 3 to the Registrant's Registration Statement on Form S-1 filed June 17, 2011 (File No. 333-172932))
4.2	Indenture governing the 7.125% Senior Notes due 2019, among Allison Transmission, Inc. as Issuer, the Guarantors named therein, and Wells Fargo Bank, National Association, as trustee, dated May 6, 2011 (incorporated by reference to Exhibit 4.6 to Amendment No. 2 to the Registrant's Registration Statement on Form S-1 filed May 16, 2011 (File No. 333-172932))
4.3	Form of 7.125% Senior Note due 2019 (included in Exhibit 4.2)
4.4	First Supplemental Indenture, dated as of March 31, 2015, between Allison Transmission, Inc. and Wells Fargo Bank, National Association, as Trustee (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K filed on April 7, 2015)
4.5	Indenture, dated as of September 23, 2016, between the Issuer and Wilmington Trust, National Association, as Trustee (including the form of 5.0% Senior Notes due 2024) (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K filed September 23, 2016)
10.1	Credit Agreement among Allison Transmission Holdings, Inc., Allison Transmission, Inc., as Borrower, the Several Lenders from time to time parties thereto, Citicorp North America, Inc., as Administrative Agent, Lehman Brothers Commercial Bank and Merrill Lynch, Pierce, Fenner & Smith Incorporated, as Syndication Agents, Sumitomo Mitsui Banking Corporation, as Documentation Agent and Co-Arranger and Citigroup Global Markets Inc., Lehman Brothers Inc. and Merrill Lynch & Co., Merrill Lynch, Pierce, Fenner & Smith Incorporated, As Joint Lead Arrangers And Joint Bookrunners, dated as of August 7, 2007 (incorporated by reference to Exhibit 10.1 to Amendment No. 1 to the Registrant's Registration Statement on Form S-1 filed April 26, 2011 (File No. 333-172932))
10.2	Amendment No. 1 to the Credit Agreement among Allison Transmission Holdings, Inc., Allison Transmission, Inc., as Borrower, the Several Lenders from time to time parties thereto, Citicorp North America, Inc., as Administrative Agent, Lehman Brothers Commercial Bank and Merrill Lynch, Pierce, Fenner & Smith Incorporated, as Syndication

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- Agents, Sumitomo Mitsui Banking Corporation, as Documentation Agent and Co-Arranger and Citigroup Global Markets Inc., Lehman Brothers Inc. and Merrill Lynch & Co., Merrill Lynch, Pierce, Fenner & Smith Incorporated, As Joint Lead Arrangers And Joint Bookrunners, dated as of November 21, 2008 (incorporated by reference to Exhibit 10.2 to the Registrant's Registration Statement on Form S-1 filed March 18, 2011 (File No. 333-172932))
- 10.3 Amendment No. 2 and Consent to the Credit Agreement among Allison Transmission Holdings, Inc., Allison Transmission, Inc., as Borrower, the several banks and other financial institutions or entities from time to time parties thereto as Lenders, Citicorp North America, Inc., as Administrative Agent and Collateral Agent, Lehman Brothers Commercial Bank and Merrill Lynch, Pierce, Fenner & Smith Incorporated, as Syndication Agents, Sumitomo Mitsui Banking Corporation, as Documentation Agent and Co-Arranger, and Citigroup Global Markets Inc., Lehman Brothers Inc., and Merrill Lynch & Co., Merrill Lynch, Pierce, Fenner & Smith Incorporated, as Joint Lead Arrangers and Joint Bookrunners, dated as of May 13, 2011 (incorporated by reference to Exhibit 10.17 to Amendment No. 3 to the Registrant's Registration Statement on Form S-1 filed June 17, 2011 (File No. 333-172932))
- 10.4 Amendment No. 3 to the Credit Agreement among Allison Transmission Holdings, Inc., Allison Transmission, Inc., as Borrower, the several banks and other financial institutions or entities from time to time parties thereto as Lenders, Citicorp North America, Inc., as Administrative Agent and Collateral Agent and the other agents and arrangers party thereto, dated as of March 9, 2012 (incorporated by reference to Exhibit 10.19 to Amendment No. 8 to the Registrant's Registration Statement on Form S-1 filed March 12, 2012 (File No. 333-172932))
- 10.5 Amendment No. 4 to the Credit Agreement, dated as of August 23, 2012, among Allison Transmission Holdings, Inc., Allison Transmission, Inc., as Borrower, the several banks and other financial institutions or entities from time to time parties thereto as Lenders, Citicorp North America, Inc., as Administrative Agent and the other agents and arrangers party thereto (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed August 23, 2012)
- 10.6 Amendment No. 5 to the Credit Agreement, dated as of October 4, 2012, among Allison Transmission Holdings, Inc., Allison Transmission, Inc., as Borrower, the several banks and other financial institutions or entities from time to time parties thereto as Lenders, Citicorp North America, Inc., as Administrative Agent and the other agents and arrangers party thereto (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed October 4, 2012)
- 10.7 Amendment No. 6 to the Credit Agreement, dated as of February 6, 2013, among Allison Transmission Holdings, Inc., Allison Transmission, Inc., as Borrower, the several banks and other financial institutions or entities from time to time parties thereto as Lenders, Citicorp North America, Inc., as Administrative Agent and the other agents and arrangers party thereto (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed February 6, 2013)
- 10.8 Amendment No. 7 to the Credit Agreement, dated as of February 6, 2013 among Allison Transmission Holdings, Inc., Allison Transmission, Inc., as Borrower, the several banks and other financial institutions or entities from time to time parties thereto as Lenders, Citicorp North America, Inc., as Administrative Agent and the other agents and arrangers party thereto (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed February 6, 2013)
- 10.9 Amendment No. 8 to the Credit Agreement, dated as of August 26, 2013, among Allison Transmission Holdings, Inc., Allison Transmission, Inc., as Borrower, the several banks and other financial institutions or entities from time to time parties thereto as Lenders, Citicorp North America, Inc., as Administrative Agent and the other agents and arrangers party thereto (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed August 26, 2013)
- 10.10 Amendment No. 9 to the Credit Agreement, dated as of December 31, 2013, among Allison Transmission Holdings, Inc., Allison Transmission, Inc., as Borrower, the several banks and other financial institutions or entities from time to time parties thereto as Lenders, Citicorp North America, Inc., as Administrative Agent and the other agents and arrangers party thereto (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed December 31, 2013)
- 10.11 Amendment No. 10 to the Credit Agreement, dated as of April 14, 2014, among Allison Transmission Holdings, Inc., Allison Transmission, Inc., as Borrower, the several banks and other financial institutions or entities from time to time parties thereto as Lenders,

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- Citicorp North America, Inc., as Administrative Agent and the other agents and arrangers party thereto (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed April 15, 2014)
- 10.12 Amendment No. 11 to the Credit Agreement, dated as of April 7, 2015, among Allison Transmission Holdings, Inc., Allison Transmission, Inc., as Borrower, the several banks and other financial institutions or entities from time to time parties thereto as Lenders, Citicorp North America, Inc., as Administrative Agent and the other agents and arrangers parties thereto (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed April 7, 2015)
- 10.13 Amendment No. 12 to the Credit Agreement, dated as of November 30, 2015, among Allison Transmission Holdings, Inc., Allison Transmission, Inc., as Borrower, the several banks and other financial institutions or entities from time to time parties thereto as Lenders, Citicorp North America, Inc., as Administrative Agent and the other agents and arrangers party thereto (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed November 30, 2015)
- 10.14 Amendment No. 13 to the Credit Agreement, dated as of September 23, 2016, among Allison Transmission Holdings, Inc., Allison Transmission, Inc., as Borrower, the several banks and other financial institutions or entities from time to time parties thereto as lenders, Citicorp North America, Inc., as Administrative Agent and the other agents and arrangers party thereto (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed September 23, 2016)
- 10.15 Amended and Restated Credit Agreement among Allison Transmission Holdings, Inc., Allison Transmission, Inc., as Borrower, the several lenders from time to time parties thereto, and Citicorp North America, Inc., as Administrative Agent, dated as of September 23, 2016 (incorporated by reference to Exhibit B of Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed September 23, 2016)
- 10.16 Guarantee And Collateral Agreement made by Allison Transmission Holdings, Inc. Allison Transmission, Inc., as Borrower, and the Subsidiary Guarantors party thereto in favor of Citicorp North America, Inc., as Administrative Agent, dated as of August 7, 2007 (incorporated by reference to Exhibit 10.3 to the Registrant's Registration Statement on Form S-1 filed March 18, 2011 (File No. 333-172932))
- 10.17 Trademark Security Agreement made by Allison Transmission, Inc. in favor of Citicorp North America, Inc., as Administrative Agent, dated as of August 7, 2007 (incorporated by reference to Exhibit 10.4 to the Registrant's Registration Statement on Form S-1 filed March 18, 2011 (File No. 333-172932))
- 10.18 Copyright Security Agreement made by Allison Transmission, Inc. in favor of Citicorp North America, Inc., as Administrative Agent, dated as of August 7, 2007 (incorporated by reference to Exhibit 10.5 to Amendment No. 2 to the Registrant's Registration Statement on Form S-1 filed May 16, 2011 (File No. 333-172932))
- 10.19 Consent Agreement to the Credit Agreement, dated as of March 12, 2014, among Allison Transmission Holdings, Inc., Allison Transmission, Inc., as Borrower, the several banks and other financial institutions or entities from time to time parties thereto as Lenders, Citicorp North America, Inc., as Administrative Agent, and the other agents and arrangers party thereto (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed March 14, 2014)
- 10.20* Allison Transmission Holdings, Inc. 2015 Equity Incentive Award Plan (incorporated by reference to Appendix A to the Registrant's Definitive Proxy Statement on Schedule 14A filed April 2, 2015)
- 10.21* Allison Transmission Holdings, Inc. 2016 Incentive Plan (incorporated by reference to Appendix B to the Registrant's Definitive Proxy Statement on Schedule 14A filed April 2, 2015)
- 10.22* Form of 2015 Equity Incentive Award Plan Restricted Stock Agreement (incorporated by reference to Exhibit 10.41 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2015 filed February 19, 2016)
- 10.23* Form of 2015 Equity Incentive Award Plan Restricted Stock Unit Agreement (incorporated by reference to Exhibit 10.42 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2015 filed February 19, 2016)
- 10.24* Form of 2015 Equity Incentive Award Plan Stock Option Agreement (incorporated by reference to Exhibit 10.43 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2015 filed February 19, 2016)
- 10.25* Form of 2015 Equity Incentive Award Plan Performance Stock Unit Agreement (filed herewith)
- 10.26* Allison Transmission Holdings, Inc. 2011 Equity Incentive Award Plan (incorporated by reference to Exhibit 10.10 to Amendment No. 3 to the Registrant's Registration Statement on Form S-1 filed June 17, 2011 (File No. 333-172932))

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- 10.27* Form of 2011 Equity Incentive Award Plan Restricted Stock Agreement (incorporated by reference to Exhibit 10.11 to Amendment No. 3 to the Registrant's Registration Statement on Form S-1 filed June 17, 2011 (File No. 333-172932))
- 10.28* Form of 2011 Equity Incentive Award Plan Restricted Stock Unit Agreement (incorporated by reference to Exhibit 10.12 to Amendment No. 3 to the Registrant's Registration Statement on Form S-1 filed June 17, 2011 (File No. 333-172932))
- 10.29* Form of 2011 Equity Incentive Award Plan Stock Option Agreement (incorporated by reference to Exhibit 10.13 to Amendment No. 3 to the Registrant's Registration Statement on Form S-1 filed June 17, 2011 (File No. 333-172932))
- 10.30* Form Amendment to Stock Option Agreement under the Allison Transmission Holdings, Inc. 2011 Equity Incentive Award Plan and Equity Incentive Plan of Allison Transmission Holdings, Inc. (incorporated by reference to Exhibit 10.27 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2013 filed July 30, 2013)
- 10.31* Form of 2011 Equity Incentive Award Plan Stock Option Agreement (incorporated by reference to Exhibit 10.29 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2013 filed October 29, 2013)
- 10.32* Equity Incentive Plan of Allison Transmission Holdings, Inc. (incorporated by reference to Exhibit 10.14 to Amendment No. 2 to the Registrant's Registration Statement on Form S-1 filed May 16, 2011 (File No. 333-172932))
- 10.33* Form of Employee Stock Option Agreement under Equity Incentive Plan of Allison Transmission Holdings, Inc. (incorporated by reference to Exhibit 10.15 to Amendment No. 2 to the Registrant's Registration Statement on Form S-1 filed May 16, 2011 (File No. 333-172932))
- 10.34* Form Amendment to Stock Option Agreement under Equity Incentive Plan of Allison Transmission Holdings, Inc. (incorporated by reference to Exhibit 10.24 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2012 filed on February 28, 2013)
- 10.35* Form of Independent Director Stock Option Agreement under Equity Incentive Plan of Allison Transmission Holdings, Inc. (incorporated by reference to Exhibit 10.16 to Amendment No. 2 to the Registrant's Registration Statement on Form S-1 filed May 16, 2011 (File No. 333-172932))
- 10.36* Second Amended and Restated Non-Employee Director Compensation Policy (incorporated by reference to Exhibit 10.44 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2015)
- 10.37* Deferred Compensation Plan of Allison Transmission Inc. (incorporated by reference to Exhibit 10.21 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2012 filed July 31, 2012)
- 10.38* Amended and Restated Non-Employee Director Deferred Compensation Plan of Allison Transmission Holdings, Inc. (incorporated by reference to Exhibit 10.38 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2015 filed April 28, 2015)
- 10.39* Form of Allison Transmission Holdings, Inc. Indemnification Agreement (incorporated by reference to Exhibit 10.9 to Amendment No. 2 to the Registrant's Registration Statement on Form S-1 filed May 16, 2011 (File No. 333-172932))
- 10.40* Form of Change in Control Severance Agreement (incorporated by reference to Exhibit 10.34 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2013 filed February 24, 2014)
- 10.41* Employment Agreement, between Allison Transmission, Inc. and Lawrence E. Dewey, dated as of April 15, 2014 (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed April 15, 2014)
- 10.42* Amendment to Employment Agreement between Allison Transmission, Inc. and Lawrence E. Dewey dated May 11, 2016 (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2016 filed July 28, 2016)
- 10.43* Employment Agreement, between Allison Transmission, Inc. and Lawrence E. Dewey, dated as of December 21, 2016 (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed December 21, 2016)
- 10.44* Employment Agreement, between Allison Transmission, Inc. and David S. Graziosi, dated as of April 15, 2014 (incorporated by reference to Exhibit 10.3 to the Registrant's Current Report on Form 8-K filed April 15, 2014)
- 10.45* Amendment to Employment Agreement between Allison Transmission, Inc. and David S. Graziosi dated May 11, 2016 (incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2016 filed July 28, 2016)

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10.46*	Employment Agreement, between Allison Transmission, Inc. and David S. Graziosi, dated as of December 21, 2016 (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed December 21, 2016)
10.47*	Separation Agreement between the Company and David L. Parish, dated October 15, 2015 (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed October 16, 2015)
10.48*	Separation Agreement between the Company and Michael G. Headly, dated December 17, 2015 (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on December 18, 2015)
14.1	Code of Business Conduct, adopted by the Board of Directors on October 30, 2014 (incorporated by reference to Exhibit 14.1 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2014 filed February 20, 2015)
21.1	List of Subsidiaries of Allison Transmission Holdings, Inc. (filed herewith)
23.1	Consent of PricewaterhouseCoopers LLP (filed herewith)
31.1	Certification pursuant to Rule 13a-14(a)/15d-14(a) of the Securities Exchange Act of 1934 of the Chief Executive Officer, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith)
31.2	Certification pursuant to Rule 13a-14(a)/15d-14(a) of the Securities Exchange Act of 1934 of the Chief Financial Officer, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith)
32.1	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 Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

* Indicates a management contract or compensatory plan or arrangement

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ITEM 16. Form 10-K Summary

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SIGNATURES

Pursuant to the requirements of 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.

Allison Transmission Holdings, Inc.
(Registrant)

Date: February 24, 2017

By: /s/ Lawrence E. Dewey
Lawrence E. Dewey
Chairman of the Board and Chief Executive Officer (Principal Executive 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.

<u>SIGNATURES</u>	<u>CAPACITY</u>	<u>DATE</u>
<u>/s/ Lawrence E. Dewey</u> Lawrence E. Dewey	Chairman of the Board and Chief Executive Officer (Principal Executive Officer)	February 24, 2017
<u>/s/ David S. Graziosi</u> David S. Graziosi	President, Chief Financial Officer and Treasurer (Principal Financial Officer and Principal Accounting Officer)	February 24, 2017
<u>/s/ Stan A. Askren</u> Stan A. Askren	Director	February 24, 2017
<u>/s/ David Denison</u> David Denison	Director	February 24, 2017
<u>/s/ David C. Everitt</u> David C. Everitt	Director	February 24, 2017
<u>/s/ Alvaro Garcia-Tunon</u> Alvaro Garcia-Tunon	Director	February 24, 2017
<u>/s/ Richard P. Lavin</u> Richard P. Lavin	Director	February 24, 2017
<u>/s/ Thomas W. Rabaut</u> Thomas W. Rabaut	Director	February 24, 2017
<u>/s/ Francis Raborn</u> Francis Raborn	Director	February 24, 2017
<u>/s/ Richard V. Reynolds</u> Richard V. Reynolds	Director	February 24, 2017
<u>/s/ Gregory P. Spivy</u> Gregory P. Spivy	Director	February 24, 2017
<u>/s/ James A. Star</u> James A. Star	Director	February 24, 2017

ALLISON TRANSMISSION HOLDINGS, INC.
2015 EQUITY INCENTIVE AWARD PLAN

PERFORMANCE STOCK UNIT GRANT NOTICE

Allison Transmission Holdings, Inc., a Delaware corporation (the "Company"), pursuant to its 2015 Equity Incentive Award Plan, as amended from time to time (the "Plan"), hereby grants to the holder listed below ("Participant") the number of performance stock units (the "PSUs") set forth below. The PSUs are subject to the terms and conditions set forth in this Performance Stock Unit Grant Notice (the "Grant Notice") and the Performance Stock Unit Agreement attached hereto as Exhibit A (the "Agreement") and the Plan, which are incorporated herein by reference. Unless otherwise defined herein, the terms defined in the Plan shall have the same defined meanings in the Grant Notice and the Agreement.

Participant:

Grant Date:

Target Number of PSUs (the "Target PSUs"):

Type of Shares Issuable: Common Stock of Allison Transmission Holdings, Inc.

Vesting Schedule: The award will vest in accordance with the vesting schedule set forth in Exhibit A.

By his or her signature, and the Company's signature below, Participant agrees to be bound by the terms and conditions of the Plan, the Agreement and the Grant Notice. Participant has reviewed the Agreement, the Plan and the Grant Notice in their entirety, has had an opportunity to obtain the advice of counsel prior to executing the Grant Notice and fully understands all provisions of the Grant Notice, the Agreement and the Plan. Participant hereby agrees to accept as binding, conclusive and final all decisions or interpretations of the Administrator upon any questions arising under the Plan, the Grant Notice or the Agreement.

ALLISON TRANSMISSION HOLDINGS, INC.

PARTICIPANT

By: _____
Print Name: _____
Title: _____

By: _____
Print Name: _____
Address: _____

**EXHIBIT A
TO PERFORMANCE STOCK UNIT GRANT NOTICE**

PERFORMANCE STOCK UNIT AGREEMENT

Pursuant to the Grant Notice to which this Agreement is attached, the Company has granted to Participant the Target PSUs set forth in the Grant Notice.

ARTICLE I.

GENERAL

1.1 Defined Terms. Capitalized terms not specifically defined herein shall have the meanings specified in the Plan or the Grant Notice.

1.2 Incorporation of Terms of Plan. The PSUs and the shares of Common Stock (“Stock”) issued to Participant hereunder (“Shares”) are subject to the terms and conditions set forth in this Agreement and the Plan, which is incorporated herein by reference. In the event of any inconsistency between the Plan and this Agreement, the terms of the Plan shall control.

ARTICLE II.

AWARD OF PERFORMANCE STOCK UNITS AND DIVIDEND EQUIVALENTS

2.1 Award of PSUs and Dividend Equivalents.

(a) In consideration of Participant’s past and/or continued employment with or service to the Company or a Subsidiary and for other good and valuable consideration, effective as of the grant date set forth in the Grant Notice (the “Grant Date”), the Company has granted to Participant the Target PSUs upon the terms and conditions set forth in the Grant Notice, the Plan and this Agreement, subject to adjustments as provided in Section 12.2 of the Plan. Each PSU represents the right to receive one Share or, at the option of the Company, an amount of cash as set forth in Section 2.3(b), in either case, at the times and subject to the conditions set forth herein. However, unless and until the PSUs have vested, Participant will have no right to the payment of any Shares subject thereto. Prior to the actual delivery of any Shares, the PSUs will represent an unsecured obligation of the Company, payable only from the general assets of the Company.

(b) The Company hereby grants to Participant an Award of Dividend Equivalents with respect to each PSU granted pursuant to the Grant Notice for all ordinary cash dividends which are paid to all or substantially all holders of the outstanding shares of Stock between the Grant Date and the date when the applicable PSU is distributed or paid to Participant or is forfeited or expires. The Dividend Equivalents for each PSU shall be equal to the amount of cash which is paid as a dividend on one share of Stock. All such Dividend Equivalents shall be credited to Participant and paid in cash at the same time as the distribution or payment is made on the PSUs to which such Dividend Equivalent relates in accordance with Section 2.3 below. Any Dividend Equivalents that relate to PSUs that are forfeited shall likewise be forfeited without consideration.

2.2 Vesting of PSUs.

(a) *TSR Vesting Schedule.* Subject to Sections 2.2(b) and (c) below, the PSUs shall vest, if at all, in amounts up to 200% of the Target PSUs (the “Maximum PSUs”) on the Determination Date or the Change in Control Determination Date, as applicable, as follows:

(i) If the Company achieves a TSR over the Performance Period that is below the 25th percentile of the TSRs of the component members of the Company’s Peer Group over the Performance Period, none of the PSUs shall vest;

(ii) If the Company achieves a TSR over the Performance Period that is at the 25th percentile of the TSRs of the component members of the Company’s Peer Group over the Performance Period, a number of PSUs equal to 50% (rounded up to the nearest whole Share) of the Target PSUs shall vest;

(iii) If the Company achieves a TSR over the Performance Period that is at the 50th percentile of the TSRs of the component members of the Company’s Peer Group over the Performance Period, a number of PSUs equal to 100% (rounded up to the nearest whole Share) of the Target PSUs shall vest; or

(iv) If the Company achieves a TSR over the Performance Period that is at or above the 75th percentile of the TSRs of the component members of the Company’s Peer Group over the Performance Period, a number of PSUs equal to the Maximum PSUs shall vest.

(v) To the extent that the Company achieves a TSR over the Performance Period that is between two thresholds specified in this Section 2.2(a), the percentage of the PSUs that vest shall be determined by the use of straight-line interpolation and the remaining PSUs shall thereupon be forfeited.

(b) *Effect of Termination of Service.* Notwithstanding any contrary provision of this Agreement, upon Participant’s Termination of Service for any or no reason prior to the Determination Date or the Change in Control Determination Date, as applicable, any and all PSUs and Dividend Equivalents shall immediately be forfeited and Participant’s rights with respect thereto shall lapse and expire.

(c) *Change in Control.* Notwithstanding any contrary provision of this Agreement, in the event of a Change in Control at any time prior to December 31, 2018, the number of PSUs determined to vest pursuant to Section 2.2(a) hereof for the period beginning on January 1, 2016 and ending on the Change in Control Determination Date shall vest on December 31, 2018, subject to the Participant not incurring a Termination of Service prior to December 31, 2018; provided, that, such unvested PSUs shall immediately vest and no longer represent unvested PSUs (i) in the event of Participant’s Termination of Service by the Company without Cause, by Participant for Good Reason or due to Participant’s death or disability, in each case, after the Change in Control and (ii) immediately prior to (and subject to the consummation of) the Change in Control in the event the successor corporation (or any of its parent entities) does not assume or substitute the PSUs for equivalent rights in connection with such Change in Control.

(d) *Definitions.* For purposes of this Agreement, the following definitions shall apply:

(i) “Average Market Value” of the Company or a member of the Peer Group, as applicable, means, as of any day, the average closing price per share of Common Stock (or per share of common stock of a member of the Peer Group, as applicable) over the 20-consecutive-trading days ending with and including that day (or, if there is no closing price on that day, the last trading day before that day).

(ii) “Beginning Average Market Value” means the Average Market Value as of January 1, 2016.

(iii) “Cause” means (a) the Board’s determination that Participant failed to substantially perform his or her duties (other than any such failure resulting from Participant’s Disability); (b) the Board’s determination that Participant failed to carry out, or comply with any lawful and reasonable directive of the Board or Participant’s immediate supervisor; (c) Participant’s conviction, plea of no contest, plea of nolo contendere, or imposition of unadjudicated probation for any felony, indictable offense or crime involving moral turpitude; (d) Participant’s unlawful use (including being under the influence) or possession of illegal drugs on the Company’s (or any of its Subsidiaries’) premises or while performing Participant’s duties and responsibilities; or (e) Participant’s commission of an act of fraud, embezzlement, misappropriation, misconduct, or breach of fiduciary duty against the Company or any of its Subsidiaries. Notwithstanding the foregoing, if Participant is a party to a written employment or change in control severance agreement with the Company (or its Subsidiary) that contains a definition of Cause, then “Cause” shall be as such term is defined in the applicable written employment or change in control severance agreement.

(iv) “Change in Control Determination Date” means any date within thirty days prior to the date of a Change in Control, as determined by the Administrator.

(v) “Determination Date” means the date the Administrator determines the number of PSUs that shall vest pursuant to Section 2.2(a) based on the TSR of the Company and the Peer Group, which date shall be no later than February 28, 2019; provided, that, in the event a Change in Control occurs after calendar year 2016 and prior to December 31, 2018, the “Determination Date” means the Change in Control Determination Date, subject to the consummation of the Change in Control.

(vi) “Ending Average Market Value” means the Average Market Value as of December 31, 2018; provided, that, in the event a Change in Control occurs after calendar year 2016 and prior to December 31, 2018, “Ending Average Market Value” means the Average Market Value as of the Change in Control Determination Date.

(vii) “Good Reason” means the occurrence of any of the following events or conditions without Participant’s written consent (a) a material diminution in Participant’s authority, duties or responsibilities, other than as a result of a Change in Control where Participant remains in a position with the Company or its successor (or any other entity that owns substantially all of the Company’s business after such sale) that is substantially equivalent in duties, rank, reporting structure and authority with Participant’s position prior to such sale, solely as such duties, rank, reporting structure and authority relate to the Company’s business; (b) a material diminution in Participant’s base salary or target annual bonus level; or (c) a material change in the geographic location at which Participant must perform his or her duties, which shall not include a relocation of Participant’s principal place of employment to any location within a fifty (50) mile radius of the location from which Participant served the Company immediately prior to the relocation. Participant must provide written notice to the Company of the

occurrence of any of the foregoing events or conditions without Participant's written consent within ninety (90) days of the occurrence of such event or the date upon which Participant reasonably became aware that such an event or condition had occurred. The Company or any successor or affiliate shall have a period of thirty (30) days to cure such event or condition after receipt of written notice of such event from Participant. Any voluntary termination for "Good Reason" following such thirty (30) day cure period must occur no later than the date that is six (6) months following the date notice was provided by Participant. Notwithstanding the foregoing, if Participant is a party to a written employment agreement or change in control severance agreement with the Company (or its Subsidiary) that contains a definition of Good Reason, then "Good Reason" shall be as such term is defined in the applicable written employment or change in control severance agreement.

(viii) "Peer Group" shall consist of the companies listed on Schedule A hereto; *provided, however*, that if a member of the Peer Group ceases to be a Publicly Traded Company for any reason during the Performance Period or is acquired by another Publicly Traded Company (other than a transaction the principal purpose of which is to change the name, corporate form or jurisdiction of incorporation or formation of the Peer Group member), the member shall be automatically removed from and treated as never having been included in the Peer Group.

(ix) "Performance Period" means the period beginning on January 1, 2016 and ending on December 31, 2018.

(x) "Publicly Traded Company" means a company whose shares are regularly quoted or traded on an active securities exchange, over-the-counter market or inter-dealer quotation system.

(xi) "TSR" means the percentage appreciation (positive or negative) in the Common Stock price (or common stock price of a member of the Peer Group, as applicable) over the Performance Period, determined by dividing (i) the difference obtained by subtracting (A) the Beginning Average Market Value, from (B) the Ending Average Market Value plus all cash dividends for the Performance Period, assuming same-day reinvestment into Common Stock (or common stock of the applicable member of the Peer Group) on the applicable ex-dividend date, by (ii) the Beginning Average Market Value. TSR shall be equitably adjusted to reflect stock dividends, stock-splits, spin-offs, and other corporate changes having similar effect.

(e) *Lapse of PSUs.*

(i) In the event of Participant's Termination of Service, except as may be otherwise provided by the Administrator or as set forth in a written agreement between Participant and the Company, Participant shall immediately forfeit any and all PSUs and Dividend Equivalents granted under this Agreement which have not vested or do not vest on or prior to the date on which such Termination of Service occurs, and Participant's rights in any such PSUs and Dividend Equivalents which are not so vested shall lapse and expire.

(ii) Subject to Sections 2.2(b) and (c), in the event the PSUs do not vest at the maximum level in accordance with the provisions of Section 2.2(a), such PSUs that do not vest in accordance with the provisions of Section 2.2(a) shall be forfeited and Participant's rights in any such PSUs and related Dividend Equivalents shall lapse and expire.

2.3 Distribution or Payment of PSUs.

(a) Participant's PSUs shall be distributed in Shares (either in book-entry form or otherwise) or, at the option of the Company, paid in an amount of cash as set forth in Section 2.3(b), in either case, as soon as administratively practicable following the vesting of the applicable PSU pursuant to Section 2.2(a), and, in any event, within sixty (60) days following such vesting. Notwithstanding the foregoing, the Company may delay a distribution or payment in settlement of PSUs if it reasonably determines that such payment or distribution will violate Federal securities laws or any other Applicable Law, *provided* that such distribution or payment shall be made at the earliest date at which the Company reasonably determines that the making of such distribution or payment will not cause such violation, as required by Treasury Regulation Section 1.409A-2(b)(7)(ii), and *provided further* that no payment or distribution shall be delayed under this Section 2.3(a) if such delay will result in a violation of Section 409A of the Code.

(b) In the event that the Company elects to make payment of Participant's PSUs in cash, the amount of cash payable with respect to each PSU shall be equal to the Fair Market Value of a Share on the day immediately preceding the applicable distribution or payment date set forth in Section 2.3(a). All distributions made in Shares shall be made by the Company in the form of whole Shares, and any fractional share shall be distributed in cash in an amount equal to the value of such fractional share determined based on the Fair Market Value as of the date immediately preceding the date of such distribution.

2.4 Conditions to Issuance of Certificates. The Company shall not be required to issue or deliver any certificate or certificates for any Shares prior to the fulfillment of all of the following conditions: (A) the admission of the Shares to listing on all stock exchanges on which such Shares are then listed, (B) the completion of any registration or other qualification of the Shares under any state or federal law or under rulings or regulations of the Securities and Exchange Commission or other governmental regulatory body, which the Administrator shall, in its absolute discretion, deem necessary or advisable, and (C) the obtaining of any approval or other clearance from any state or federal governmental agency that the Administrator shall, in its absolute discretion, determine to be necessary or advisable.

2.5 Tax Withholding. Notwithstanding any other provision of this Agreement:

(a) The Company and its Subsidiaries have the authority to deduct or withhold, or require Participant to remit to the Company or the applicable Subsidiary, an amount sufficient to satisfy applicable federal, state, local and foreign taxes (including the employee portion of any FICA obligation) required by law to be withheld with respect to any taxable event arising pursuant to this Agreement. The Company and its Subsidiaries may withhold or the Participant may make such payment in one or more of the forms specified below:

(i) by cash or check made payable to the Company or the Subsidiary with respect to which the withholding obligation arises;

(ii) by the deduction of such amount from other compensation payable to Participant;

(iii) with respect to any withholding taxes arising in connection with the distribution of the PSUs, with the consent of the Administrator, by requesting that the Company and its Subsidiaries withhold a net number of vested Shares otherwise issuable pursuant to the PSUs having a then current Fair Market Value not exceeding the amount necessary to satisfy the withholding obligation of the Company and its Subsidiaries based on the minimum applicable statutory withholding rates for federal, state, local and foreign income tax and payroll tax purposes;

(iv) with respect to any withholding taxes arising in connection with the distribution of the PSUs, with the consent of the Administrator, by tendering to the Company vested Shares having a then current Fair Market Value not exceeding the amount necessary to satisfy the withholding obligation of the Company and its Subsidiaries based on the minimum applicable statutory withholding rates for federal, state, local and foreign income tax and payroll tax purposes;

(v) with respect to any withholding taxes arising in connection with the distribution of the PSUs, through the delivery of a notice that Participant has placed a market sell order with a broker acceptable to the Company with respect to Shares then issuable to Participant pursuant to the PSUs, and that the broker has been directed to pay a sufficient portion of the net proceeds of the sale to the Company or the Subsidiary with respect to which the withholding obligation arises in satisfaction of such withholding taxes; *provided* that payment of such proceeds is then made to the Company or the applicable Subsidiary at such time as may be required by the Administrator, but in any event not later than the settlement of such sale; or

(vi) in any combination of the foregoing.

(b) With respect to any withholding taxes arising in connection with the PSUs, in the event Participant fails to provide timely payment of all sums required pursuant to Section 2.5(a), the Company shall have the right and option, but not the obligation, to treat such failure as an election by Participant to satisfy all or any portion of Participant's required payment obligation pursuant to Section 2.5(a)(ii) or Section 2.5(a)(iii) above, or any combination of the foregoing as the Company may determine to be appropriate. The Company shall not be obligated to deliver any certificate representing Shares issuable with respect to the PSUs to Participant or his or her legal representative unless and until Participant or his or her legal representative shall have paid or otherwise satisfied in full the amount of all federal, state, local and foreign taxes applicable with respect to the taxable income of Participant resulting from the vesting or settlement of the PSUs or any other taxable event related to the PSUs.

(c) In the event any tax withholding obligation arising in connection with the PSUs will be satisfied under Section 2.5(a)(iii), then the Company may elect to instruct any brokerage firm determined acceptable to the Company for such purpose to sell on Participant's behalf a whole number of shares from those Shares then issuable to Participant pursuant to the PSUs as the Company determines to be appropriate to generate cash proceeds sufficient to satisfy the tax withholding obligation and to remit the proceeds of such sale to the Company or the Subsidiary with respect to which the withholding obligation arises. Participant's acceptance of this Award constitutes Participant's instruction and authorization to the Company and such brokerage firm to complete the transactions described in this Section 2.5(c), including the transactions described in the previous sentence, as applicable. The Company may refuse to issue any Shares in settlement of the PSUs to Participant until the foregoing tax withholding obligations are satisfied, *provided* that no payment shall be delayed under this Section 2.5(c) if such delay will result in a violation of Section 409A of the Code.

(d) Participant is ultimately liable and responsible for all taxes owed in connection with the PSUs, regardless of any action the Company or any Subsidiary takes with respect to any tax withholding obligations that arise in connection with the PSUs. Neither the Company nor any Subsidiary makes any representation or undertaking regarding the treatment of any tax withholding in connection with the awarding, vesting or payment of the PSUs or the subsequent sale of Shares. The Company and the Subsidiaries do not commit and are under no obligation to structure the PSUs to reduce or eliminate Participant's tax liability.

2.6 Rights as Stockholder. Neither Participant nor any person claiming under or through Participant will have any of the rights or privileges of a stockholder of the Company in respect of any Shares deliverable hereunder unless and until certificates representing such Shares (which may be in book-entry form) will have been issued and recorded on the records of the Company or its transfer agents or registrars, and delivered to Participant (including through electronic delivery to a brokerage account). Except as otherwise provided herein, after such issuance, recordation and delivery, Participant will have all the rights of a stockholder of the Company with respect to such Shares, including, without limitation, the right to receipt of dividends and distributions on such Shares.

ARTICLE III.

OTHER PROVISIONS

3.1 Administration. The Administrator shall have the power to interpret the Plan, the Grant Notice and this Agreement and to adopt such rules for the administration, interpretation and application of the Plan, the Grant Notice and this Agreement as are consistent therewith and to interpret, amend or revoke any such rules. All actions taken and all interpretations and determinations made by the Administrator will be final and binding upon Participant, the Company and all other interested persons. To the extent allowable pursuant to Applicable Law, no member of the Committee or the Board will be personally liable for any action, determination or interpretation made with respect to the Plan, the Grant Notice or this Agreement.

3.2 PSUs Not Transferable. The PSUs may not be sold, pledged, assigned or transferred in any manner other than by will or the laws of descent and distribution, unless and until the Shares underlying the PSUs have been issued, and all restrictions applicable to such Shares have lapsed. No PSUs or any interest or right therein or part thereof shall be liable for the debts, contracts or engagements of Participant or his or her successors in interest or shall be subject to disposition by transfer, alienation, anticipation, pledge, encumbrance, assignment or any other means whether such disposition be voluntary or involuntary or by operation of law by judgment, levy, attachment, garnishment or any other legal or equitable proceedings (including bankruptcy), and any attempted disposition thereof shall be null and void and of no effect, except to the extent that such disposition is permitted by the preceding sentence.

3.3 Adjustments. Participant acknowledges that the PSUs and the Shares subject to the PSUs are subject to adjustment, modification and termination in certain events as provided in this Agreement and Section 12.2 of the Plan.

3.4 Notices. Any notice to be given under the terms of this Agreement to the Company shall be addressed to the Company in care of the Secretary of the Company at the Company's principal office, and any notice to be given to Participant shall be addressed to Participant at Participant's last address reflected on the Company's records. By a notice given pursuant to this Section 3.4, either party may hereafter designate a different address for notices to be given to that party. Any notice shall be deemed duly given when sent via email or when sent by certified mail (return receipt requested) and deposited (with postage prepaid) in a post office or branch post office regularly maintained by the United States Postal Service.

3.5 Titles. Titles are provided herein for convenience only and are not to serve as a basis for interpretation or construction of this Agreement.

3.6 Governing Law. The laws of the State of Delaware shall govern the interpretation, validity, administration, enforcement and performance of the terms of this Agreement regardless of the law that might be applied under principles of conflicts of laws.

3.7 Conformity to Securities Laws. Participant acknowledges that the Plan, the Grant Notice and this Agreement are intended to conform to the extent necessary with all Applicable Laws, including, without limitation, the provisions of the Securities Act and the Exchange Act, and any and all regulations and rules promulgated thereunder by the Securities and Exchange Commission, and state securities laws and regulations. Notwithstanding anything herein to the contrary, the Plan shall be administered, and the PSUs are granted, only in such a manner as to conform to Applicable Law. To the extent permitted by Applicable Law, the Plan and this Agreement shall be deemed amended to the extent necessary to conform to Applicable Law.

3.8 Amendment, Suspension and Termination. To the extent permitted by the Plan, this Agreement may be wholly or partially amended or otherwise modified, suspended or terminated at any time or from time to time by the Administrator or the Board, *provided* that, except as may otherwise be provided by the Plan, no amendment, modification, suspension or termination of this Agreement shall adversely affect the PSUs in any material way without the prior written consent of Participant.

3.9 Successors and Assigns. The Company may assign any of its rights under this Agreement to single or multiple assignees, and this Agreement shall inure to the benefit of the successors and assigns of the Company. Subject to the restrictions on transfer set forth in Section 3.2 and the Plan, this Agreement shall be binding upon and inure to the benefit of the heirs, legatees, legal representatives, successors and assigns of the parties hereto.

3.10 Limitations Applicable to Section 16 Persons. Notwithstanding any other provision of the Plan or this Agreement, if Participant is subject to Section 16 of the Exchange Act, the Plan, the PSUs, the Dividend Equivalents, the Grant Notice and this Agreement shall be subject to any additional limitations set forth in any applicable exemptive rule under Section 16 of the Exchange Act (including any amendment to Rule 16b-3 of the Exchange Act) that are requirements for the application of such exemptive rule. To the extent permitted by Applicable Law, this Agreement shall be deemed amended to the extent necessary to conform to such applicable exemptive rule.

3.11 Not a Contract of Employment. Nothing in this Agreement or in the Plan shall confer upon Participant any right to continue to serve as an employee or other service provider of the Company or any Subsidiary or shall interfere with or restrict in any way the rights of the Company and its Subsidiaries, which rights are hereby expressly reserved, to discharge or terminate the services of Participant at any time for any reason whatsoever, with or without Cause, except to the extent expressly provided otherwise in a written agreement between the Company or a Subsidiary and Participant.

3.12 Entire Agreement. The Plan, the Grant Notice and this Agreement (including any exhibit hereto) constitute the entire agreement of the parties and supersede in their entirety all prior undertakings and agreements of the Company and Participant with respect to the subject matter hereof.

3.13 Section 409A. This Award is not intended to constitute “nonqualified deferred compensation” within the meaning of Section 409A of the Code (together with any Department of Treasury regulations and other interpretive guidance issued thereunder, including without limitation any such regulations or other guidance that may be issued after the date hereof, “Section 409A”). However, notwithstanding any other provision of the Plan, the Grant Notice or this Agreement, if at any time the Administrator determines that this Award (or any portion thereof) may be subject to Section 409A, the Administrator shall have the right in its sole discretion (without any obligation to do so or to indemnify Participant or any other person for failure to do so) to adopt such amendments to the Plan, the Grant Notice or this Agreement, or adopt other policies and procedures (including amendments, policies and procedures with retroactive effect), or take any other actions, as the Administrator determines are necessary or appropriate for this Award either to be exempt from the application of Section 409A or to comply with the requirements of Section 409A.

3.14 Agreement Severable. In the event that any provision of the Grant Notice or this Agreement is held invalid or unenforceable, such provision will be severable from, and such invalidity or unenforceability will not be construed to have any effect on, the remaining provisions of the Grant Notice or this Agreement.

3.15 Limitation on Participant's Rights. Participation in the Plan confers no rights or interests other than as herein provided. This Agreement creates only a contractual obligation on the part of the Company as to amounts payable and shall not be construed as creating a trust. Neither the Plan nor any underlying program, in and of itself, has any assets. Participant shall have only the rights of a general unsecured creditor of the Company with respect to amounts credited and benefits payable, if any, with respect to the PSUs and Dividend Equivalents.

3.16 Counterparts. The Grant Notice may be executed in one or more counterparts, including by way of any electronic signature, subject to Applicable Law, each of which shall be deemed an original and all of which together shall constitute one instrument.

3.17 Broker-Assisted Sales. In the event of any broker-assisted sale of Shares in connection with the payment of withholding taxes as provided in Section 2.5(a)(iii) or Section 2.5(a)(v): (A) any Shares to be sold through a broker-assisted sale will be sold on the day the tax withholding obligation arises or as soon thereafter as practicable; (B) such Shares may be sold as part of a block trade with other participants in the Plan in which all participants receive an average price; (C) Participant will be responsible for all broker's fees and other costs of sale, and Participant agrees to indemnify and hold the Company harmless from any losses, costs, damages, or expenses relating to any such sale; (D) to the extent the proceeds of such sale exceed the applicable tax withholding obligation, the Company agrees to pay such excess in cash to Participant as soon as reasonably practicable; (E) Participant acknowledges that the Company or its designee is under no obligation to arrange for such sale at any particular price, and that the proceeds of any such sale may not be sufficient to satisfy the applicable tax withholding obligation; and (F) in the event the proceeds of such sale are insufficient to satisfy the applicable tax withholding obligation, Participant agrees to pay immediately upon demand to the Company or its Subsidiary with respect to which the withholding obligation arises an amount in cash sufficient to satisfy any remaining portion of the Company's or the applicable Subsidiary's withholding obligation.

* * *

**SCHEDULE A
TO PERFORMANCE STOCK UNIT AGREEMENT**

PEER GROUP

Eaton Corp. plc
Cummins Inc.
BorgWarner Inc.
Rockwell Automation, Inc.
Flowserve Corp.
Joy Global Inc.
AMETEK, Inc.
Roper Industries, Inc.
Parker-Hannifin Corp.
Lincoln Electric Holdings, Inc.
Pall Corp.
WABCO Holdings Inc.
Wabtec Corp.
Donaldson Co., Inc.
TransDigm Group Inc.
Rexnord Corp.
IDEX Corporation
Woodward, Inc.
Sensata Technologies Holding N.V.
Nordson Corp.
Gentex Corp.
CLARCOR Inc.
Graco Inc.

List of Subsidiaries

Name

State or Country of
Organization

Allison Transmission, Inc.

Delaware

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (No. 333-180285 and 333-204224) of Allison Transmission Holdings, Inc. of our report dated February 24, 2017 relating to the financial statements, financial statement schedule and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP
Indianapolis, Indiana
February 24, 2017

**CERTIFICATION PURSUANT TO RULE 13a-14(a)/15d-14(a) OF THE SECURITIES
EXCHANGE ACT OF 1934, AS ADOPTED PURSUANT TO SECTION 302 OF THE
SARBANES-OXLEY ACT OF 2002**

I, Lawrence E. Dewey, certify that:

1. I have reviewed this Annual Report on Form 10-K of Allison Transmission Holdings, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated: February 24, 2017

/s/ Lawrence E. Dewey

Name: Lawrence E. Dewey
Title: Chairman and Chief Executive Officer
(Principal Executive Officer)

**CERTIFICATION PURSUANT TO RULE 13a-14(a)/15d-14(a) OF THE SECURITIES
EXCHANGE ACT OF 1934, AS ADOPTED PURSUANT TO SECTION 302 OF THE
SARBANES-OXLEY ACT OF 2002**

I, David S. Graziosi, certify that:

1. I have reviewed this Annual Report on Form 10-K of Allison Transmission Holdings, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated: February 24, 2017

/s/ David S. Graziosi

Name: David S. Graziosi
Title: President, Chief Financial Officer and Treasurer
(Principal Financial Officer)

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of Allison Transmission Holdings, Inc. (the "Company") on Form 10-K for the fiscal year ended December 31, 2016 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), we, Lawrence E. Dewey, Chairman and Chief Executive Officer of the Company, and David S. Graziosi, President, Chief Financial Officer and Treasurer of the Company, certify, pursuant to 18 U.S.C. § 1350 as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: February 24, 2017

/s/ Lawrence E. Dewey

Lawrence E. Dewey
Chairman and Chief Executive Officer
(Principal Executive Officer)

Dated: February 24, 2017

/s/ David S. Graziosi

David S. Graziosi
President, Chief Financial Officer and Treasurer
(Principal Financial Officer)