UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 10-Q

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

For the quarterly period ended June 30, 2023

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	**26-0414014**
(State or Other Jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification Number)
One Allison Way	
Indianapolis, IN	**46222**
(Address of Principal Executive Offices)	(Zip Code)

(317) 242-5000

(Registrant's Telephone Number, Including Area Code)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, $0.01 par value	**ALSN**	**New York Stock Exchange**

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

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

Large accelerated filer	☒	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
		Emerging growth company	☐

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

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

As of July 17, 2023, there were 89,534,833 shares of Common Stock outstanding.

INDEX

PART I. FINANCIAL INFORMATION

ITEM 1. Financial Statements

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

	June 30, 2023	December 31, 2022
ASSETS		
Current Assets		
Cash and cash equivalents	**$ 351**	$ 232
Accounts receivable – net of allowance for doubtful accounts of $6 and $5, respectively	**381**	363
Inventories	**278**	224
Other current assets	**59**	47
Total Current Assets	**1,069**	866
Property, plant and equipment, net	**761**	763
Intangible assets, net	**855**	878
Goodwill	**2,076**	2,075
Marketable securities	**24**	22
Other non-current assets	**71**	67
TOTAL ASSETS	**$ 4,856**	$ 4,671
LIABILITIES		
Current Liabilities		
Accounts payable	**$ 238**	$ 195
Product warranty liability	**25**	33
Current portion of long-term debt	**6**	6
Deferred revenue	**46**	38
Other current liabilities	**182**	208
Total Current Liabilities	**497**	480
Product warranty liability	**35**	24
Deferred revenue	**93**	93
Long-term debt	**2,499**	2,501
Deferred income taxes	**517**	536
Other non-current liabilities	**159**	163
TOTAL LIABILITIES	**3,800**	3,797
Commitments and contingencies (see Note P)		
STOCKHOLDERS' EQUITY		
Common stock, $0.01 par value, 1,880,000,000 shares authorized, 89,519,087 shares issued and outstanding and 91,788,885 shares issued and outstanding, respectively	**1**	1
Non-voting common stock, $0.01 par value, 20,000,000 shares authorized, none issued and outstanding	**—**	—
Preferred stock, $0.01 par value, 100,000,000 shares authorized, none issued and outstanding	**—**	—
Paid in capital	**1,868**	1,848
Accumulated deficit	**(788)**	(953)
Accumulated other comprehensive loss, net of tax	**(25)**	(22)
TOTAL STOCKHOLDERS' EQUITY	**1,056**	874
TOTAL LIABILITIES & STOCKHOLDERS' EQUITY	**$ 4,856**	$ 4,671

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

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2022	2023	2022
Net sales	$ 783	$ 664	$ 1,524	$ 1,341
Cost of sales	402	353	782	710
Gross profit	381	311	742	631
Selling, general and administrative	92	78	179	153
Engineering — research and development	47	46	91	89
Operating income	242	187	472	389
Interest expense, net	(28)	(30)	(56)	(59)
Other income (expense), net	2	(3)	12	(13)
Income before income taxes	216	154	428	317
Income tax expense	(41)	(32)	(83)	(66)
Net income	$ 175	$ 122	$ 345	$ 251
Basic earnings per share attributable to common stockholders	$ 1.94	$ 1.26	$ 3.79	$ 2.59
Diluted earnings per share attributable to common stockholders	$ 1.92	$ 1.26	$ 3.75	$ 2.56
Comprehensive income, net of tax	$ 175	$ 118	$ 342	$ 264

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

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

	Six Months Ended June 30,	
	2023	**2022**
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net income	**$ 345**	$ 251
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation of property, plant and equipment	**53**	53
Amortization of intangible assets	**22**	23
Deferred income taxes	**(17)**	9
Stock-based compensation	**11**	9
Unrealized (gain) loss on marketable securities	**(3)**	11
Technology-related investments gain	**(3)**	(6)
Loss on intercompany foreign exchange	**—**	3
Other	**3**	5
Changes in assets and liabilities:		
Accounts receivable	**(19)**	(70)
Inventories	**(55)**	(29)
Accounts payable	**34**	17
Other assets and liabilities	**(37)**	(50)
Net cash provided by operating activities	**334**	226
CASH FLOWS FROM INVESTING ACTIVITIES:		
Additions of long-lived assets	**(43)**	(50)
Proceeds from technology-related investments	**2**	6
Business acquisitions	**—**	(23)
Investment in equity method investee	**—**	(1)
Net cash used for investing activities	**(41)**	(68)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Repurchases of common stock	**(137)**	(115)
Dividend payments	**(43)**	(41)
Proceeds from exercise of stock options	**14**	1
Taxes paid related to net share settlement of equity awards	**(5)**	(4)
Payments on long-term debt	**(3)**	(3)
Payments on revolving credit facility	**—**	(95)
Borrowings on revolving credit facility	**—**	95
Net cash used for financing activities	**(174)**	(162)
Effect of exchange rate changes on cash	**—**	(1)
Net increase (decrease) in cash and cash equivalents	**119**	(5)
Cash and cash equivalents at beginning of period	**232**	127
Cash and cash equivalents at end of period	**$ 351**	$ 122
SUPPLEMENTAL DISCLOSURES OF CASH FLOW INFORMATION:		
Cash paid during period for:		
Income taxes	**$ 121**	59
Interest	**$ 64**	57
Non-cash investing activities:		
Capital expenditures in liabilities	**$ 18**	12

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

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

	Three months ended						
	Common Stock	Non-voting Common Stock	Preferred Stock	Paid-in Capital	Accumulated (Deficit) Income	Accumulated Other Comprehensive (Loss) Income, net of tax	Stockholders' Equity
Balance at March 31, 2022	$ 1	$ —	$ —	$ 1,832	$ (1,098)	$ (56)	$ 679
Stock-based compensation	—	—	—	6	—	—	6
Pension and OPEB liability adjustment	—	—	—	—	—	(2)	(2)
Foreign currency translation adjustment	—	—	—	—	—	(8)	(8)
Interest rate swaps	—	—	—	—	—	6	6
Issuance of common stock	—	—	—	1	—	—	1
Repurchase of common stock	—	—	—	—	(34)	—	(34)
Dividends on common stock	—	—	—	—	(21)	—	(21)
Net income	—	—	—	—	122	—	122
Balance at June 30, 2022	$ 1	$ —	$ —	$ 1,839	$ (1,031)	$ (60)	$ 749
Balance at March 31, 2023	$ 1	$ —	$ —	$ 1,857	$ (845)	$ (25)	$ 988
Stock-based compensation	**—**	**—**	**—**	**6**	**—**	**—**	**6**
Pension and OPEB liability adjustment	**—**	**—**	**—**	**—**	**—**	**(3)**	**(3)**
Foreign currency translation adjustment	**—**	**—**	**—**	**—**	**—**	**(2)**	**(2)**
Interest rate swaps	**—**	**—**	**—**	**—**	**—**	**5**	**5**
Issuance of common stock	**—**	**—**	**—**	**5**	**—**	**—**	**5**
Repurchase of common stock	**—**	**—**	**—**	**—**	**(97)**	**—**	**(97)**
Dividends on common stock	**—**	**—**	**—**	**—**	**(21)**	**—**	**(21)**
Net income	**—**	**—**	**—**	**—**	**175**	**—**	**175**
Balance at June 30, 2023	**$ 1**	**$ —**	**$ —**	**$ 1,868**	**$ (788)**	**$ (25)**	**$ 1,056**

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

	Six months ended						
	Common Stock	Non-voting Common Stock	Preferred Stock	Paid-in Capital	Accumulated (Deficit) Income	Accumulated Other Comprehensive (Loss) Income, net of tax	Stockholders' Equity
Balance at December 31, 2021	$ 1	$ —	$ —	$ 1,832	$ (1,126)	$ (73)	$ 634
Stock-based compensation	—	—	—	9	—	—	9
Pension and OPEB liability adjustment	—	—	—	—	—	(4)	(4)
Foreign currency translation adjustment	—	—	—	—	—	(8)	(8)
Interest rate swaps	—	—	—	—	—	25	25
Issuance of common stock	—	—	—	(2)	—	—	(2)
Repurchase of common stock	—	—	—	—	(115)	—	(115)
Dividends on common stock	—	—	—	—	(41)	—	(41)
Net income	—	—	—	—	251	—	251
Balance at June 30, 2022	$ 1	$ —	$ —	$ 1,839	$ (1,031)	$ (60)	$ 749
Balance at December 31, 2022	$ 1	$ —	$ —	$ 1,848	$ (953)	$ (22)	$ 874
Stock-based compensation	**—**	**—**	**—**	**11**	**—**	**—**	**11**
Pension and OPEB liability adjustment	**—**	**—**	**—**	**—**	**—**	**(5)**	**(5)**
Foreign currency translation adjustment	**—**	**—**	**—**	**—**	**—**	**—**	**—**
Interest rate swaps	**—**	**—**	**—**	**—**	**—**	**2**	**2**
Issuance of common stock	**—**	**—**	**—**	**9**	**—**	**—**	**9**
Repurchase of common stock	**—**	**—**	**—**	**—**	**(137)**	**—**	**(137)**
Dividends on common stock	**—**	**—**	**—**	**—**	**(43)**	**—**	**(43)**
Net income	**—**	**—**	**—**	**—**	**345**	**—**	**345**
Balance at June 30, 2023	**$ 1**	**$ —**	**$ —**	**$ 1,868**	**$ (788)**	**$ (25)**	**$ 1,056**

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

Allison Transmission Holdings, Inc.
Notes to Condensed Consolidated Financial Statements
(UNAUDITED)

NOTE A. OVERVIEW

Overview

Allison Transmission Holdings, Inc. and its subsidiaries ("Allison" or the "Company") design and manufacture vehicle propulsion solutions, including commercial-duty on-highway, off-highway and defense fully automatic transmissions and electric hybrid and fully electric systems. The business was founded in 1915 and has been headquartered in Indianapolis, Indiana since inception. Allison is traded on the New York Stock Exchange under the symbol, "ALSN".

Although approximately 74% of revenues were generated in North America in 2022, the Company has a global presence by serving customers in Asia, Europe, South America and Africa. The Company serves customers through an independent network of approximately 1,600 independent distributor and dealer locations worldwide.

NOTE B. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation and Principles of Consolidation

The condensed consolidated financial statements have been prepared in accordance with accounting principles for interim financial information and with the instructions to Form 10-Q and Article 10 of Regulation S-X. Accordingly, the condensed consolidated financial statements do not include all information and footnotes required by accounting principles generally accepted in the United States of America ("GAAP") for complete financial statements. The information herein reflects all normal recurring material adjustments, which are, in the opinion of management, necessary for the fair statement of the results for the periods presented. The condensed consolidated financial statements herein consist of all wholly-owned domestic and foreign subsidiaries with all significant intercompany transactions eliminated.

These condensed consolidated financial statements present the financial position, results of comprehensive income, cash flows and statements of stockholders' equity of the Company. Certain immaterial reclassifications have been made in the condensed consolidated financial statements of prior periods to conform to the current period presentation. These reclassifications had no material impact on previously reported net income, total stockholders' equity or cash flows. The condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2022 as filed with the Securities and Exchange Commission on February 16, 2023. The interim period financial results for the three- and six-month periods presented are not necessarily indicative of results to be expected for any other interim period or for the entire year.

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, sales incentives, government price adjustments, fair market values and future cash flows associated with goodwill, indefinite-lived intangibles, definite-lived intangibles, long-lived asset impairment tests, useful lives for depreciation and amortization, warranty liabilities, core deposit liabilities, environmental liabilities, determination of discount rate and other assumptions for pension and other post-retirement benefit ("OPEB") expense, determination of discount rate and period for leases, income taxes and deferred tax valuation allowances, derivative valuation, assumptions for business combinations 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 and from the assumptions used in the preparation of the Company's financial statements. Changes in estimates are recorded in results of operations in the period that the events or circumstances giving rise to such changes occur.

NOTE C. REVENUE

Revenue is recognized as each distinct performance obligation within a contract is satisfied. A performance obligation is a promise in a contract to transfer a distinct good or service to the customer. The Company enters into long-term agreements (“LTAs”) and distributor agreements with certain customers. The LTAs and distributor agreements do not include committed volumes until underlying purchase orders are issued; therefore, the Company determined that purchase orders are the contract with a customer. A contract’s transaction price is allocated to each distinct performance obligation and recognized as revenue when the performance obligation is satisfied, as there is no right of return.

Some of the Company's contracts include multiple performance obligations, most commonly the sale of both a transmission and extended transmission coverage ("ETC"). The Company allocates the contract’s transaction price to each performance obligation based on the standalone selling price of each distinct good or service in the contract.

The Company may also use volume-based discounts and rebates as marketing incentives in the sales of both vehicle propulsion solutions and service parts, which are accounted for as variable consideration. The Company records the impact of the incentives as a reduction to revenue when it is determined that the adjustment is not likely to reverse, historically on a quarterly basis. The Company estimates the impact of all other incentives based on the related sales and market conditions in the end market vocation. The Company recorded no material adjustments based on variable consideration for either of the three or six months ended June 30, 2023 or 2022.

Net sales are made on credit terms, generally 30 days, based on an assessment of the customer’s creditworthiness. For certain goods or services, the Company receives consideration prior to satisfying the related performance obligation. Such consideration is recorded as a contract liability in current and non-current deferred revenue as of June 30, 2023 and December 31, 2022. See "Note J. Deferred Revenue” for more information, including the amount of revenue earned during each of the three and six months ended June 30, 2023 and 2022 that had been previously deferred. The Company had no material contract assets as of either June 30, 2023 or December 31, 2022.

The Company has one operating segment and reportable segment. The Company is in one line of business, which is the manufacture and distribution of vehicle propulsion solutions. The following presents disaggregated revenue by categories that best depict how the nature, amount, timing and uncertainty of revenue and cash flows are affected by economic factors (dollars in millions):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	**2022**	**2023**	**2022**
North America On-Highway	**$ 397**	$ 340	**$ 773**	$ 686
North America Off-Highway	**25**	20	**49**	38
Defense	**33**	29	**60**	64
Outside North America On-Highway	**123**	105	**231**	214
Outside North America Off-Highway	**24**	32	**47**	62
Service Parts, Support Equipment and Other	**181**	138	**364**	277
Total Net Sales	**$ 783**	$ 664	**$ 1,524**	$ 1,341

NOTE D. INVENTORIES

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

	June 30, 2023	December 31, 2022
Purchased parts and raw materials	$ 147	$ 115
Work in progress	15	7
Service parts	57	53
Finished goods	59	49
Total inventories	$ 278	$ 224

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 L. Other Current Liabilities" for more information.

NOTE E. GOODWILL AND OTHER INTANGIBLE ASSETS

As of June 30, 2023 and December 31, 2022, the carrying value of the Company's Goodwill was $2,076 million and $2,075 million, respectively.

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

	June 30, 2023			December 31, 2022		
	Intangible assets, gross	Accumulated amortization	Intangible assets, net	Intangible assets, gross	Accumulated amortization	Intangible assets, net
Other intangible assets:						
Trade name	$ 791	$ —	$ 791	$ 791	$ —	$ 791
In-process research and development	25	—	25	25	—	25
Customer relationships — commercial	839	(813)	26	839	(793)	46
Proprietary technology	484	(478)	6	484	(477)	7
Customer relationships — defense	62	(55)	7	62	(53)	9
Non-compete agreements	1	(1)	—	1	(1)	—
Total	$ 2,202	$ (1,347)	$ 855	$ 2,202	$ (1,324)	$ 878

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

	2024	2025	2026	2027	2028
Amortization expense	$ 9	$ 5	$ 2	$ 1	$ 1

NOTE F. FAIR VALUE OF FINANCIAL INSTRUMENTS

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 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.

Level 2 — Inputs are other than quoted prices in active markets included in Level 1, which are either directly or indirectly observable as of the reporting 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 in which all significant value-drivers are observable in active markets or are supported by observable levels at which transactions are executed in the marketplace.

Level 3 — Certain inputs are unobservable or have little or no market data available. 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 June 30, 2023 and December 31, 2022, 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 equivalents, marketable 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 and time deposits. The Company's marketable securities consist of publicly traded stock of Jing-Jin Electric Technologies Co. Ltd., which has a readily determinable fair value. The Company's derivative instruments consist of interest rate 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 equivalents, marketable 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 Company uses valuations from the issuing financial institutions for the fair value measurement of interest rate swaps. The floating-to-fixed interest rate swaps are based on the Secured Overnight Financing Rate ("SOFR"), which is observable at commonly quoted intervals. The fair values are included in other current and non-current assets in the Condensed Consolidated Balance Sheets. See "Note H. Derivatives" for more information regarding the Company's interest rate swaps.

The following table summarizes the fair value of the Company's financial assets and (liabilities) as of June 30, 2023 and December 31, 2022 (dollars in millions):

	Fair Value Measurements Using					
	Quoted Prices in Active Markets for Identical Assets (Level 1)		Significant Other Observable Inputs (Level 2)		TOTAL	
	June 30, 2023	December 31, 2022	June 30, 2023	December 31, 2022	June 30, 2023	December 31, 2022
Cash equivalents	**$ 156**	$ 111	**$ —**	$ —	**$ 156**	$ 111
Marketable securities	**24**	22	**—**	—	**24**	22
Derivative assets	**—**	—	**20**	18	**20**	18
Rabbi trust assets	**17**	15	**—**	—	**17**	15
Deferred compensation obligation	**(17)**	(15)	**—**	—	**(17)**	(15)
Total	**$ 180**	$ 133	**$ 20**	$ 18	**$ 200**	$ 151

NOTE G. DEBT

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

	June 30, 2023	December 31, 2022
Long-term debt:		
Senior Secured Credit Facility Term Loan, variable, due 2026	**$ 622**	$ 625
Senior Notes, fixed 4.75%, due 2027	**400**	400
Senior Notes, fixed 5.875%, due 2029	**500**	500
Senior Notes, fixed 3.75%, due 2031	**1,000**	1,000
Total long-term debt	**$ 2,522**	$ 2,525
Less: current maturities of long-term debt	**6**	6
deferred financing costs, net	**17**	18
Total long-term debt, net	**$ 2,499**	$ 2,501

As of June 30, 2023, the Company had $2,522 million of indebtedness associated with Allison Transmission, Inc.'s ("ATI"), the Company's wholly-owned subsidiary, 4.75% Senior Notes due October 2027 ("4.75% Senior Notes"), ATI's 5.875% Senior Notes due June 2029 ("5.875% Senior Notes"), ATI's 3.75% Senior Notes due January 2031 ("3.75% Senior Notes" and, together with the 4.75% Senior Notes and 5.875% Senior Notes, the "Senior Notes") and the Second Amended and Restated Credit Agreement dated as of March 29, 2019, as amended (the "Credit Agreement"), governing ATI's term loan facility in the amount of $622 million due March 2026 ("Term Loan") and ATI's revolving credit facility with commitments in the amount of $650 million due September 2025 ("Revolving Credit Facility" and, together with the Term Loan, the "Senior Secured Credit Facility").

The fair value of the Company's long-term debt obligations as of June 30, 2023 was $2,325 million. The fair value is based on quoted Level 2 market prices of the Company's debt as of June 30, 2023. 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 February 2023, the Company and ATI entered into Amendment No. 3 (the "Amendment") to the Credit Agreement. The Amendment replaced the London Interbank Offered Rate ("LIBOR") interest rate benchmark with SOFR and included a 0.1% credit spread adjustment to the SOFR benchmark for all available interest periods. Other than the foregoing, the material terms of the Credit Agreement remained unchanged. The amendment was treated as a modification to the Senior Secured Credit Facility through a practical expedient provided through reference rate reform accounting guidance.

The borrowings under the Senior Secured Credit Facility are collateralized by a lien on substantially all assets of the Company, ATI and certain existing and future U.S. subsidiary guarantors, as provided in the Credit Agreement. Interest on the Term Loan, as of June 30, 2023, is either (a) 1.75% over a SOFR rate on deposits in U.S. dollars for one-, three- or six-month periods (or a twelve-month period if, at the time of the borrowing, consented to by all relevant lenders and the administrative agent) plus a 0.1% credit spread adjustment for all interest periods ("Adjusted Term SOFR"), or (b) 0.75% over the greater of the prime lending rate as quoted by the administrative agent, the Adjusted Term SOFR Rate for an interest period of one month plus 1.00% and the federal funds effective rate published by the Federal Reserve Bank of New York plus 0.50%, subject to a 1.00% floor (the "Base Rate"). As of June 30, 2023, the Company elected to pay the lowest all-in rate of Adjusted Term SOFR plus the applicable margin, or 6.93%, on the Term Loan. The Credit Agreement requires minimum quarterly principal payments on the Term Loan, as well as prepayments from certain net cash proceeds of non-ordinary course asset sales and casualty and condemnation events, the incurrence of certain debt and from a percentage of excess cash flow, if applicable. The minimum required quarterly principal payment on the Term Loan through its maturity date of March 2026 is $2 million. As of June 30, 2023, 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.

The Senior Secured Credit Facility also provides a Revolving Credit Facility, net of an allowance for up to $75 million in outstanding letters of credit commitments. During the six months ended June 30, 2023, the Company made no withdrawals on the Revolving Credit Facility. As of June 30, 2023, the Company had $645 million available under the Revolving Credit Facility, net of $5 million in letters of credit. Borrowings under the Revolving Credit Facility bear interest at a variable base rate plus an applicable margin based on the Company's first lien net leverage ratio. When the Company's first lien net leverage ratio is above 4.00x, interest on the Revolving Credit Facility is (a) 0.75% over the Base Rate or (b) 1.75% over the Adjusted Term SOFR Rate; when the Company's first lien net leverage ratio is equal to or less than 4.00x and above 3.50x, interest on the Revolving Credit Facility is (i) 0.50% over the Base Rate or (ii) 1.50% over the Adjusted Term SOFR Rate; and when the Company's first lien net leverage ratio is equal to or below 3.50x, interest on the Revolving Credit Facility is (y) 0.25% over the Base Rate or (z) 1.25% over the Adjusted Term SOFR Rate. As of June 30, 2023, the applicable margin for the Revolving Credit Facility was 1.25%. In addition, there is an annual commitment fee, based on the Company's first lien net leverage ratio, on the average unused revolving credit borrowings available under the Revolving Credit Facility. As of June 30, 2023, the commitment fee was 0.25%. Borrowings under the Revolving Credit Facility are payable at the option of the Company throughout the term of the Senior Secured Credit Facility with the balance due in September 2025.

The Senior Secured Credit Facility requires the Company to maintain a specified maximum first lien net leverage ratio of 5.50x when revolving loan commitments remain outstanding on the Revolving Credit Facility at the end of a fiscal quarter. As of June 30, 2023, the Company had no amounts outstanding under the Revolving Credit Facility; however, the Company would have been in compliance with the maximum first lien net leverage ratio, achieving a 0.26x ratio. Additionally, within the terms of the Senior Secured Credit Facility, a first lien net 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.

In addition, the Credit Agreement, 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, engage in acquisitions, consolidations and mergers, declare or pay certain dividends or repurchase shares of the Company's common stock. As of June 30, 2023, the Company was in compliance with all covenants under the Credit Agreement.

Senior Notes

Each series of the Senior Notes is unsecured and is guaranteed by each of ATI's domestic subsidiaries that is a borrower under or guarantees the Senior Secured Credit Facility and is 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 ATI's domestic subsidiaries currently guarantee any series of the Senior Notes. The indentures governing the Senior Notes contain 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. As of June 30, 2023, the Company was in compliance with all covenants under the indentures governing the Senior Notes.

ATI may from time to time seek to retire its Senior Notes through cash purchases, exchanges for equity securities, 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 and will be in accordance with the respective indenture governing such notes. The amounts involved may be material. Some or all of the 4.75% Senior Notes may be redeemed at any time at redemption prices specified in the indenture governing such notes. Some or all of the 5.875% Senior Notes may be redeemed prior to June 1, 2024 by paying a price equal to 100.00% of the principal amount being redeemed, plus an “applicable premium”. At any time on or after June 1, 2024, ATI may redeem some or all of the 5.875% Senior Notes at redemption prices specified in the indenture governing such notes. ATI may redeem up to 40% of the 3.75% Senior Notes prior to January 30, 2024 by paying a price equal to 103.750% of the principal amount being redeemed. On or after January 30, 2024 and prior to January 30, 2026, ATI may redeem some or all of the 3.75% Senior Notes by paying a price equal to 100.00% of the principal amount being redeemed, plus an “applicable premium”. At any time on or after January 30, 2026, ATI may redeem some or all of the 3.75% Senior Notes at redemption prices specified in the indenture governing such notes.

NOTE H. DERIVATIVES

The Company is subject to interest rate risk related to the Senior Secured Credit Facility and entered into interest rate swaps to manage a portion of this exposure. The Company amended the contractual terms of its interest rate swaps in the second quarter of 2023. These amendments transitioned the reference rates from LIBOR to the forward-looking term rate based on SOFR ("Term SOFR") and were only a result of reference rate reform. During this transition period, the Company utilized optional expedients permitting the Company not to de-designate the existing cash flow hedging relationships and to continue to qualify for hedge accounting based upon a qualitative subsequent assessment concluding that the hedging relationships remained highly effective. When the transition of the reference rates was completed, the Company performed an initial quantitative assessment that demonstrated a highly effective hedging relationship that qualifies for hedge accounting under the hypothetical derivative method.

As of June 30, 2023, the Company held interest rate swap contracts that, in the aggregate, effectively hedge $500 million of the variable rate debt associated with the Term Loan at the Term SOFR weighted average fixed rate of 2.81% through September 2025.

Fair value adjustments are recorded as a component of Accumulated other comprehensive loss, net of tax (“AOCL”) in the Condensed Consolidated Balance Sheets. Balances in AOCL are reclassified to earnings when transactions related to the underlying risk are settled. See "Note F. Fair Value of Financial Instruments” for information regarding the fair value of the Company’s interest rate swaps.

The following tabular disclosures further describe the Company’s interest rate derivatives qualifying and designated for hedge accounting and their impact on the financial condition of the Company (dollars in millions):

		Fair Value	
	Balance Sheet Location	**June 30, 2023**	**December 31, 2022**
Derivative Assets:			
Interest rate swaps	Other current assets	**$ 9**	$ 7
	Other non-current assets	**11**	11
Total derivative assets		**$ 20**	$ 18

The balance of net derivative gains recorded in AOCL as of June 30, 2023 and December 31, 2022 was $20 million and $18 million, respectively. See "Note O. Accumulated Other Comprehensive Loss” for information regarding activity recorded as a component of AOCL during the three and six months ended June 30, 2023 and 2022. As of June 30, 2023, the Company had $11 million of derivative gains recorded in AOCL expected to be reclassified to earnings within the next twelve months.

NOTE I. PRODUCT WARRANTY LIABILITIES

As of June 30, 2023, current and non-current product warranty liabilities were $25 million and $35 million, respectively. As of June 30, 2022, current and non-current product warranty liabilities were $28 million and $25 million, respectively.

Product warranty liability activities consist of the following (dollars in millions):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2022	2023	2022
Beginning balance	**$ 59**	$ 53	**$ 57**	$ 53
Payments	**(10)**	(8)	**(18)**	(15)
Increase in liability (warranty issued during period)	**9**	5	**15**	9
Net adjustments to liability	**2**	3	**6**	6
Ending balance	**$ 60**	$ 53	**$ 60**	$ 53

NOTE J. DEFERRED REVENUE

As of June 30, 2023, current and non-current deferred revenue was $46 million and $93 million, respectively. As of June 30, 2022, current and non-current deferred revenue was $39 million and $96 million, respectively.

Deferred revenue activity consists of the following (dollars in millions):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2022	2023	2022
Beginning balance	**$ 139**	$ 132	**$ 131**	$ 136
Increases	**11**	13	**29**	20
Revenue earned	**(11)**	(10)	**(21)**	(21)
Ending balance	**$ 139**	$ 135	**$ 139**	$ 135

Deferred revenue recorded in current and non-current liabilities related to ETC as of June 30, 2023 was $30 million and $84 million, respectively. Deferred revenue recorded in current and non-current liabilities related to ETC as of June 30, 2022 was $30 million and $85 million, respectively.

NOTE K. LEASES

Contracts are assessed by the Company to determine if the contract conveys the right to control an identified asset in exchange for consideration during a period of time. The Company classifies all identified leases as either operating or finance leases. As of June 30, 2023, the Company was not a party to any finance leases. Contracts that contain leases are assessed to determine if the consideration in the contract is related to a lease component, non-lease component or other components not related to the lease. Lease components are recorded as right-of-use (“ROU”) assets and lease liabilities while any non-lease component is expensed as incurred. The consideration in the contract related to other components not related to the lease is allocated among the lease component and the non-lease component, as applicable, based on the stand-alone selling price of the lease and non-lease components.

Certain lease contracts may contain an option to extend or terminate the lease. The Company considers the economic impact of extension and termination options by contract. If the Company concludes it is reasonably certain an option will be exercised, that option is included in the lease term and impacts the amount recorded as an ROU asset and lease liability at inception of the contract.

The Company's lease liability is determined by discounting the future cash flows over the lease period. The Company determines its discount rates utilizing current secured financing rates based on the length of the lease period plus the Company's margin over Adjusted Term SOFR on the Term Loan. The Company believes this rate effectively represents a borrowing rate the Company could obtain on a debt instrument possessing similar terms as the lease. Lease liabilities are classified between current and non-current liabilities based on the terms of the underlying leases. The weighted average discount rate on operating leases as of June 30, 2023 and December 31, 2022 was 4.57% and 4.43%, respectively.

As of June 30, 2023, the Company recorded current and non-current operating lease liabilities of $4 million and $12 million, respectively. As of December 31, 2022, the Company recorded current and non-current operating lease liabilities of $4 million and $13 million, respectively. The following table reconciles future undiscounted cash flows for operating leases as of June 30, 2023 to total operating lease liabilities:

	June 30, 2023
For the remainder of 2023	**$ 2**
2024	**4**
2025	**3**
2026	**2**
2027	**2**
Thereafter	**5**
Total lease payments	**$ 18**
Less: Interest	**2**
Present value of lease liabilities	**$ 16**

ROU assets are calculated as the related lease liability adjusted for lease incentives, prepayments and the effect of escalating lease payments on period expense. The below table depicts the ROU assets held by the Company based on the underlying asset:

	June 30, 2023	December 31, 2022
Buildings	**$ 14**	$ 15
Land	**1**	1
Equipment	**1**	—
Vehicles	**1**	1
Total ROU assets	**$ 17**	$ 17

The weighted average remaining lease term as of June 30, 2023 and June 30, 2022 was 5.8 years and 6.8 years, respectively.

Operating lease expense was $2 million for each of the three months ended June 30, 2023 and 2022, and $3 million for each of the six months ended June 30, 2023 and 2022, and was recorded within Selling, general and administrative expense and Engineering — research and development on the Company's Condensed Consolidated Statements of Comprehensive Income. There was no material short-term operating lease expense for either of the three or six months ended June 30, 2023 or 2022.

During the six months ended June 30, 2023, there were $2 million in new ROU assets obtained in exchange for lease obligations. During the six months ended June 30, 2022, there were no new ROU assets obtained in exchange for lease obligations.

NOTE L. OTHER CURRENT LIABILITIES

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

	June 30, 2023	December 31, 2022
Payroll and related costs	**$ 60**	$ 72
Sales incentives	**37**	42
Accrued interest payable	**24**	24
Vendor buyback obligation	**19**	16
Taxes payable	**15**	31
Construction holdback	**5**	4
OPEB liability	**4**	4
Lease liability	**4**	4
Other accruals	**14**	11
Total	**$ 182**	$ 208

NOTE M. EMPLOYEE BENEFIT PLANS

Components of net periodic benefit cost (credit) consist of the following (dollars in millions):

	Pension Plans		Post-retirement Benefits	
	For the Three Months Ended June 30,		For the Three Months Ended June 30,	
	2023	2022	**2023**	2022
Net periodic benefit cost (credit):				
Service cost	**$ 1**	$ 2	**$ —**	$ 1
Interest cost	**2**	2	**1**	—
Expected return on assets	**(2)**	(2)	**—**	—
Prior service credit	**—**	—	**(3)**	(2)
Net periodic benefit cost (credit)	**$ 1**	$ 2	**$ (2)**	$ (1)

	Pension Plans		Post-retirement Benefits	
	For the Six Months Ended June 30,		For the Six Months Ended June 30,	
	2023	2022	**2023**	2022
Net periodic benefit cost (credit):				
Service cost	**$ 2**	$ 4	**$ —**	$ 1
Interest cost	**4**	3	**2**	1
Expected return on assets	**(4)**	(4)	**—**	—
Prior service credit	**—**	—	**(5)**	(5)
Recognized actuarial gain	**—**	—	**(1)**	—
Net periodic benefit cost (credit)	**$ 2**	$ 3	**$ (4)**	$ (3)

The components of net periodic benefit cost (credit) other than the service cost component are included in Other income (expense), net in the Condensed Consolidated Statements of Comprehensive Income.

NOTE N. INCOME TAXES

For the three and six months ended June 30, 2023, the Company recorded total income tax expense of $41 million and $83 million, respectively. The effective tax rate for each of the three and six months ended June 30, 2023 was 19%. For the three and six months ended June 30, 2022, the Company recorded total income tax expense of $32 million and $66 million, respectively. The effective tax rate for each of the three and six months ended June 30, 2022 was 21%.

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 authoritative accounting guidance. 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 carry-forward periods, 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.

The Company continues to provide for a valuation allowance on certain of its foreign deferred tax assets. The Company has determined, based on the evaluation of both objective and subjective evidence available, that this valuation allowance is necessary and that it is more likely than not that the deferred tax assets are not fully realizable.

NOTE O. ACCUMULATED OTHER COMPREHENSIVE LOSS

The following tables reconcile changes in AOCL by component (net of tax, dollars in millions):

	Three months ended			
	Pension and OPEB liability adjustments	Interest rate swaps	Foreign currency items	Total
AOCL as of March 31, 2022	$ (19)	$ (5)	$ (32)	$ (56)
Other comprehensive income (loss) before reclassifications	—	5	(8)	(3)
Amounts reclassified from AOCL	(2)	3	—	1
Income tax expense	—	(2)	—	(2)
Net current period other comprehensive (loss) income	$ (2)	$ 6	$ (8)	$ (4)
AOCL as of June 30, 2022	$ (21)	$ 1	$ (40)	$ (60)
AOCL as of March 31, 2023	$ 3	$ 12	$ (40)	$ (25)
Other comprehensive income (loss) before reclassifications	**—**	**9**	**(2)**	**7**
Amounts reclassified from AOCL	**(3)**	**(3)**	**—**	**(6)**
Income tax expense	**—**	**(1)**	**—**	**(1)**
Net current period other comprehensive (loss) income	**$ (3)**	**$ 5**	**$ (2)**	**$ —**
AOCL as of June 30, 2023	**$ —**	**$ 17**	**$ (42)**	**$ (25)**

	Six months ended			
	Pension and OPEB liability adjustments	Interest rate swaps	Foreign currency items	Total
AOCL as of December 31, 2021	$ (17)	$ (24)	$ (32)	$ (73)
Other comprehensive income (loss) before reclassifications	—	27	(8)	19
Amounts reclassified from AOCL	(5)	6	—	1
Income tax benefit (expense)	1	(8)	—	(7)
Net current period other comprehensive (loss) income	$ (4)	$ 25	$ (8)	$ 13
AOCL as of June 30, 2022	$ (21)	$ 1	$ (40)	$ (60)
AOCL as of December 31, 2022	$ 5	$ 15	$ (42)	$ (22)
Other comprehensive income before reclassifications	**—**	**7**	**—**	**7**
Amounts reclassified from AOCL	**(6)**	**(5)**	**—**	**(11)**
Income tax benefit	**1**	**—**	**—**	**1**
Net current period other comprehensive (loss) income	**$ (5)**	**$ 2**	**$ —**	**$ (3)**
AOCL as of June 30, 2023	**$ —**	**$ 17**	**$ (42)**	**$ (25)**

	Amounts reclassified from AOCL		
AOCL Components	**Three months ended June 30, 2023**	**Three months ended June 30, 2022**	**Affected line item in the Condensed Consolidated Statements of Comprehensive Income**
Interest rate swaps	**$ 3**	$ (3)	Interest expense, net
Prior service credit	**3**	2	Other income (expense), net
Total reclassifications, before tax	**$ 6**	$ (1)	Income before income taxes
Income tax expense	**(1)**	—	Income tax expense
Total reclassifications, net of tax	**$ 5**	$ (1)	

AOCL Components	Amounts reclassified from AOCL Six months ended June 30, 2023	Six months ended June 30, 2022	Affected line item in the Condensed Consolidated Statements of Comprehensive Income
Interest rate swaps	**$ 5**	$ (6)	Interest expense, net
Prior service credit	**5**	5	Other income (expense), net
Recognized actuarial gain	**1**	—	Other income (expense), net
Total reclassifications, before tax	**$ 11**	$ (1)	Income before income taxes
Income tax expense	**(3)**	—	Income tax expense
Total reclassifications, net of tax	**$ 8**	$ (1)	

Prior service credits and actuarial gains are included in the computation of the Company's net periodic benefit cost (credit). See "Note M. Employee Benefit Plans" for additional details.

NOTE P. COMMITMENTS AND CONTINGENCIES

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 condensed 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 Q. EARNINGS PER SHARE

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2022	2023	2022
Net income	**$ 175**	$ 122	**$ 345**	$ 251
Weighted average shares of common stock outstanding	**90**	97	**91**	97
Dilutive effect of stock-based awards	**1**	—	**1**	1
Diluted weighted average shares of common stock outstanding	**91**	97	**92**	98
Basic earnings per share attributable to common stockholders	**$ 1.94**	$ 1.26	**$ 3.79**	$ 2.59
Diluted earnings per share attributable to common stockholders	**$ 1.92**	$ 1.26	**$ 3.75**	$ 2.56

The dilutive impact of stock-based compensation is calculated using the treasury stock method. 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. For each of the three and six months ended June 30, 2023, 1 million of outstanding stock options were excluded from the diluted EPS calculation because they were anti-dilutive. For the three and six months ended June 30, 2022, there were 2 million and 1 million, respectively, outstanding stock options excluded from the diluted EPS calculation because they were anti-dilutive. Basic and diluted EPS for the full-year is calculated using the weighted average shares of common stock outstanding during the year while quarterly basic and diluted EPS is calculated using the weighted average shares of common stock outstanding during the quarter; therefore, the sum of the four quarters' EPS may not equal full-year EPS.

NOTE R. COMMON STOCK

The Company's Board of Directors has authorized the Company to repurchase up to $4,000 million of its common stock pursuant to a stock repurchase program (the "Repurchase Program"). During the three and six months ended June 30, 2023, the Company repurchased $97 million and $137 million of its common stock under the Repurchase Program, leaving $898 million of authorized repurchases remaining under the Repurchase Program as of June 30, 2023. The Repurchase Program has no termination date, and the timing and amount of stock purchases are subject to market conditions and corporate needs. The Repurchase Program may be modified, suspended or discontinued at any time at the Company’s discretion.

ITEM 2. Management’s Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis is intended to help the reader understand our business, financial condition, results of operations, liquidity and capital resources. You should read this discussion in conjunction with our condensed consolidated interim financial statements and the related notes contained elsewhere in this Quarterly Report on Form 10-Q.

The statements in this discussion regarding industry trends, our expectations regarding our future performance, liquidity and capital resources and other non-historical statements are forward-looking statements. These forward-looking statements are subject to numerous risks and uncertainties, including, but not limited to, the risks and uncertainties described in “Cautionary Note Regarding Forward-Looking Statements” and Part II, Item 1A “Risk Factors” below, and in Part I, Item 1A "Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2022 as filed with the Securities and Exchange Commission on February 16, 2023. Our actual results may differ materially from those contained in or implied by any forward-looking statements.

Overview

Allison Transmission Holdings, Inc. and its subsidiaries (“Allison,” the “Company,” “we,” “us” or “our”) design and manufacture vehicle propulsion solutions, including commercial-duty on-highway, off-highway and defense fully automatic transmissions and electric hybrid and fully electric systems. The business was founded in 1915 and has been headquartered in Indianapolis, Indiana since inception. Allison is traded on the New York Stock Exchange under the symbol, “ALSN”.

Although approximately 74% of revenues were generated in North America in 2022, we have a global presence by serving customers in Asia, Europe, South America and Africa. We serve customers through an independent network of approximately 1,600 independent distributor and dealer locations worldwide.

Trends Impacting Our Business

Our net sales are driven by commercial vehicle production, which tends to be highly correlated to macroeconomic conditions and continues to be impacted by global supply chain constraints. In 2023, we expect higher net sales driven by higher customer demand in the Global On-Highway and Service Parts, Support Equipment and Other end markets, price increases on certain products and the continued execution of growth initiatives.

Second Quarter Net Sales by End Market (dollars in millions)

End Market	Q2 2023 Net Sales	Q2 2022 Net Sales	% Variance
North America On-Highway	**$ 397**	$ 340	17%
North America Off-Highway	**25**	20	25%
Defense	**33**	29	14%
Outside North America On-Highway	**123**	105	17%
Outside North America Off-Highway	**24**	32	(25)%
Service Parts, Support Equipment and Other	**181**	138	31%
Total Net Sales	**$ 783**	$ 664	18%

North America On-Highway end market net sales were up 17% for the second quarter 2023 compared to the second quarter 2022, principally driven by strength in customer demand for medium-duty and Class 8 vocational trucks and price increases on certain products.

Global Off-Highway end market net sales were down 6% for the second quarter 2023 compared to the second quarter 2022, principally driven by lower demand in the energy sector outside of North America, partially offset by higher demand in the mining and construction sectors outside of North America and higher demand for hydraulic fracturing applications in the North American energy sector.

Defense end market net sales were up 14% for the second quarter 2023 compared to the second quarter 2022, principally driven by increased demand for Wheeled vehicle applications.

Outside North America On-Highway end market net sales were up 17% for the second quarter 2023 compared to the second quarter 2022, principally driven by strength in customer demand in Europe and Asia, the continued execution of our growth initiatives and price increases on certain products.

Service Parts, Support Equipment and Other end market net sales were up 31% for the second quarter 2023 compared to the second quarter 2022, principally driven by higher demand for global service parts and support equipment and price increases on certain products.

Key Components of our Results of Operations

Net sales

We generate our net sales primarily from the sale of vehicle propulsion solutions, service and component parts, support equipment, defense kits, engineering services, royalties and extended transmission coverage to a wide array of original equipment manufacturers, distributors and the U.S. government. Sales are recorded in accordance with the terms of the contract, net of provisions for customer incentives 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 vehicle propulsion solutions and parts. For the six months ended June 30, 2023, 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 LTAs, as appropriate. See Part I, Item 3, “Quantitative and Qualitative Disclosures about Market Risk—Commodity Price Risk” included below.

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 intangible assets.

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.

Non-GAAP Financial Measures

We use Adjusted Earnings before Interest, Taxes, Depreciation, and Amortization ("EBITDA") and Adjusted EBITDA as a percent of net sales to measure our operating profitability. We believe that Adjusted EBITDA and Adjusted EBITDA as a percent of net sales 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 as a percent of net sales is also used in the calculation of management's incentive compensation program. The most directly comparable U.S. generally accepted accounting principles ("GAAP") measure to Adjusted EBITDA and Adjusted EBITDA as a percent of net sales is Net income and Net income as a percent of net sales, respectively. Adjusted EBITDA is calculated as earnings before interest expense, net, income tax expense, amortization of intangible assets, depreciation of property, plant and equipment and other adjustments as defined by the Second Amended and Restated Credit Agreement dated as of March 29, 2019, as amended (the "Credit Agreement") governing Allison Transmission, Inc.'s ("ATI"), our wholly-owned subsidiary, term loan facility in the amount of $622 million due March 2026 ("Term Loan"). Adjusted EBITDA as a percent of net sales 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. 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. Adjusted free cash flow is calculated as Net cash provided by operating activities after additions of long-lived assets.

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

	Three Months Ended June 30,		Six Months Ended June 30,	
(unaudited, dollars in millions)	**2023**	**2022**	**2023**	**2022**
Net income (GAAP)	**$ 175**	$ 122	**$ 345**	$ 251
plus:				
Income tax expense	**41**	32	**83**	66
Interest expense, net	**28**	30	**56**	59
Depreciation of property, plant and equipment	**27**	26	**53**	53
Amortization of intangible assets	**11**	12	**22**	23
Stock-based compensation expense (a)	**6**	6	**11**	9
Unrealized (gain) loss on marketable securities (b)	**—**	(4)	**(3)**	11
Technology-related investments gain (c)	**—**	—	**(3)**	(6)
Unrealized loss on foreign exchange (d)	**—**	2	**—**	3
Acquisition-related earnouts (e)	**—**	1	**—**	2
Adjusted EBITDA (Non-GAAP)	**$ 288**	$ 227	**$ 564**	$ 471
Net sales (GAAP)	**$ 783**	$ 664	**$ 1,524**	$ 1,341
Net income as a percent of net sales (GAAP)	**22.3%**	18.4%	**22.6%**	18.7%
Adjusted EBITDA as a percent of net sales (Non-GAAP)	**36.8%**	34.2%	**37.0%**	35.1%
Net cash provided by operating activities (GAAP)	**$ 141**	$ 64	**$ 334**	$ 226
Deductions to reconcile to Adjusted free cash flow:				
Additions of long-lived assets	**(19)**	(30)	**(43)**	(50)
Adjusted free cash flow (Non-GAAP)	**$ 122**	$ 34	**$ 291**	$ 176

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

(b) Represents (gains) losses (recorded in Other income (expense), net) related to an investment in the common stock of Jing-Jin Electric Technologies Co. Ltd.
(c) Represents gains (recorded in Other income (expense), net) related to investments in co-development agreements to expand our position in propulsion solution technologies.
(d) Represents losses (recorded in Other income (expense), net) on intercompany financing transactions for our India facility.
(e) Represents expenses (recorded in Selling, general and administrative and Engineering – research and development) for earnouts related to our acquisition of Vantage Power Limited.

Results of Operations

Comparison of three months ended June 30, 2023 and 2022

The following table sets forth certain financial information for the three months ended June 30, 2023 and 2022. The following table and discussion should be read in conjunction with the information contained in our condensed consolidated financial statements and the notes thereto included in Part I, Item 1 of this Quarterly Report on Form 10-Q.

	Three Months Ended June 30,			
(unaudited, dollars in millions)	**2023**	**% of net sales**	**2022**	**% of net sales**
Net sales	**$ 783**	**100 %**	$ 664	100 %
Cost of sales	**402**	**51**	353	53
Gross profit	**381**	**49**	311	47
Operating expenses:				
Selling, general and administrative	**92**	**12**	78	12
Engineering — research and development	**47**	**6**	46	7
Total operating expenses	**139**	**18**	124	19
Operating income	**242**	**31**	187	28
Interest expense, net	**(28)**	**(4)**	(30)	(5)
Other income (expense), net	**2**	**1**	(3)	—
Income before income taxes	**216**	**28**	154	23
Income tax expense	**(41)**	**(6)**	(32)	(5)
Net income	**$ 175**	**22 %**	$ 122	18 %

Net sales

Net sales for the quarter ended June 30, 2023 were $783 million compared to $664 million for the quarter ended June 30, 2022, an increase of 18%. The increase was principally driven by a $57 million, or 17%, increase in net sales in the North America On-Highway end market principally driven by strength in customer demand for medium-duty and Class 8 vocational trucks and price increases on certain products, a $43 million, or 31%, increase in net sales in the Service Parts, Support Equipment and Other end market principally driven by higher demand for global service parts and support equipment and price increases on certain products, an $18 million, or 17%, increase in net sales in the Outside North America On-Highway end market principally driven by strength in customer demand in Europe and Asia, the continued execution of our growth initiatives and price increases on certain products, a $4 million, or 14%, increase in net sales in the Defense end market principally driven by increased demand for Wheeled vehicle applications, partially offset by a $3 million, or 6%, decrease in net sales in the Global Off-Highway end market principally driven by lower demand in the energy sector outside of North America, partially offset by higher demand in the mining and construction sectors outside of North America and higher demand for hydraulic fracturing applications in the North American energy sector.

Cost of sales

Cost of sales for the quarter ended June 30, 2023 was $402 million compared to $353 million for the quarter ended June 30, 2022, an increase of 14%. The increase was principally driven by increased direct material and manufacturing expense commensurate with increased net sales.

Gross profit

Gross profit for the quarter ended June 30, 2023 was $381 million compared to $311 million for the quarter ended June 30, 2022, an increase of 23%. The increase was principally driven by $45 million of price increases on certain products and $43 million related to increased net sales, partially offset by $17 million of higher manufacturing expense. Gross profit as a percent of net sales for the three months ended June 30, 2023 increased

190 basis points compared to the same period in 2022 principally driven by price increases on certain products and increased net sales, partially offset by increased cost of goods sold.

Selling, general and administrative

Selling, general and administrative expenses for the quarter ended June 30, 2023 were $92 million compared to $78 million for the quarter ended June 30, 2022, an increase of 18%. The increase was principally driven by increased commercial activities spending, $5 million of higher incentive compensation expense and $3 million of increased product warranty expense.

Engineering — research and development

Engineering expenses for the quarter ended June 30, 2023 were $47 million compared to $46 million for the quarter ended June 30, 2022.

Interest expense, net

Interest expense, net for the quarter ended June 30, 2023 was $28 million compared to $30 million for the quarter ended June 30, 2022, a decrease of 7%. The decrease was principally driven by higher interest income on cash and cash equivalents.

Other income (expense), net

Other income (expense), net for the quarter ended June 30, 2023 was $2 million compared to ($3) million for the quarter ended June 30, 2022. The change was principally driven by $4 million of favorable foreign exchange and $3 million of favorable change associated with assets held in a rabbi trust, partially offset by $4 million of unfavorable change in marketable securities.

Income tax expense

Income tax expense for the three months ended June 30, 2023 was $41 million, resulting in an effective tax rate of 19%, compared to $32 million of income tax expense and an effective tax rate of 21% for the three months ended June 30, 2022. The increase in income tax expense was principally driven by increased taxable income.

Comparison of six months ended June 30, 2023 and 2022

The following table sets forth certain financial information for the six months ended June 30, 2023 and 2022. The following table and discussion should be read in conjunction with the information contained in our condensed consolidated financial statements and the notes thereto included in Part I, Item 1 of this Quarterly Report on Form 10-Q.

	Six Months Ended June 30,			
(unaudited, dollars in millions)	**2023**	**% of net sales**	**2022**	**% of net sales**
Net sales	**$ 1,524**	**100 %**	$ 1,341	100 %
Cost of sales	**782**	**51**	710	53
Gross profit	**742**	**49**	631	47
Operating expenses:				
Selling, general and administrative	**179**	**12**	153	11
Engineering — research and development	**91**	**6**	89	7
Total operating expenses	**270**	**18**	242	18
Operating income	**472**	**31**	389	29
Interest expense, net	**(56)**	**(3)**	(59)	(4)
Other income (expense), net	**12**	**—**	(13)	(1)
Income before income taxes	**428**	**28**	317	24
Income tax expense	**(83)**	**(5)**	(66)	(5)
Net income	**$ 345**	**23 %**	$ 251	19 %

Net sales

Net sales for the six months ended June 30, 2023 were $1,524 million compared to $1,341 million for the six months ended June 30, 2022, an increase of 14%. The increase was principally driven by an $87 million, or 13%, increase in net sales in the North America On-Highway end market principally driven by strength in customer demand for medium-duty and Class 8 vocational trucks and price increases on certain products, an $87 million, or 31%, increase in net sales in the Service Parts, Support Equipment and Other end market principally driven by higher demand for global service parts and support equipment, price increases on certain products and higher demand for aluminum die cast components, and a $17 million, or 8%, increase in net sales in the Outside North America On-Highway end market principally driven by price increases on certain products and the continued execution of our growth initiatives, partially offset by a $4 million, or 6%, decrease in net sales in the Defense end market principally driven by lower demand for Tracked vehicle applications partially offset by higher demand for Wheeled vehicle applications and a $4 million, or 4%, decrease in net sales in the Global Off-Highway end market principally driven by lower demand in the energy sector outside of North America partially offset by higher demand for hydraulic fracturing applications in the North American energy sector and higher demand in the mining and construction sectors outside of North America.

Cost of sales

Cost of sales for the six months ended June 30, 2023 was $782 million compared to $710 million for the six months ended June 30, 2022, an increase of 10%. The increase was principally driven by increased direct material and manufacturing expense commensurate with increased net sales and higher direct material costs.

Gross profit

Gross profit for the six months ended June 30, 2023 was $742 million compared to $631 million for the six months ended June 30, 2022, an increase of 18%. The increase was principally driven by $101 million of price increases on certain products and $47 million related to increased net sales, partially offset by $27 million of higher manufacturing expense and $9 million of higher direct material costs. Gross profit as a percent of net sales for the six months ended June 30, 2023 increased 160 basis points compared to the same period in 2022 principally driven by price increases on certain products and increased net sales, partially offset by increased cost of goods sold.

Selling, general and administrative

Selling, general and administrative expenses for the six months ended June 30, 2023 were $179 million compared to $153 million for the six months ended June 30, 2022, an increase of 17%. The increase was principally driven by increased commercial activities spending, $8 million of higher incentive compensation expense and $6 million of increased product warranty expense.

Engineering — research and development

Engineering expenses for the six months ended June 30, 2023 were $91 million compared to $89 million for the six months ended June 30, 2022.

Interest expense, net

Interest expense, net for the six months ended June 30, 2023 was ($56) million compared to ($59) million for the six months ended June 30, 2022, a decrease of 5%. The decrease was principally driven by higher interest income on cash and cash equivalents.

Other income (expense), net

Other income (expense), net for the six months ended June 30, 2023 was $12 million compared to ($13) million for the six months ended June 30, 2022. The change was principally driven by $14 million of favorable change in marketable securities, $8 million of favorable foreign exchange and $5 million of favorable change associated with assets held in a rabbi trust, partially offset by $3 million unfavorable change in technology-related investment gains.

Income tax expense

Income tax expense for the six months ended June 30, 2023 was $83 million, resulting in an effective tax rate of 19%, compared to $66 million of income tax expense and an effective tax rate of 21% for the six months ended June 30, 2022. The increase in income tax expense was principally driven by increased taxable income.

Liquidity and Capital Resources

We generate cash primarily from our operations to fund our operating, investing and financing activities. Our principal uses of cash are operating expenses, capital expenditures, working capital needs, debt service, dividends on common stock, stock repurchases and strategic growth initiatives, including investments, acquisitions and collaborations. Our ability to generate cash in the future and our future uses of cash are subject to general economic, financial, competitive, legislative, regulatory and other factors that may be beyond our control. We had total available cash and cash equivalents of $351 million and $232 million as of June 30, 2023 and December 31, 2022, respectively. Of the available cash and cash equivalents, $195 million was deposited in operating accounts and $156 million was invested in U.S. government backed securities and time deposits as of June 30, 2023, compared to $121 million deposited in operating accounts and $111 million invested in U.S. government backed securities as of December 31, 2022.

As of June 30, 2023, the total of cash held by foreign subsidiaries was $90 million, the majority of which was at our subsidiaries located in the Netherlands, China, India and Japan. 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 currently anticipate that local liquidity restrictions will preclude us from funding our targeted initiatives or operating needs with local resources.

We have not recognized any deferred tax liabilities associated with earnings in foreign subsidiaries, except for our subsidiary located in China, as they are intended to be permanently reinvested and used to support foreign operations or have no associated tax requirements. We have recorded a deferred tax liability of $3 million for the tax liability associated with the remittance of previously taxed income and unremitted earnings for our subsidiary located in China. The remaining deferred tax liabilities, if recorded, related to unremitted earnings that are indefinitely reinvested are not material.

Our liquidity requirements are significant, primarily due to our debt service requirements. As of June 30, 2023, we had $622 million of indebtedness associated with ATI’s Term Loan, $400 million of indebtedness associated with ATI’s 4.75% Senior Notes due October 2027 (“4.75% Senior Notes”), $500 million of indebtedness associated with ATI’s 5.875% Senior Notes due June 2029 (“5.875% Senior Notes”) and $1,000 million of indebtedness associated with ATI’s 3.75% Senior Notes due January 2031 (“3.75% Senior Notes” and, together with the 4.75% Senior Notes and 5.875% Senior Notes, the “Senior Notes”). Short-term and long-term debt service liquidity requirements consist of $2 million of minimum required quarterly principal payments on ATI’s Term Loan through its maturity date of March 2026 and periodic interest payments on ATI’s Term Loan and the Senior Notes. There are no required quarterly principal payments on the Senior Notes. Long-term debt service liquidity requirements also consist of the payment in full of any remaining principal balance of ATI’s Term Loan and the Senior Notes upon their respective maturity dates.

We made $3 million of principal payments on the Term Loan during each of the six months ended June 30, 2023 and 2022. Our ability to make payments on and refinance our indebtedness and to fund planned capital expenditures and growth initiatives will depend on our ability to generate cash in the future.

The Senior Secured Credit Facility provides for a $650 million Revolving Credit Facility, net of an allowance for up to $75 million in outstanding letter of credit commitments. As of June 30, 2023, we had $645 million available under the Revolving Credit Facility, net of $5 million in letters of credit. As of June 30, 2023, we had no amounts outstanding under the Revolving Credit Facility. If we have commitments outstanding on the Revolving Credit Facility at the end of a fiscal quarter, the Senior Secured Credit Facility requires us to maintain a specified maximum first lien net leverage ratio of 5.50x. Additionally, within the terms of the Senior Secured Credit Facility, a first lien net 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 June 30, 2023, our first lien net leverage ratio was 0.26x. The Senior Secured Credit Facility also provides certain financial incentives based on our first lien net leverage ratio. A first lien net leverage ratio at or below 4.00x and above 3.50x results in a 25 basis point reduction to the applicable margin on the Revolving Credit Facility. A first lien net leverage ratio at or below 3.50x results in an additional 25 basis point reduction to the applicable margin on the Revolving Credit Facility. These reductions remain in effect as long as we achieve a first lien net leverage ratio at or below the related threshold.

In addition, the Credit Agreement includes, among other things, customary restrictions (subject to certain exceptions) on our ability to incur certain indebtedness, grant certain liens, make certain investments, engage in acquisitions, consolidations and mergers, declare or pay certain dividends, and repurchase shares of our common stock. The indentures governing the Senior Notes contain negative covenants restricting or limiting our ability to, among other things, incur or guarantee additional indebtedness, incur liens, pay dividends on, redeem or repurchase our capital stock, make certain investments, permit payment or dividend restrictions on certain of our subsidiaries, sell assets, engage in certain transactions with affiliates, and consolidate or merge or sell all or substantially all of our assets. As of June 30, 2023, we are in compliance with all covenants under the Senior Secured Credit Facility and indentures governing the Senior Notes.

Our credit ratings and outlook are reviewed periodically by Moody’s Investors Service, Inc. (“Moody’s”) and Fitch Ratings, Inc. (“Fitch”). As of June 30, 2023, our credit ratings from both Moody's and Fitch are shown in the table below:

	June 30, 2023	
Credit Ratings	**Moody's**	**Fitch**
Corporate Credit	Ba1	BB+
Term Loan	Baa2	BBB-
4.75% Senior Notes	Ba2	BB+
5.875% Senior Notes	Ba2	BB+
3.75% Senior Notes	Ba2	BB+

Our Board of Directors has authorized us to repurchase up to $4,000 million of our common stock pursuant to a stock repurchase program (the "Repurchase Program"). During the six months ended June 30, 2023, we repurchased approximately $137 million of our common stock under the Repurchase Program. All of the repurchase transactions during the six months ended June 30, 2023 were settled in cash during the same period. As of June 30, 2023, we had approximately $898 million available under the Repurchase Program.

The following table shows our sources and uses of funds for the six months ended June 30, 2023 and 2022 (dollars in millions):

	Six Months Ended June 30,	
Statements of Cash Flows Data	2023	2022
Cash flows provided by operating activities	**$ 334**	$ 226
Cash flows used for investing activities	**$ (41)**	$ (68)
Cash flows used for financing activities	**$ (174)**	$ (162)

Generally, cash provided by operating activities has been adequate to fund our operations. We have significant liquidity, including $351 million of cash and cash equivalents and $645 million available under the Revolving Credit Facility, net of $5 million of letters of credit, as of June 30, 2023. At this time, we believe cash provided by operating activities, cash and cash equivalents and borrowing capacity under the Revolving Credit Facility will be sufficient to meet our known and anticipated cash requirements for the next twelve months and thereafter.

Cash provided by operating activities

Operating activities for the six months ended June 30, 2023 generated $334 million of cash compared to $226 million for the six months ended June 30, 2022. The increase was principally driven by higher gross profit and lower operating working capital requirements, partially offset by higher cash income taxes.

Cash used for investing activities

Investing activities for the six months ended June 30, 2023 used $41 million of cash compared to $68 million for the six months ended June 30, 2022. The decrease was principally driven by $23 million in cash paid for business acquisitions during the first half of 2022 that did not reoccur in the first half of 2023 and a $7 million decrease in capital expenditures, partially offset by $4 million of lower proceeds from technology-related investments.

Cash used for financing activities

Financing activities for the six months ended June 30, 2023 used $174 million of cash compared to $162 million for the six months ended June 30, 2022. The increase was principally driven by $22 million of increased stock repurchases under the Repurchase Program, partially offset by $13 million of higher proceeds from the exercise of stock options.

Contingencies

We are a party to various legal actions and administrative proceedings and subject to various claims arising in the ordinary course of business, including those relating to commercial transactions, product liability, personal injury and workers’ compensation, safety, health, taxes, environmental and other matters. For more information, see "Note P. Commitments and Contingencies” of our condensed consolidated financial statements included in Part I, Item 1 of this Quarterly Report on Form 10-Q.

Critical Accounting Policies and Significant Accounting Estimates

A discussion of our critical accounting policies and significant accounting estimates is included in Part II, Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in our Annual Report on Form 10-K for the year ended December 31, 2022 as filed with the Securities and Exchange Commission on February 16, 2023. The preparation of the condensed 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 revenues and expenses during the applicable reporting period. 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. Within the context of these critical accounting estimates, we are not currently aware of any reasonably likely events or circumstances that would result in different policies or estimates being reported for the three and six months ended June 30, 2023.

Recently Issued Accounting Pronouncements

See "Note B. Summary of Significant Accounting Policies” in Part I, Item 1, of this Quarterly Report on Form 10-Q.

Cautionary Note Regarding Forward-Looking Statements

This Quarterly Report on Form 10-Q 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 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: our participation in markets that are competitive; our ability to prepare for, respond to and successfully achieve our objectives relating to technological and market developments, competitive threats and changing customer needs, including with respect to electric hybrid and fully electric commercial vehicles; increases in cost, disruption of supply or shortage of labor, freight, raw materials, energy or components used to manufacture or transport our products or those of our customers or suppliers, including as a result of geopolitical risks, wars and pandemics; global economic volatility; general economic and industry conditions, including the risk of recession; labor strikes, work stoppages or similar labor disputes, which could significantly disrupt our operations or those of our principal customers or suppliers; the duration and spread of the COVID-19 pandemic, including new variants of the virus and the pace and availability of vaccines and boosters, mitigating efforts deployed by government agencies and the public at large, and the overall impact from such outbreak on economic conditions, financial market volatility and our business, including but not limited to the operations of our manufacturing and other facilities, the availability of labor, our supply chain, our distribution processes and demand for our products and the corresponding impacts to our net sales and cash flow; the highly cyclical industries in which certain of our end users operate; uncertainty in the global regulatory and business environments in which we operate; the concentration of our net sales in our top five customers and the loss of any one of these; the failure of markets outside North America to increase adoption of fully automatic transmissions; the success of our research and development efforts, the outcome of which is uncertain; U.S. and foreign defense spending; risks associated with our international operations, including acts of war and increased trade protectionism; 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 identify, consummate and effectively integrate acquisitions and collaborations; and risks related to our indebtedness.

Important factors that could cause actual results to differ materially from our expectations are disclosed in Part I, Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2022 as filed with the Securities and Exchange Commission on February 16, 2023 and Part II, Item 1A of this Quarterly Report on Form 10-Q. All written and oral forward-looking statements attributable to us, or persons acting on our behalf, are expressly qualified in their entirety by these 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 Quarterly Report on Form 10-Q in the context of these risks and uncertainties.

ITEM 3. 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

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 $1,267 million, including $645 million under our Revolving Credit Facility, net of $5 million of letters of credit. As of June 30, 2023, we held interest rate swap contracts that, in the aggregate, effectively hedge $500 million of the variable rate debt associated with the Term Loan at the forward-looking term rate based on the Secured Overnight Financing Rate weighted average fixed rate of 2.81% through September 2025. A one-eighth percent increase or decrease in assumed interest rates for the Senior Secured Credit Facility, if fully drawn as of June 30, 2023, would have an impact of approximately $1 million on interest expense per year. As of June 30, 2023, we had no outstanding borrowings against the Revolving Credit Facility.

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 Brazilian Real, British Pound, Canadian Dollar, Chinese Yuan Renminbi, Euro, Hungarian Forint, Indian Rupee and Japanese Yen. 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 Chinese Yuan Renminbi, Euro, Indian Rupee, and Japanese Yen would correspondingly change our earnings, net of tax, by an estimated $6 million per year. We believe our other direct exposure to foreign currencies is immaterial.

Commodity Price Risk

We are subject to changes in our cost of sales caused by movements in underlying commodity prices. As of June 30, 2023, approximately 67% of our cost of sales consisted 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 includes 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 includes 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 LTAs. We historically have not entered into long-term purchase contracts related to the purchase of aluminum and steel.

Assuming current levels of commodity purchases, a 10% variation in the price of aluminum and steel would correspondingly change our earnings by approximately $9 million and $12 million per year, respectively.

Many of our LTAs have incorporated a cost-sharing arrangement related to potential future commodity price fluctuations. For purposes of the sensitivity analysis above, the impact of these cost sharing arrangements has not been included.

ITEM 4. 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 Securities Exchange Act of 1934, as amended (the "Exchange Act")) as of the end of the period covered by this report. 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 the end of the period covered by this Quarterly Report on Form 10-Q 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.

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 period covered by this Quarterly Report on Form 10-Q that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

From time to time, we are a party to various legal actions in the normal course of our business, including those related to commercial transactions, product liability, personal injury and workers' compensation, safety, health, taxes, environmental and other matters. Information pertaining to legal proceedings can be found in "Note P. Commitments and Contingencies" in the notes to the condensed consolidated financial statements included in Part I, Item 1 of this Quarterly Report on Form 10-Q, which information is incorporated herein by reference.

Item 1A. Risk Factors

There have been no material changes from our risk factors as previously reported in Part I, Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2022 as filed with the Securities and Exchange Commission on February 16, 2023.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

The following table sets forth information related to our repurchases of our common stock on a monthly basis in the three months ended June 30, 2023:

	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares that May Yet Be Purchased Under Plans(1)
April 1 – April 30, 2023	832,020	$ 45.67	832,020	$ 957,132,405
May 1 – May 31, 2023	1,040,523	$ 48.06	1,040,523	$ 907,121,147
June 1 – June 30, 2023	179,611	$ 50.12	179,611	$ 898,119,727
	2,052,154	$ 47.27	2,052,154	

(1) These values reflect the amounts that may be repurchased under the Repurchase Program approved by the Board of Directors on November 14, 2016 and the increases approved by the Board of Directors on November 8, 2017, July 30, 2018, May 9, 2019 and February 24, 2022, which in the aggregate total authorized repurchases of $4,000 million. The Repurchase Program has no termination date.

Item 5. Other Information

Insider Trading Arrangements

The following table sets forth information related to the Company's directors and officers who adopted, modified or terminated any contract, instruction or written plan for the purchase or sale of Company securities that was intended to satisfy the affirmative defense conditions of Rule 10b5-1(c) ("Rule 10b5-1 trading arrangement") or any “non-Rule 10b5-1 trading arrangement,” as such term is defined in Item 408(c) of Regulation S-K, during the three months ended June 30, 2023:

				Trading Arrangement			
Name	Title	Action	Date	Rule 10b5-1*	Non-Rule 10b5-1**	Total Shares to be Sold	Expiration Date
G. Frederick Bohley(1)	Senior Vice President, Chief Financial Officer and Treasurer	Adopted	5/30/2023	X		4,950	2/16/2024

* Intended to satisfy the affirmative defense of Rule 10b5-1(c)
** Not intended to satisfy the affirmative defense of Rule 10b5-1(c)
(1) Mr. Bohley’s plan provides for the potential exercise of up to 4,950 vested stock options prior to their expiration on February 18, 2024 and the associated sale of the underlying common stock.

Item 6. Exhibits

(a) Exhibits

Exhibit Number	Description
3.1	Amended and Restated Bylaws of Allison Transmission Holdings, Inc. effective as of May 4, 2023 (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed May 5, 2023)
31.1	Certification of Chief Executive Officer pursuant to Rule 13a-14(a)/15d-14(a) as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith)
31.2	Certification of Chief Financial Officer pursuant to Rule 13a-14(a)/15d-14(a) as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith)
32.1	Certification of Periodic Report by Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (filed herewith)
101	The following financial information from the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2023, formatted in Inline XBRL (eXtensible Business Reporting Language): (i) the Condensed Consolidated Balance Sheets; (ii) the Condensed Consolidated Statements of Comprehensive Income; (iii) the Condensed Consolidated Statements of Cash Flows; (iv) the Condensed Consolidated Statements of Stockholders' Equity; and (v) the Notes to Condensed Consolidated Financial Statements
104	Cover Page Interactive Data File – The cover page from the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2023, formatted in Inline XBRL and contained in Exhibit 101

SIGNATURES

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

ALLISON TRANSMISSION HOLDINGS, INC.

Date: July 28, 2023	By:	/s/ David S. Graziosi	
		Name:	David S. Graziosi
		Title:	Chairman, President and Chief Executive Officer (Principal Executive Officer)
Date: July 28, 2023	By:	/s/ G. Frederick Bohley	
		Name:	G. Frederick Bohley
		Title:	Senior Vice President, Chief Financial Officer and Treasurer (Principal Financial Officer and Principal Accounting Officer)

Exhibit 31.1

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 Quarterly Report on Form 10-Q 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:

Name: David S. Graziosi
Title: Chairman, President and Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

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, G. Frederick Bohley, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q 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:

Name: G. Frederick Bohley
Title: Senior Vice President, Chief Financial Officer and Treasurer
(Principal Financial Officer)

Exhibit 31.2

Exhibit 32.1

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 Quarterly Report of Allison Transmission Holdings, Inc. (the “Company”) on Form 10-Q for the quarter ending June 30, 2023 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), we, David S. Graziosi, Chairman, President and Chief Executive Officer of the Company, and G. Frederick Bohley, Senior Vice 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:

David S. Graziosi
Chairman, President and Chief Executive Officer
(Principal Executive Officer)

Dated:

G. Frederick Bohley
Senior Vice President, Chief Financial Officer and Treasurer
(Principal Financial Officer)