

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549**

FORM 10-Q

(Mark One)

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

For the quarterly period ended September 30, 2023

OR

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

For the transition period from _____ to _____

Commission file number: 1-6003



FEDERAL SIGNAL CORPORATION

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

36-1063330

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

1415 West 22nd Street, Oak Brook, Illinois

(Address of principal executive offices)

60523

(Zip code)

(630) 954-2000

(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, par value \$1.00 per share	FSS	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	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
Emerging growth company	<input type="checkbox"/>		

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 October 31, 2023, the number of shares outstanding of the registrant's common stock was 60,928,813.

FEDERAL SIGNAL CORPORATION
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FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q (“Form 10-Q”) is being filed by Federal Signal Corporation and its subsidiaries (referred to collectively as the “Company,” “we,” “our” or “us” herein, unless the context otherwise indicates) with the United States (“U.S.”) Securities and Exchange Commission (the “SEC”), and includes comments made by management that may contain words such as “may,” “will,” “believe,” “expect,” “anticipate,” “intend,” “plan,” “project,” “estimate” and “objective” or similar terminology, or the negative thereof, concerning the Company’s future financial performance, business strategy, plans, goals and objectives. These expressions are intended to identify forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”), Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), and the Private Securities Litigation Reform Act of 1995. Forward-looking statements include information concerning the Company’s possible or assumed future performance or results of operations and are not guarantees. While these statements are based on assumptions and judgments that management has made in light of industry experience as well as perceptions of historical trends, current conditions, expected future developments and other factors believed to be appropriate under the circumstances, they are subject to risks, uncertainties and other factors that may cause the Company’s actual results, performance or achievements to be materially different.

These risks and uncertainties, some of which are beyond the Company’s control, include the risk factors described under Part I, Item 1A, *Risk Factors*, of the Company’s Annual Report on Form 10-K for the year ended December 31, 2022, which was filed with the SEC on March 1, 2023. These factors may not constitute all factors that could cause actual results to differ materially from those discussed in any forward-looking statement. The Company operates in a continually changing business environment and new factors emerge from time to time, including, for example, the ongoing coronavirus pandemic and the government response to the pandemic. The Company cannot predict such factors, nor can it assess the impact, if any, of such factors on its results of operations, financial condition or cash flow. Accordingly, forward-looking statements should not be relied upon as a predictor of actual results. The Company disclaims any responsibility to update any forward-looking statement provided in this Form 10-Q.

ADDITIONAL INFORMATION

The Company is subject to the reporting and information requirements of the Exchange Act and, as a result, is obligated to file Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and other reports and information with the SEC, as well as amendments to those reports. The Company makes these filings available free of charge through our website at www.federalsignal.com as soon as reasonably practicable after such materials are filed with, or furnished to, the SEC. Information on our website does not constitute part of this Form 10-Q. In addition, the SEC maintains a website at www.sec.gov that contains reports, proxy and information statements, and other information regarding issuers that file electronically.

PART I. FINANCIAL INFORMATION

Item 1. Financial Statements (Unaudited).

**FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS (Unaudited)**

(in millions, except per share data)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Net sales	\$ 446.4	\$ 346.4	\$ 1,274.3	\$ 1,043.3
Cost of sales	328.7	263.6	943.5	795.0
Gross profit	117.7	82.8	330.8	248.3
Selling, engineering, general and administrative expenses	50.6	39.8	156.0	125.5
Amortization expense	3.9	3.1	11.4	9.6
Acquisition and integration-related expenses (benefits)	0.7	0.4	2.0	(1.0)
Operating income	62.5	39.5	161.4	114.2
Interest expense, net	5.1	2.7	15.4	5.9
Other expense (income), net	0.3	0.1	1.5	(0.6)
Income before income taxes	57.1	36.7	144.5	108.9
Income tax expense	13.8	4.9	33.5	23.1
Net income	<u>\$ 43.3</u>	<u>\$ 31.8</u>	<u>\$ 111.0</u>	<u>\$ 85.8</u>
Earnings per share:				
Basic	\$ 0.71	\$ 0.53	\$ 1.83	\$ 1.42
Diluted	0.71	0.52	1.81	1.40
Weighted average common shares outstanding:				
Basic	60.8	60.4	60.7	60.5
Diluted	61.4	61.0	61.4	61.1

See notes to condensed consolidated financial statements.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (Unaudited)

(in millions)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Net income	\$ 43.3	\$ 31.8	\$ 111.0	\$ 85.8
Other comprehensive income (loss):				
Change in foreign currency translation adjustment	(5.1)	(11.9)	(0.4)	(22.1)
Change in unrecognized net actuarial loss and prior service cost related to pension benefit plans, net of income tax expense of \$0.3, \$0.3, \$0.3 and \$0.8, respectively	0.9	1.8	0.8	4.9
Change in unrealized gain or loss on interest rate swaps, net of income tax expense (benefit) of \$0.0, \$0.4, \$(0.1) and \$1.2, respectively	0.1	1.1	(0.2)	3.4
Total other comprehensive (loss) income	(4.1)	(9.0)	0.2	(13.8)
Comprehensive income	\$ 39.2	\$ 22.8	\$ 111.2	\$ 72.0

See notes to condensed consolidated financial statements.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
CONDENSED CONSOLIDATED BALANCE SHEETS

(in millions, except per share data)	September 30, 2023	December 31, 2022
	(Unaudited)	
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 41.0	\$ 47.5
Accounts receivable, net of allowances for doubtful accounts of \$2.4 and \$2.5, respectively ..	213.3	173.8
Inventories	330.1	292.7
Prepaid expenses and other current assets	19.3	17.4
Total current assets	603.7	531.4
Properties and equipment, net of accumulated depreciation of \$169.9 and \$156.4, respectively	188.3	179.3
Rental equipment, net of accumulated depreciation of \$51.1 and \$45.4, respectively	130.3	109.1
Operating lease right-of-use assets	23.7	24.7
Goodwill	473.6	453.4
Intangible assets, net of accumulated amortization of \$66.8 and \$55.4, respectively	212.2	208.2
Deferred tax assets	12.1	8.8
Other long-term assets	10.7	9.4
Total assets	<u>\$ 1,654.6</u>	<u>\$ 1,524.3</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Current portion of long-term borrowings and finance lease obligations	\$ 3.9	\$ 1.5
Accounts payable	82.4	72.4
Customer deposits	27.6	25.4
Accrued liabilities:		
Compensation and withholding taxes	34.5	31.1
Current operating lease liabilities	7.4	6.9
Other current liabilities	46.8	43.2
Total current liabilities	202.6	180.5
Long-term borrowings and finance lease obligations	362.0	361.5
Long-term operating lease liabilities	17.0	18.5
Long-term pension and other postretirement benefit liabilities	38.8	38.9
Deferred tax liabilities	56.7	51.0
Other long-term liabilities	21.6	13.0
Total liabilities	698.7	663.4
Stockholders' equity:		
Common stock, \$1 par value per share, 90.0 shares authorized, 69.9 and 69.5 shares issued, respectively	69.9	69.5
Capital in excess of par value	284.7	271.8
Retained earnings	875.5	782.2
Treasury stock, at cost, 9.0 and 8.8 shares, respectively	(190.4)	(178.6)
Accumulated other comprehensive loss	(83.8)	(84.0)
Total stockholders' equity	955.9	860.9
Total liabilities and stockholders' equity	<u>\$ 1,654.6</u>	<u>\$ 1,524.3</u>

See notes to condensed consolidated financial statements.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS (Unaudited)

(in millions)	Nine Months Ended September 30,	
	2023	2022
Operating activities:		
Net income	\$ 111.0	\$ 85.8
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	45.1	40.7
Stock-based compensation expense	8.9	7.5
Changes in fair value of contingent consideration	(0.2)	—
Amortization of interest rate swap settlement gain	(1.8)	—
Deferred income taxes	2.0	0.3
Changes in operating assets and liabilities	(74.0)	(101.9)
Net cash provided by operating activities	91.0	32.4
Investing activities:		
Purchases of properties and equipment	(21.4)	(45.6)
Payments for acquisition-related activity, net of cash acquired	(55.1)	(6.6)
Other, net	0.8	2.1
Net cash used for investing activities	(75.7)	(50.1)
Financing activities:		
Increase in revolving lines of credit, net	4.6	49.9
Purchases of treasury stock	(4.3)	(16.1)
Redemptions of common stock to satisfy withholding taxes related to stock-based compensation	(5.6)	(3.0)
Payments for acquisition-related activity	(0.5)	—
Cash dividends paid to stockholders	(17.7)	(16.4)
Proceeds from stock-based compensation activity	2.3	0.1
Other, net	—	(0.1)
Net cash (used for) provided by financing activities	(21.2)	14.4
Effects of foreign exchange rate changes on cash and cash equivalents	(0.6)	(1.7)
Decrease in cash and cash equivalents	(6.5)	(5.0)
Cash and cash equivalents at beginning of year	47.5	40.5
Cash and cash equivalents at end of period	\$ 41.0	\$ 35.5

See notes to condensed consolidated financial statements.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (Unaudited)

Three Months Ended September 30, 2023						
(in millions)	Common Stock	Capital in Excess of Par Value	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Loss	Total
Balance at July 1, 2023	\$ 69.9	\$ 280.9	\$ 838.3	\$ (185.5)	\$ (79.7)	\$ 923.9
Net income			43.3			43.3
Total other comprehensive loss					(4.1)	(4.1)
Cash dividends declared (\$0.10 per share)			(6.1)			(6.1)
Stock-based payments:						
Stock-based compensation		3.1				3.1
Stock option exercises and other	—	0.7		(0.6)		0.1
Stock repurchase program				(4.3)		(4.3)
Balance at September 30, 2023	<u>\$ 69.9</u>	<u>\$ 284.7</u>	<u>\$ 875.5</u>	<u>\$ (190.4)</u>	<u>\$ (83.8)</u>	<u>\$ 955.9</u>
Three Months Ended September 30, 2022						
(in millions)	Common Stock	Capital in Excess of Par Value	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Loss	Total
Balance at July 1, 2022	\$ 69.2	\$ 262.4	\$ 726.7	\$ (170.2)	\$ (79.0)	\$ 809.1
Net income			31.8			31.8
Total other comprehensive loss					(9.0)	(9.0)
Cash dividends declared (\$0.09 per share)			(5.5)			(5.5)
Stock-based payments:						
Stock-based compensation		2.1				2.1
Stock option exercises and other	—	0.6		(1.1)		(0.5)
Balance at September 30, 2022	<u>\$ 69.2</u>	<u>\$ 265.1</u>	<u>\$ 753.0</u>	<u>\$ (171.3)</u>	<u>\$ (88.0)</u>	<u>\$ 828.0</u>
Nine Months Ended September 30, 2023						
(in millions)	Common Stock	Capital in Excess of Par Value	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Loss	Total
Balance at January 1, 2023	\$ 69.5	\$ 271.8	\$ 782.2	\$ (178.6)	\$ (84.0)	\$ 860.9
Net income			111.0			111.0
Total other comprehensive income					0.2	0.2
Cash dividends declared (\$0.29 per share)			(17.7)			(17.7)
Stock-based payments:						
Stock-based compensation		8.2				8.2
Stock option exercises and other	0.3	4.8		(4.2)		0.9
Performance share unit transactions	0.1	(0.1)		(3.3)		(3.3)
Stock repurchase program				(4.3)		(4.3)
Balance at September 30, 2023	<u>\$ 69.9</u>	<u>\$ 284.7</u>	<u>\$ 875.5</u>	<u>\$ (190.4)</u>	<u>\$ (83.8)</u>	<u>\$ 955.9</u>

Nine Months Ended September 30, 2022						
(in millions)	Common Stock	Capital in Excess of Par Value	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Loss	Total
Balance at January 1, 2022	\$ 68.9	\$ 256.7	\$ 683.6	\$ (151.0)	\$ (74.2)	\$ 784.0
Net income			85.8			85.8
Total other comprehensive loss					(13.8)	(13.8)
Cash dividends declared (\$0.27 per share)			(16.4)			(16.4)
Stock-based payments:						
Stock-based compensation		6.8				6.8
Stock option exercises and other	0.2	1.7		(2.9)		(1.0)
Performance share unit transactions	0.1	(0.1)		(1.3)		(1.3)
Stock repurchase program				(16.1)		(16.1)
Balance at September 30, 2022	<u>\$ 69.2</u>	<u>\$ 265.1</u>	<u>\$ 753.0</u>	<u>\$ (171.3)</u>	<u>\$ (88.0)</u>	<u>\$ 828.0</u>

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(Unaudited)

NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Organization and Description of the Business

Federal Signal Corporation was founded in 1901 and was reincorporated as a Delaware corporation in 1969. References herein to the “Company,” “we,” “our” or “us” refer collectively to Federal Signal Corporation and its subsidiaries.

Products manufactured and services rendered by the Company are divided into two reportable segments: Environmental Solutions Group and Safety and Security Systems Group. The individual operating businesses are organized as such because they share certain characteristics, including technology, marketing, distribution and product application, which create long-term synergies. These segments are discussed in Note 12 – Segment Information.

Basis of Presentation and Consolidation

The accompanying unaudited condensed consolidated financial statements represent the consolidation of Federal Signal Corporation and its subsidiaries included herein and have been prepared by the Company pursuant to the rules and regulations of the United States (“U.S.”) Securities and Exchange Commission (the “SEC”). Certain information and footnote disclosures normally included in financial statements prepared in accordance with U.S. generally accepted accounting principles (“GAAP”) have been condensed or omitted pursuant to such rules and regulations, although the Company believes that the disclosures presented herein are adequate to ensure the information presented is not misleading. Except as otherwise noted, these condensed consolidated financial statements have been prepared in accordance with the Company’s accounting policies described in the Company’s Annual Report on Form 10-K for the year ended December 31, 2022, and should be read in conjunction with those consolidated financial statements and the notes thereto.

These condensed consolidated financial statements include all normal and recurring adjustments that we considered necessary to present a fair statement of our results of operations, financial condition and cash flow. Intercompany balances and transactions have been eliminated in consolidation.

The results reported in these condensed consolidated financial statements should not be regarded as necessarily indicative of results that may be expected for the entire year, which may differ materially due to, among other things, the risk factors described under Part I, Item 1A, *Risk Factors*, of the Company’s Annual Report on Form 10-K for the year ended December 31, 2022, which was filed with the SEC on March 1, 2023. While we label our quarterly information using a calendar convention whereby our first, second and third quarters are labeled as ending on March 31, June 30 and September 30, respectively, it is our longstanding practice to establish interim quarterly closing dates based on a 13-week period ending on a Saturday, with our fiscal year ending on December 31. The effects of this practice are not material and exist only within a reporting year.

Recent Accounting Pronouncements and Accounting Changes

There are no new accounting pronouncements issued, but not yet adopted, that are expected to have a material impact on the Company’s results of operations, financial position or cash flow.

Use of Estimates

The preparation of consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect (i) the reported amounts of assets and liabilities, (ii) the disclosure of contingent assets and liabilities at the date of the consolidated financial statements and (iii) the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Significant Accounting Policies

There have been no changes to the Company’s significant accounting policies as disclosed in the Company’s Annual Report on Form 10-K for the year ended December 31, 2022.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)
(Unaudited)

NOTE 2 – ACQUISITIONS

Acquisitions Completed in 2023

Acquisition of Trackless

On April 3, 2023, the Company completed the acquisition of substantially all the assets and operations of Trackless Vehicles Limited and Trackless Vehicles Asset Corp, including the wholly-owned subsidiary Work Equipment Ltd. (collectively, “Trackless”), a leading Canadian manufacturer of off-road, multi-purpose tractors and attachments. The Company expects that the Trackless acquisition will further bolster its position as an industry leading diversified industrial manufacturer of specialized vehicles for maintenance and infrastructure markets with leading brands of premium, value-adding products, and a strong supporting aftermarket platform.

The assets and liabilities of Trackless have been consolidated into the Company’s Condensed Consolidated Balance Sheet as of September 30, 2023, and the post-acquisition results of operations have been included in the Condensed Consolidated Statements of Operations, within the Environmental Solutions Group.

The initial cash consideration paid by the Company to acquire Trackless was C\$56.3 million (approximately \$41.9 million), inclusive of certain closing adjustments, of which C\$1.0 million (approximately \$0.7 million) was received in the three months ended September 30, 2023. In addition, there is a contingent earn-out payment of up to C\$6.0 million (approximately \$4.5 million), based upon the achievement of certain financial targets over a specified performance period. The purchase price was funded through existing cash and borrowings under the Company’s credit agreement.

The acquisition is being accounted for in accordance with Accounting Standards Codification (“ASC”) 805, *Business Combinations*. Accordingly, the total purchase price has been allocated on a preliminary basis to assets acquired and liabilities assumed in connection with the acquisition based on their estimated fair values as of the completion of the acquisition. A single estimate of fair value results from a complex series of judgments about future events and uncertainties and relies heavily on estimates and assumptions. The Company’s judgments used to determine the estimated fair value assigned to each class of assets acquired and liabilities assumed, as well as asset lives, can materially impact the Company’s results of operations. The Company’s purchase price allocation as of September 30, 2023 reflects various provisional estimates that were based on the information that was available as of the acquisition date and the filing date of this Form 10-Q. The Company believes that information provides a reasonable basis for estimating the fair values of assets acquired and liabilities assumed; however, the determination of those fair values is not yet finalized. Thus, the preliminary measurements of fair value set forth in the table below are subject to change during the measurement period as valuations are finalized. The Company expects to finalize the valuation and complete the purchase price allocation as soon as practicable.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)
(Unaudited)

The following table summarizes the preliminary fair value of assets acquired and liabilities assumed as of the acquisition date:

(in millions)	
Purchase price, inclusive of closing adjustments	\$ 41.9
Estimated fair value of additional consideration ^(a)	4.5
Total consideration	46.4
Accounts receivable	4.7
Inventories	14.3
Prepaid expenses and other current assets	0.1
Rental equipment	1.6
Properties and equipment	4.4
Customer relationships ^(b)	10.5
Trade names ^(c)	2.8
Other intangible assets	1.3
Accounts payable	(1.5)
Accrued liabilities	(0.5)
Net assets acquired	37.7
Goodwill ^(d)	\$ 8.7

- (a) Represents the preliminary estimated fair value of the contingent earn-out payment as of the acquisition date, which is included in Other long-term liabilities on the Condensed Consolidated Balance Sheets. See Note 13 – Fair Value Measurements for discussion of the methodology used to determine the fair value of the contingent earn-out payment.
- (b) Represents the preliminary fair value assigned to customer relationships, which are considered to be definite-lived intangible assets, with a preliminary estimated useful life of approximately 12 years.
- (c) Represents the preliminary fair value assigned to trade names, which are considered to be indefinite-lived intangible assets.
- (d) Goodwill, which is primarily tax-deductible, has been allocated to the Environmental Solutions Group on the basis that the synergies identified will primarily benefit this segment.

In the period between the April 3, 2023 closing date and September 30, 2023, Trackless generated \$19.6 million of net sales and \$4.3 million of operating income, before elimination of intercompany transactions.

Acquisition of Blasters

On January 3, 2023, the Company completed the acquisition of substantially all the assets and operations of Blasters, Inc. and Blasters Technologies, LLC (collectively, “Blasters”), a leading U.S. manufacturer of truck-mounted waterblasting equipment. The Company expects that the Blasters acquisition will further bolster its position as an industry leading diversified industrial manufacturer of specialized vehicles for maintenance and infrastructure markets with leading brands of premium, value-adding products, and a strong supporting aftermarket platform.

The assets and liabilities of Blasters have been consolidated into the Company’s Condensed Consolidated Balance Sheet as of September 30, 2023, and the post-acquisition results of operations have been included in the Condensed Consolidated Statements of Operations, within the Environmental Solutions Group.

The initial cash consideration paid by the Company to acquire Blasters was \$13.0 million, inclusive of certain closing adjustments, of which \$0.2 million was received in October 2023. In addition, there is a contingent earn-out payment of up to \$8.0 million, based upon the achievement of certain financial targets over a specified performance period. The purchase price was funded through existing cash and borrowings under the Company’s credit agreement.

The acquisition is being accounted for in accordance with ASC 805, *Business Combinations*. The Company’s purchase price allocation as of September 30, 2023 reflects various provisional estimates that were based on the information that was available as of the acquisition date and the filing date of this Form 10-Q. The Company believes that information provides a reasonable basis for estimating the fair values of assets acquired and liabilities assumed; however, the determination of those fair values is not yet finalized. Thus, the preliminary measurements of fair value set forth in the table below are subject to change during the measurement period as valuations are finalized. The Company expects to finalize the valuation and complete the purchase price allocation as soon as practicable.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)
(Unaudited)

The following table summarizes the preliminary fair value of assets acquired and liabilities assumed as of the acquisition date:

(in millions)	
Purchase price, inclusive of closing adjustments	\$ 13.0
Estimated fair value of additional consideration ^(a)	4.0
Total consideration	17.0
Accounts receivable	0.7
Inventories	4.6
Prepaid expenses and other current assets	0.1
Properties and equipment	1.1
Operating lease right-of-use assets ^(b)	1.1
Customer relationships ^(c)	5.3
Trade names ^(d)	2.6
Other intangible assets	0.3
Operating lease liabilities ^(b)	(1.1)
Accounts payable	(0.9)
Accrued liabilities	(0.5)
Customer deposits	(0.5)
Finance lease obligations	(0.1)
Net assets acquired	12.7
Goodwill ^(e)	\$ 4.3

- (a) Represents the preliminary estimated fair value of the contingent earn-out payment as of the acquisition date, of which \$1.0 million is included in Other current liabilities and \$3.0 million is included in Other long-term liabilities on the Condensed Consolidated Balance Sheets. See Note 13 – Fair Value Measurements for discussion of the methodology used to determine the fair value of the contingent earn-out payment.
- (b) In connection with the acquisition, the Company entered into a lease agreement for the Blasters facility, which is owned by affiliates of the sellers. The related-party lease contains a market-based annual rent of \$0.2 million, an initial lease term of five years, and options to renew.
- (c) Represents the preliminary fair value assigned to customer relationships, which are considered to be definite-lived intangible assets, with a preliminary estimated useful life of approximately 12 years.
- (d) Represents the preliminary fair value assigned to trade names, which are considered to be indefinite-lived intangible assets.
- (e) Goodwill, which is tax-deductible, has been allocated to the Environmental Solutions Group on the basis that the synergies identified will primarily benefit this segment.

In the period between the January 3, 2023 closing date and September 30, 2023, Blasters generated \$14.4 million of net sales and \$1.0 million of operating income.

The 2023 acquisitions of Trackless and Blasters would not have been material to the Company’s net sales or results of operations for the three and nine months ended September 30, 2022, either individually or in the aggregate. Accordingly, the Company’s consolidated results do not differ materially from historical performance as a result of the acquisitions, and therefore, unaudited pro-forma results are not presented.

Acquisitions Completed in 2022

On October 3, 2022, the Company completed the acquisition of substantially all the assets and operations of TowHaul Corporation (“TowHaul”). TowHaul is a leading manufacturer of off-road towing and hauling equipment. The TowHaul acquisition bolstered the Company’s position as an industry leading diversified industrial manufacturer of specialized vehicles for maintenance and infrastructure markets with leading brands of premium, value-adding products, and a strong supporting aftermarket platform.

The cash consideration paid by the Company to acquire TowHaul was \$43.3 million, which was funded through existing cash and borrowings under the Company’s credit facility.

During the nine months ended September 30, 2023, the Company recognized measurement period adjustments, which primarily resulted from obtaining a third-party valuation of acquired intangible assets, that resulted in a \$7.5 million increase to the

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carrying value of Goodwill from the \$12.9 million previously recorded as of December 31, 2022, with a corresponding reduction in the carrying value of acquired intangible assets. The measurement period adjustments did not have a material impact on the Company’s Condensed Consolidated Statements of Operations for the three and nine months ended September 30, 2023. As of September 30, 2023, the Company’s purchase price allocation for the TowHaul acquisition is considered to be final.

The following table summarizes the fair value of assets acquired and liabilities assumed as of the acquisition date:

(in millions)

Purchase price, inclusive of closing adjustments	\$ 43.3
Total consideration	43.3
Accounts receivable	1.5
Inventories	4.7
Properties and equipment	6.1
Customer relationships ^(a)	6.9
Trade names ^(b)	5.7
Other intangible assets	1.0
Accounts payable	(0.1)
Accrued liabilities	(0.5)
Customer deposits	(2.4)
Net assets acquired	22.9
Goodwill ^(c)	<u>\$ 20.4</u>

- (a) Represents the fair value assigned to customer relationships, which are considered to be definite-lived intangible assets, with an estimated useful life of 6 years.
- (b) Represents the fair value assigned to trade names, which are considered to be indefinite-lived intangible assets.
- (c) Goodwill, which is tax-deductible, has been allocated to the Environmental Solutions Group on the basis that the synergies identified will primarily benefit this segment.

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NOTE 3 – REVENUE RECOGNITION

The following table presents the Company's Net sales disaggregated by geographic region, based on the location of the end customer, and by major product line:

(in millions)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Geographic Region:				
U.S.	\$ 340.0	\$ 275.9	\$ 988.0	\$ 840.1
Canada	67.1	44.9	180.4	131.2
Europe/Other	39.3	25.6	105.9	72.0
Total net sales	\$ 446.4	\$ 346.4	\$ 1,274.3	\$ 1,043.3
Major Product Line:				
<i>Environmental Solutions</i>				
Vehicles and equipment ^(a)	\$ 290.5	\$ 214.8	\$ 820.8	\$ 668.0
Parts	53.8	44.1	168.2	130.0
Rental income ^(b)	13.8	14.4	41.7	40.2
Other ^(c)	14.9	11.5	34.1	27.1
Total	373.0	284.8	1,064.8	865.3
<i>Safety and Security Systems</i>				
Public safety and security equipment	44.2	36.3	126.8	109.9
Industrial signaling equipment	17.8	16.7	55.1	46.0
Warning systems	11.4	8.6	27.6	22.1
Total	73.4	61.6	209.5	178.0
Total net sales	\$ 446.4	\$ 346.4	\$ 1,274.3	\$ 1,043.3

(a) Includes net sales from the sale of new and used vehicles and equipment, including sales of rental equipment.

(b) Represents income from vehicle and equipment lease arrangements with customers.

(c) Primarily includes revenues from services, such as maintenance and repair work, and the sale of extended warranty contracts.

Contract Balances

The Company recognizes contract liabilities when cash payments, such as customer deposits, are received in advance of the Company's satisfaction of the related performance obligations. Contract liabilities are recognized as Net sales when the related performance obligations are satisfied, which generally occurs within three to six months of the cash receipt. Contract liability balances are not materially impacted by any other factors. The Company's contract liabilities were \$30.9 million and \$28.9 million as of September 30, 2023 and December 31, 2022, respectively. Contract assets, such as unbilled receivables, were not material as of any of the periods presented herein.

NOTE 4 – INVENTORIES

The following table summarizes the components of Inventories:

(in millions)	September 30, 2023	December 31, 2022
Finished goods	\$ 121.4	\$ 97.5
Raw materials	172.3	164.3
Work in process	36.4	30.9
Total inventories ^(a)	\$ 330.1	\$ 292.7

(a) Amounts at September 30, 2023 include inventories acquired in the acquisitions of Blasters and Trackless - See Note 2 - Acquisitions.

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NOTE 5 – DEBT

The following table summarizes the components of Long-term borrowings and finance lease obligations:

(in millions)	September 30, 2023	December 31, 2022
2022 Credit Agreement ^(a)	\$ 364.2	\$ 361.0
Finance lease obligations	1.7	2.0
Total borrowings and finance lease obligations, including current portion	365.9	363.0
Less: Current borrowings	3.1	0.8
Less: Current finance lease obligations	0.8	0.7
Total long-term borrowings and finance lease obligations	<u>\$ 362.0</u>	<u>\$ 361.5</u>

(a) Defined as the Third Amended and Restated Credit Agreement, dated October 21, 2022, as amended.

As more fully described within Note 13 – Fair Value Measurements, the Company uses a three-level fair value hierarchy that prioritizes the inputs used to measure fair value. The fair value of the Company’s borrowings and finance lease obligations is based on interest rates that we believe are currently available to us for issuance of debt with similar terms and remaining maturities (Level 2 input). The carrying amounts of the Company’s borrowings and finance lease obligations approximate their fair values as of September 30, 2023 and December 31, 2022.

The 2022 Credit Agreement is a senior secured credit facility which provides the Company and certain of its foreign subsidiaries access to an aggregate principal amount of \$800 million, consisting of (i) a revolving credit facility in an amount up to \$675 million (the “Revolver”) and (ii) a term loan facility in an amount up to \$125 million. The 2022 Credit Agreement matures on October 21, 2027.

Borrowings under the 2022 Credit Agreement bear interest, at the Company’s option, at a base rate or an Adjusted Term Secured Overnight Financing Rate (“SOFR”), Adjusted Eurocurrency Rate or Adjusted Daily Simple SONIA Rate (as each is defined in the 2022 Credit Agreement), plus, in each case, an applicable margin. The applicable margin ranges from zero to 0.75% for base rate borrowings and 1.00% to 1.75% for Adjusted Term SOFR, Adjusted Eurocurrency Rate or Adjusted Daily Simple SONIA Rate borrowings. The Company must also pay a commitment fee to the lenders ranging between 0.10% to 0.25% per annum on the unused portion of the Revolver along with other standard fees. Applicable margin, issuance fees and other customary expenses are payable on outstanding letters of credit.

The Company is subject to certain net leverage ratio and interest coverage ratio financial covenants under the 2022 Credit Agreement that are measured at each fiscal quarter-end. The Company was in compliance with all such covenants as of September 30, 2023.

As of September 30, 2023, there was \$364.2 million of cash drawn and \$11.2 million of undrawn letters of credit under the 2022 Credit Agreement, with \$424.6 million of net availability for borrowings. As of December 31, 2022, there was \$361.0 million cash drawn and \$11.2 million of undrawn letters of credit under the 2022 Credit Agreement, with \$427.8 million of net availability for borrowings.

The following table summarizes the gross borrowings and gross payments under the Company’s credit facilities:

(in millions)	Nine Months Ended September 30,	
	2023	2022
Gross borrowings	\$ 134.3	\$ 85.7
Gross payments	129.7	35.8

Interest Rate Swaps

On October 21, 2022, the Company entered into an interest rate swap (the “2022 Swap”) with a notional amount of \$75.0 million, as a means of fixing the floating interest rate component on \$75.0 million of its variable-rate debt. The 2022 Swap is designated as a cash flow hedge, with an original maturity date of October 31, 2025.

On July 11, 2023, the Company entered into an additional interest rate swap (the “2023 Swap”) with a notional amount of \$75.0 million, as a means of fixing the floating interest rate component on \$75.0 million of its variable-rate debt. The 2023 Swap is designated as a cash flow hedge, with an original maturity date of August 1, 2025.

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As a result of the application of hedge accounting treatment, all unrealized gains and losses related to the derivative instruments are recorded in Accumulated other comprehensive loss and are reclassified into operations in the same period in which the hedged transaction affects earnings. Hedge effectiveness is assessed quarterly. The Company does not use derivative instruments for trading or speculative purposes.

The fair value of the Company's interest rate swaps is derived from a discounted cash flow analysis based on the terms of the contract and the interest rate curve (Level 2 inputs) and measured on a recurring basis in our Condensed Consolidated Balance Sheets.

At September 30, 2023 and December 31, 2022, the fair value of the Company's interest rate swaps was an asset of \$1.2 million and a liability of \$0.3 million, which were included in Other long-term assets and Other long-term liabilities on the Condensed Consolidated Balance Sheets, respectively. During the three and nine months ended September 30, 2023, unrealized pre-tax gains of \$0.6 million and \$1.5 million, respectively, were recorded in Accumulated other comprehensive loss. During the three and nine months ended September 30, 2022, unrealized pre-tax gains \$1.6 million and \$4.7 million, respectively, were recorded in Accumulated other comprehensive loss. No ineffectiveness was recorded in either period.

In connection with entering into the 2022 Credit Agreement in October 2022, the Company terminated an interest rate swap initially entered into in 2019, receiving proceeds of \$4.3 million upon settlement. The settlement gain was recorded in Accumulated other comprehensive loss and is being amortized into earnings ratably through the original maturity date of July 30, 2024. During the three and nine months ended September 30, 2023, the Company recognized non-cash settlement gains of \$0.6 million and \$1.8 million, respectively, as a component of Interest expense, net on the Condensed Consolidated Statements of Operations. At September 30, 2023 and December 31, 2022, an unrealized settlement gain of \$2.0 million and \$3.8 million, respectively, was included in Accumulated other comprehensive loss on the Condensed Consolidated Balance Sheets.

NOTE 6 – GOODWILL AND OTHER INTANGIBLE ASSETS

The following table summarizes the carrying amount of goodwill, and the changes in the carrying amount of goodwill in the nine months ended September 30, 2023, by segment:

(in millions)	Environmental Solutions	Safety & Security Systems	Total
Balance at January 1, 2023	\$ 343.8	\$ 109.6	\$ 453.4
Acquisitions, including measurement period adjustments	20.5	—	20.5
Translation adjustments	—	(0.3)	(0.3)
Balance at September 30, 2023	<u>\$ 364.3</u>	<u>\$ 109.3</u>	<u>\$ 473.6</u>

The following table summarizes the gross carrying amount and accumulated amortization of intangible assets for each major class of intangible assets:

(in millions)	September 30, 2023			December 31, 2022		
	Gross Carrying Value	Accumulated Amortization	Net Carrying Value	Gross Carrying Value	Accumulated Amortization	Net Carrying Value
Definite-lived intangible assets:						
Customer relationships ^(a)	\$ 162.3	\$ (62.7)	\$ 99.6	\$ 153.7	\$ (52.0)	\$ 101.7
Other ^(a)	8.2	(4.1)	4.1	5.7	(3.4)	2.3
Total definite-lived intangible assets	170.5	(66.8)	103.7	159.4	(55.4)	104.0
Indefinite-lived intangible assets:						
Trade names	104.2	—	104.2	99.9	—	99.9
Other	4.3	—	4.3	4.3	—	4.3
Total indefinite-lived intangible assets	108.5	—	108.5	104.2	—	104.2
Total intangible assets	<u>\$ 279.0</u>	<u>\$ (66.8)</u>	<u>\$ 212.2</u>	<u>\$ 263.6</u>	<u>\$ (55.4)</u>	<u>\$ 208.2</u>

(a) Average useful life of customer relationships and other definite-lived intangible assets are estimated to be approximately 12 years and 6 years, respectively. The average useful life across all definite-lived intangible assets is estimated to be approximately 11 years.

The table above includes preliminary estimates of the fair value and useful lives of certain definite and indefinite-lived

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intangible assets related to the acquisitions of Trackless and Blasters, which were completed during the second quarter of 2023, and the first quarter of 2023, respectively. As further described in Note 2 – Acquisitions, the preliminary measurements of fair value included in the table above are subject to change during the measurement period as the applicable third-party valuations are finalized.

Amortization expense for the three months ended September 30, 2023 and 2022 was \$3.9 million and \$3.1 million, respectively. Amortization expense for the nine months ended September 30, 2023 and 2022 was \$11.4 million and \$9.6 million, respectively.

The Company currently estimates that aggregate amortization expense will be approximately \$3.9 million for the remainder of 2023, \$15.5 million in 2024, \$15.5 million in 2025, \$15.3 million in 2026, \$14.4 million in 2027, and \$39.1 million thereafter. Actual amounts of amortization may differ from estimated amounts due to changes in foreign currency rates, measurement period adjustments for the Trackless and Blasters acquisitions, impairment of intangible assets and other events.

NOTE 7 – INCOME TAXES

The Company recognized income tax expense of \$13.8 million and \$4.9 million for the three months ended September 30, 2023 and 2022, respectively. The increase in tax expense in the current-year quarter was largely due to higher pre-tax income levels and the non-recurrence of certain discrete tax benefits recognized in the prior-year quarter. During the three months ended September 30, 2022, the Company recognized a \$2.7 million tax benefit from the release of a valuation allowance that had previously been recorded against deferred tax assets associated with foreign tax credits in the U.S., and a \$1.1 million tax benefit associated with the release of a valuation allowance in the U.K. Including these items, the Company’s effective tax rate for the three months ended September 30, 2023 was 24.2%, compared to 13.4% in the prior-year quarter.

For the nine months ended September 30, 2023 and 2022, the Company recognized income tax expense of \$33.5 million and \$23.1 million, respectively. The increase in tax expense in the current-year period was largely due to higher pre-tax income levels and the non-recurrence of the discrete tax benefits recognized in the prior-year quarter, partially offset by a \$1.7 million increase in excess tax benefits associated with stock-based compensation activity and a \$0.6 million benefit associated with changes in tax reserves. Including these items, the Company’s effective tax rate for the nine months ended September 30, 2023 was 23.2%, compared to 21.2% in the prior-year period.

During the nine months ended September 30, 2023, the Company filed amended U.S. federal income tax returns for the 2015 through 2018 tax years to claim a worthless stock deduction. As of September 30, 2023, the aggregate refund claim associated with the worthless stock deduction was \$13.4 million, including interest of \$1.6 million, and the Company recognized an offsetting increase to its liability for unrecognized tax benefits.

NOTE 8 – PENSIONS

The following table summarizes the components of Net periodic pension expense (benefit):

(in millions)	U.S. Benefit Plan				Non-U.S. Benefit Plan			
	Three Months Ended September 30,		Nine Months Ended September 30,		Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022	2023	2022	2023	2022
Service cost	\$ —	\$ —	\$ —	\$ —	\$ 0.1	\$ 0.1	\$ 0.1	\$ 0.1
Interest cost	1.6	1.2	4.6	3.3	0.3	0.2	1.1	0.6
Amortization of actuarial loss	0.4	0.6	1.0	1.7	0.2	0.2	0.7	0.5
Amortization of prior service cost	—	—	—	—	0.1	—	0.1	0.1
Expected return on plan assets	(1.9)	(1.7)	(5.7)	(5.2)	(0.6)	(0.5)	(1.6)	(1.5)
Net periodic pension expense (benefit)	<u>\$ 0.1</u>	<u>\$ 0.1</u>	<u>\$ (0.1)</u>	<u>\$ (0.2)</u>	<u>\$ 0.1</u>	<u>\$ —</u>	<u>\$ 0.4</u>	<u>\$ (0.2)</u>

The items that comprise Net periodic pension expense (benefit), other than service cost, are included as a component of Other expense (income), net on the Condensed Consolidated Statements of Operations.

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NOTE 9 – COMMITMENTS AND CONTINGENCIES

Financial Commitments

The Company provides indemnifications and other guarantees in the ordinary course of business, the terms of which range in duration and often are not explicitly defined. Specifically, the Company is occasionally required to provide letters of credit and bid and performance bonds to various customers, principally to act as security for retention levels related to casualty insurance policies and to guarantee the performance of subsidiaries that engage in export and domestic transactions. At September 30, 2023, the Company had outstanding performance and financial standby letters of credit, as well as outstanding bid and performance bonds, aggregating to \$25.6 million. If any such letters of credit or bonds are called, the Company would be obligated to reimburse the issuer of the letter of credit or bond. The Company believes the likelihood of any currently outstanding letter of credit or bond being called is remote.

The Company has transactions involving the sale of equipment to certain of its customers which include (i) guarantees to repurchase the equipment for a fixed price at a future date and (ii) guarantees to repurchase the equipment from the third-party lender in the event of default by the customer. As of September 30, 2023, both the single year and maximum potential cash payments the Company could be required to make to repurchase equipment under these agreements amounted to \$1.4 million. The Company’s risk under these repurchase arrangements would be partially mitigated by the value of the products repurchased as part of the transaction. Historical cash requirements and losses associated with these obligations have not been significant but could increase if customer defaults exceed current expectations.

The Company has certain lease agreements for facilities owned by affiliates which include provisions requiring the Company to guarantee any remaining lease payments in the event of default. As of September 30, 2023, the total amount of future payments guaranteed under these agreements was approximately \$0.9 million. The Company believes the likelihood of defaulting on these leases is remote.

Product Warranties

The Company issues product performance warranties to customers with the sale of its products. The specific terms and conditions of these warranties vary depending upon the product sold and country in which the Company does business, with warranty periods generally ranging from one to five years. The Company estimates the costs that may be incurred under its basic limited warranty and records a liability in the amount of such costs at the time the sale of the related product is recognized. Factors that affect the Company’s warranty liability include (i) the number of units under warranty, (ii) historical and anticipated rates of warranty claims and (iii) costs per claim. The Company periodically assesses the adequacy of its recorded warranty liabilities and adjusts the amounts as necessary.

The following table summarizes the changes in the Company’s warranty liabilities during the nine months ended September 30, 2023 and 2022:

(in millions)	2023	2022
Balance at January 1	\$ 9.3	\$ 9.7
Provisions to expense	5.7	5.3
Acquisitions	0.1	—
Payments	(5.8)	(5.9)
Balance at September 30	<u>\$ 9.3</u>	<u>\$ 9.1</u>

Legal Proceedings

The Company is subject to various claims, including pending and possible legal actions for product liability and other damages, and other matters arising in the ordinary course of the Company’s business. On a quarterly basis, the Company reviews uninsured material legal claims against the Company and accrues for the costs of such claims as appropriate in the exercise of management’s best judgment and experience. However, due to a lack of factual information available to the Company about a claim, or the procedural stage of a claim, it may not be possible for the Company to reasonably assess either the probability of a favorable or unfavorable outcome of the claim or to reasonably estimate the amount of loss should there be an unfavorable outcome. Therefore, for many claims, the Company cannot reasonably estimate a range of loss.

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The Company believes, based on current knowledge and after consultation with counsel, that the outcome of such claims and actions will not have a material adverse effect on the Company's results of operations or financial condition. However, in the event of unexpected future developments, it is possible that the ultimate resolution of such matters, if unfavorable, could have a material adverse effect on the Company's results of operations, financial condition or cash flow.

Hearing Loss Litigation

The Company has been sued for monetary damages by firefighters claiming that exposure to the Company's sirens impaired their hearing and the sirens are therefore defective. Between 1999 and 2013, 40 cases were filed on behalf of a total of 2,816 plaintiffs in the Circuit Court of Cook County, Illinois. The trial of the first 27 of these plaintiffs' claims occurred in 2008, whereby a Cook County jury returned a unanimous verdict in favor of the Company. In 2009, a trial was held on behalf of nine Chicago firefighter plaintiffs and concluded with a verdict for the plaintiffs in varying amounts totaling \$0.4 million. Following appeals, the Company satisfied the judgments, resulting in the final dismissal of the cases. A third consolidated trial involving eight Chicago firefighter plaintiffs occurred in November 2011. The jury returned a unanimous verdict in favor of the Company. Thereafter, the trial court scheduled a fourth consolidated trial involving three firefighter plaintiffs. Prior to trial, the claims of two of the firefighter plaintiffs were dismissed, and on December 17, 2012, the jury entered a complete defense verdict for the Company. On December 20, 2021, the parties executed a settlement agreement to resolve claims of approximately 462 firefighters still involved in the litigation, agreeing to pay a lump sum of \$0.2 million based upon an assessment of firefighters who met minimal bilateral hearing loss standards. The estimated settlement amount was accrued by the Company. The settlement agreement did not require the payment of any attorney fees by the Company and provided that plaintiffs' attorney would withdraw from representing firefighters who did not agree to the settlement. In July 2022, the Company issued the settlement payment for eligible plaintiffs who submitted a release. The claims of all other eligible plaintiffs were dismissed for want of prosecution on August 5, 2022.

The Company also filed motions to dismiss cases involving firefighters who worked for fire departments located outside of Illinois based on improper venue. On February 24, 2017, the Circuit Court of Cook County dismissed the cases of 1,770 such firefighter plaintiffs. In 2017, the Company entered into a global settlement agreement (the "2017 Settlement Agreement") with two attorneys who represented approximately 1,090 of these plaintiffs offering to pay \$700 per plaintiff to settle these cases, and 717 plaintiffs accepted this offer as a final settlement. The 2017 Settlement Agreement did not require the payment of any attorney fees by the Company. The attorneys representing these plaintiffs agreed to withdraw from representing plaintiffs who did not respond to the settlement offer. It is the Company's position that the non-settling plaintiffs who failed to timely refile their cases are barred from doing so by the statute of limitations.

The Company was also sued on this issue outside of the Cook County, Illinois venue. Between 2007 and 2009, lawsuits involving 71 plaintiffs were filed in the Court of Common Pleas, Philadelphia County, Pennsylvania. Three of these cases were dismissed pursuant to pretrial motions, one case was voluntarily dismissed, and others were settled for nominal sums. Three trials were held in these cases. In the first trial, a jury returned a verdict for the plaintiff, finding that the Company's siren was not defectively designed but that the Company negligently constructed the siren. The jury awarded damages in an amount less than \$0.1 million. In 2010, a jury returned a defense verdict for the Company as to the claims of nine plaintiffs. In a third trial, the jury returned a defense verdict for the Company as to the claims of nine plaintiffs. Following the defense verdicts in the last two Philadelphia trials, in order to avoid the inconvenience, uncertainty and distraction of the lawsuits, the Company entered into a global settlement agreement (the "2010 Settlement Agreement") on behalf of 1,125 claimants (the "Claimants"). The 2010 Settlement Agreement provided that the Company pay a total amount of \$3.8 million to settle the claims (including the costs, fees and other expenses of the law firm in connection with its representation of the Claimants), subject to certain terms, conditions and procedures set forth in the 2010 Settlement Agreement. On April 22, 2011, the Company confirmed that the terms and conditions of the 2010 Settlement Agreement had been met and made an adjusted payment of \$3.6 million to conclude the settlement. The amount was based upon the Company's receipt of 1,069 signed releases provided by Claimants. The Company generally denies the allegations made in the lawsuits and denies that its products caused any injuries to the Claimants.

From 2007 through 2009, firefighters also brought hearing loss claims against the Company in New Jersey, Missouri, Maryland and Kings County, New York, all of which were dismissed prior to trial.

In 2012, 20 new cases were filed in Philadelphia on behalf of 20 Philadelphia firefighters against various defendants in addition to the Company. Five of these cases were dismissed. The first trial involving these cases occurred in December 2014 and involved three firefighter plaintiffs. The jury returned a verdict in favor of the Company. Following the trial, the parties agreed to settle cases involving seven firefighter plaintiffs for nominal amounts.

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In January 2015, plaintiffs' attorneys filed two new complaints in Philadelphia on behalf of approximately 70 additional firefighter plaintiffs. One of the complaints, which involved 11 firefighter plaintiffs from the District of Columbia, was removed to federal court in the Eastern District of Pennsylvania. Plaintiffs voluntarily dismissed all claims in that case on May 31, 2016. The Company thereafter moved to recover fees and costs in this case, asserting that plaintiffs' counsel failed to properly investigate the claims prior to filing suit. The Court granted the motion, awarding \$0.1 million to the Company, and the United States Court of Appeals for the Third Circuit affirmed the decision awarding fees and costs to the Company. The Court granted the Company's motion to dismiss the remaining out-of-state firefighters. In 2015, another nine new cases involving a total of 193 firefighters were filed in Philadelphia. The court dismissed all claims filed by out-of-state firefighters, a decision affirmed by the appellate court.

In 2016 and 2017, plaintiffs filed new cases involving a total of 155 Philadelphia firefighters in Philadelphia state court, and the cases were transferred to the mass tort program in Philadelphia for pretrial purposes. In November 2017, a trial involving one Philadelphia firefighter occurred, and the jury returned a verdict in favor of the Company.

In 2014, an action was brought in the Court of Common Pleas of Erie County, Pennsylvania on behalf of 61 firefighters against various defendants in addition to the Company. Also in 2014, 20 lawsuits involving a total of 193 Buffalo Fire Department firefighters were filed in the Supreme Court of the State of New York, Erie County. In 2015, the Company was served with a complaint filed in Union County, New Jersey state court, involving 34 New Jersey firefighters. In 2016, nine cases were filed in Suffolk County, Massachusetts state court, naming the Company as a defendant. These cases involved 194 firefighters who lived and worked in the Boston area. In 2017, plaintiffs' attorneys filed additional hearing loss cases in Florida. Prior to a dismissal of these cases pursuant to the Tolling Agreement discussed below, there was a total of 1084 firefighters involved in these cases.

In 2013, cases were filed in Allegheny County, Pennsylvania on behalf of 247 plaintiff firefighters from Pittsburgh and against various defendants including the Company. In 2016, cases were filed against an additional 19 Pittsburgh firefighters. After the Company filed pretrial motions, the Court dismissed claims of 55 Pittsburgh firefighter plaintiffs. Prior to the first scheduled trial, the Court granted the Company's motion for summary judgment and dismissed all claims asserted by plaintiff firefighters involved in this trial. Following an appeal by the plaintiff firefighters, the appellate court affirmed this dismissal. A jury rendered a verdict in favor of the Company in 2017.

In 2017, five cases involving 70 firefighter plaintiffs were filed in Lackawanna County, Pennsylvania.

A second trial involving Pittsburgh firefighters began in 2018. At the outset of this trial, plaintiffs' attorneys, who represent all firefighters who filed cases in Allegheny County, Philadelphia, Buffalo, New Jersey, Massachusetts, and Florida requested that the Company consider settlement of various cases. In March 2018, the parties agreed in principle on a framework (the "Settlement Framework") to resolve hearing loss claims and cases in all jurisdictions involved in the hearing loss litigation except Cook County, Illinois and Lackawanna County, Pennsylvania and a case involving one firefighter in New York City, cases being handled by different attorneys. The Company later settled the cases in Lackawanna County and settled the case involving one firefighter in New York City for nominal amounts.

In order to minimize the parties' respective legal costs and expenses during this settlement process, on July 5, 2018, the parties entered into a tolling agreement (the "Tolling Agreement"). Pursuant to the Tolling Agreement, counsel for the settling firefighters agreed to dismiss the pending lawsuits in all jurisdictions except for the Allegheny County (Pittsburgh), Pennsylvania cases, and the Company agreed to a tolling of any statute of limitations applicable to the dismissed cases. The Tolling Agreement continued in place until the parties executed a global settlement agreement (the "2019 Settlement Agreement") on November 4, 2019. After execution of the 2019 Settlement Agreement, the Allegheny County (Pittsburgh) cases were dismissed.

Pursuant to the Settlement Framework, the Company would pay \$700 to each firefighter who filed a lawsuit and is eligible to be part of the settlement and \$300 to each firefighter who has not yet filed a case and is eligible to be part of the settlement. To be eligible for settlement, among other things, firefighters must provide proof that they have high frequency noise-induced hearing loss. There are approximately 2,160 firefighters whose claims may be considered as part of this settlement, including approximately 921 firefighters who have ongoing filed lawsuits. The Settlement Framework was finalized in the 2019 Settlement Agreement. The 2019 Settlement Agreement requires plaintiffs' attorneys to withdraw from representing firefighters who elect not to participate in the settlement and does not include the payment of any attorney fees by the Company. Pursuant to the 2019 Settlement Agreement, the parties are now in the process of determining how many of the approximately 2,160 firefighters will be eligible to participate in the settlement.

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NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)
(Unaudited)

As of September 30, 2023, the Company has recognized an estimated liability for the potential settlement amount under the Settlement Framework. While it is reasonably possible that the ultimate resolution of this matter may result in a loss in excess of the amount accrued, the incremental loss is not expected to be material.

NOTE 10 – EARNINGS PER SHARE

The Company computes earnings per share (“EPS”) in accordance with ASC 260, *Earnings per Share*, which requires that non-vested restricted stock containing non-forfeitable dividend rights should be treated as participating securities pursuant to the two-class method. Under the two-class method, net income is reduced by the amount of dividends declared in the period for common stock and participating securities. The remaining undistributed earnings are then allocated to common stock and participating securities as if all of the net income for the period had been distributed. The amounts of distributed and undistributed earnings allocated to participating securities for the three and nine months ended September 30, 2023 and 2022 were insignificant and did not materially impact the calculation of basic or diluted EPS.

Basic EPS is computed by dividing income available to common stockholders by the weighted average number of shares of common stock and non-vested restricted stock awards outstanding for the period.

Diluted EPS is computed using the weighted average number of shares of common stock and non-vested restricted stock awards outstanding for the year, plus the effect of dilutive potential common shares outstanding during the period. The dilutive effect of common stock equivalents is determined using the more dilutive of the two-class method or alternative methods. The Company uses the treasury stock method to determine the potentially dilutive impact of our employee stock options and restricted stock units, and the contingently issuable method for our performance-based restricted stock unit awards.

For both the three and nine months ended September 30, 2023, options to purchase 0.1 million shares of the Company’s common stock had an anti-dilutive effect on EPS, and accordingly, were excluded from the calculation of diluted EPS. For both the three and nine months ended September 30, 2022, options to purchase 0.3 million shares of the Company’s common stock had an anti-dilutive effect on EPS, and accordingly, were excluded from the calculation of diluted EPS.

The following table reconciles Net income to basic and diluted EPS:

(in millions, except per share data)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Net income	\$ 43.3	\$ 31.8	\$ 111.0	\$ 85.8
Weighted average shares outstanding – Basic	60.8	60.4	60.7	60.5
Dilutive effect of common stock equivalents	0.6	0.6	0.7	0.6
Weighted average shares outstanding – Diluted	61.4	61.0	61.4	61.1
Earnings per share:				
Basic	\$ 0.71	\$ 0.53	\$ 1.83	\$ 1.42
Diluted	0.71	0.52	1.81	1.40

NOTE 11 – STOCKHOLDERS’ EQUITY

Dividends

On February 14, 2023, the Company’s Board of Directors (the “Board”) declared a quarterly cash dividend of \$0.09 per common share. The dividend totaled \$5.5 million and was distributed on March 31, 2023 to stockholders of record at the close of business on March 17, 2023.

On April 25, 2023, the Board declared a quarterly cash dividend of \$0.10 per common share. The dividend totaled \$6.1 million and was distributed on June 2, 2023 to stockholders of record at the close of business on May 19, 2023.

On July 24, 2023, the Board declared a quarterly cash dividend of \$0.10 per common share. The dividend totaled \$6.1 million and was distributed on September 1, 2023 to stockholders of record at the close of business on August 18, 2023.

During the three and nine months ended September 30, 2022, dividends of \$5.5 million and \$16.4 million, respectively, were paid to stockholders.

On October 24, 2023, the Board declared a quarterly cash dividend of \$0.10 per common share payable on December 1, 2023 to

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)

(Unaudited)

stockholders of record at the close of business on November 17, 2023.

Stock Repurchase Program

In March 2020, the Board authorized a stock repurchase program of up to \$75.0 million of the Company's common stock, with the remaining authorization under our previously described repurchase program adopted in 2014 being subject to the March 2020 program. The stock repurchase program is intended primarily to facilitate purchases of Company stock as a means to provide cash returns to stockholders, enhance stockholder returns and manage the Company's capital structure. Under its stock repurchase program, the Company is authorized to repurchase, from time to time, shares of its outstanding common stock. Stock repurchases by the Company are subject to market conditions and other factors and may be commenced, suspended or discontinued at any time.

During the three and nine months ended September 30, 2023, the Company repurchased 72,468 shares for a total of \$4.3 million under its stock repurchase programs.

No shares were repurchased during the three months ended September 30, 2022. During the nine months ended September 30, 2022, the Company repurchased 472,381 shares for a total of \$16.1 million.

Accumulated Other Comprehensive Loss

The following tables summarize the changes in each component of Accumulated other comprehensive loss, net of tax in the three months ended September 30, 2023 and 2022:

(in millions) ^(a)	Actuarial Losses	Prior Service Costs	Foreign Currency Translation	Interest Rate Swaps	Total
Balance at July 1, 2023	\$ (68.7)	\$ (2.0)	\$ (11.3)	\$ 2.3	\$ (79.7)
Other comprehensive income (loss) before reclassifications	0.3	—	(5.1)	0.8	(4.0)
Amounts reclassified from accumulated other comprehensive loss	0.5	0.1	—	(0.7)	(0.1)
Net current-period other comprehensive income (loss) ..	0.8	0.1	(5.1)	0.1	(4.1)
Balance at September 30, 2023	<u>\$ (67.9)</u>	<u>\$ (1.9)</u>	<u>\$ (16.4)</u>	<u>\$ 2.4</u>	<u>\$ (83.8)</u>

(in millions) ^(a)	Actuarial Losses	Prior Service Costs	Foreign Currency Translation	Interest Rate Swaps	Total
Balance at July 1, 2022	\$ (65.1)	\$ (2.1)	\$ (13.6)	\$ 1.8	\$ (79.0)
Other comprehensive income (loss) before reclassifications	1.0	0.2	(11.9)	1.0	(9.7)
Amounts reclassified from accumulated other comprehensive loss	0.6	—	—	0.1	0.7
Net current-period other comprehensive income (loss) ..	1.6	0.2	(11.9)	1.1	(9.0)
Balance at September 30, 2022	<u>\$ (63.5)</u>	<u>\$ (1.9)</u>	<u>\$ (25.5)</u>	<u>\$ 2.9</u>	<u>\$ (88.0)</u>

(a) Amounts in parentheses indicate losses.

The following tables summarize the changes in each component of Accumulated other comprehensive loss, net of tax in the nine months ended September 30, 2023 and 2022:

(in millions) ^(a)	Actuarial Losses	Prior Service Costs	Foreign Currency Translation	Interest Rate Swaps	Total
Balance at January 1, 2023	\$ (68.6)	\$ (2.0)	\$ (16.0)	\$ 2.6	\$ (84.0)
Other comprehensive (loss) income before reclassifications	(0.6)	—	(0.4)	1.5	0.5
Amounts reclassified from accumulated other comprehensive loss	1.3	0.1	—	(1.7)	(0.3)
Net current-period other comprehensive income (loss) ..	0.7	0.1	(0.4)	(0.2)	0.2
Balance at September 30, 2023	<u>\$ (67.9)</u>	<u>\$ (1.9)</u>	<u>\$ (16.4)</u>	<u>\$ 2.4</u>	<u>\$ (83.8)</u>

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)
(Unaudited)

(in millions) ^(a)	Actuarial Losses	Prior Service Costs	Foreign Currency Translation	Interest Rate Swaps	Total
Balance at January 1, 2022	\$ (67.9)	\$ (2.4)	\$ (3.4)	\$ (0.5)	\$ (74.2)
Other comprehensive income (loss) before reclassifications	2.8	0.4	(22.1)	3.0	(15.9)
Amounts reclassified from accumulated other comprehensive loss	1.6	0.1	—	0.4	2.1
Net current-period other comprehensive income (loss) ..	4.4	0.5	(22.1)	3.4	(13.8)
Balance at September 30, 2022	<u>\$ (63.5)</u>	<u>\$ (1.9)</u>	<u>\$ (25.5)</u>	<u>\$ 2.9</u>	<u>\$ (88.0)</u>

(a) Amounts in parentheses indicate losses.

The following table summarizes the amounts reclassified from Accumulated other comprehensive loss, net of tax, in the three months ended September 30, 2023 and 2022 and the affected line item in the Condensed Consolidated Statements of Operations:

Details about Accumulated Other Comprehensive Loss Components	Amount Reclassified from Accumulated Other Comprehensive Loss		Affected Line Item in Condensed Consolidated Statements of Operations
	2023	2022	
(in millions) ^(a)			
Amortization of actuarial losses of defined benefit pension plans	\$ (0.6)	\$ (0.8)	Other expense (income), net
Amortization of prior service costs of defined benefit pension plans ..	(0.1)	—	Other expense (income), net
Interest rate swaps	0.9	(0.2)	Interest expense, net
Total before tax	0.2	(1.0)	
Income tax (expense) benefit	(0.1)	0.3	Income tax expense
Total reclassifications for the period, net of tax	<u>\$ 0.1</u>	<u>\$ (0.7)</u>	

(a) Amounts in parentheses indicate losses.

The following table summarizes the amounts reclassified from Accumulated other comprehensive loss, net of tax, in the nine months ended September 30, 2023 and 2022 and the affected line item in the Condensed Consolidated Statements of Operations:

Details about Accumulated Other Comprehensive Loss Components	Amount Reclassified from Accumulated Other Comprehensive Loss		Affected Line Item in Condensed Consolidated Statements of Operations
	2023	2022	
(in millions) ^(a)			
Amortization of actuarial losses of defined benefit pension plans	\$ (1.7)	\$ (2.2)	Other expense (income), net
Amortization of prior service costs of defined benefit pension plans ..	(0.1)	(0.1)	Other expense (income), net
Interest rate swaps	2.3	(0.5)	Interest expense, net
Total before tax	0.5	(2.8)	
Income tax (expense) benefit	(0.2)	0.7	Income tax expense
Total reclassifications for the period, net of tax	<u>\$ 0.3</u>	<u>\$ (2.1)</u>	

(a) Amounts in parentheses indicate losses.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)
(Unaudited)

NOTE 12 – SEGMENT INFORMATION

The Company has two reportable segments: the Environmental Solutions Group and the Safety and Security Systems Group. Business units are organized under each reportable segment because they share certain characteristics, such as technology, marketing, distribution and product application, which create long-term synergies.

The following tables summarize the Company’s operations by segment, including Net sales, Operating income (loss), and Total assets:

(in millions)	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Net sales:				
Environmental Solutions	\$ 373.0	\$ 284.8	\$ 1,064.8	\$ 865.3
Safety and Security Systems	73.4	61.6	209.5	178.0
Total net sales	\$ 446.4	\$ 346.4	\$ 1,274.3	\$ 1,043.3
Operating income (loss):				
Environmental Solutions	\$ 57.2	\$ 33.9	\$ 151.0	\$ 99.8
Safety and Security Systems	13.7	10.5	39.9	28.7
Corporate and eliminations	(8.4)	(4.9)	(29.5)	(14.3)
Total operating income	62.5	39.5	161.4	114.2
Interest expense, net	5.1	2.7	15.4	5.9
Other expense (income), net	0.3	0.1	1.5	(0.6)
Income before income taxes	\$ 57.1	\$ 36.7	\$ 144.5	\$ 108.9
(in millions)				
			September 30, 2023	December 31, 2022
Total assets:				
Environmental Solutions			\$ 1,342.4	\$ 1,206.4
Safety and Security Systems			282.8	279.3
Corporate and eliminations			29.4	38.6
Total assets			\$ 1,654.6	\$ 1,524.3

NOTE 13 – FAIR VALUE MEASUREMENTS

The Company uses a three-level fair value hierarchy that prioritizes the inputs used to measure fair value. This hierarchy maximizes the use of observable inputs and minimizes the use of unobservable inputs. Observable inputs are developed based on market data obtained from independent sources, while unobservable inputs reflect the Company’s assumptions about valuation based on the best information available in the circumstances. The three levels of inputs are classified as follows:

- Level 1 — quoted prices in active markets for identical assets or liabilities;
- Level 2 — observable inputs, other than quoted prices included in Level 1, such as quoted prices for markets that are not active, or other inputs that are observable or can be corroborated by observable market data; and
- Level 3 — unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities, including certain pricing models, discounted cash flow methodologies and similar techniques that use significant unobservable inputs.

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In determining fair value, the Company uses various valuation approaches within the fair value measurement framework. The valuation methodologies used for the Company’s assets and liabilities measured at fair value and their classification in the valuation hierarchy are summarized below.

Cash Equivalents

Cash equivalents primarily consist of time-based deposits and interest-bearing instruments with maturities of three months or less. The Company classified cash equivalents as Level 1 due to the short-term nature of these instruments and measured the fair value based on quoted prices in active markets for identical assets.

Interest Rate Swaps

As described in Note 5 – Debt, the Company may, from time to time, execute interest rate swaps as a means of fixing the floating interest rate component on a portion of its floating-rate debt. The Company classifies its interest rate swaps as Level 2 due to the use of a discounted cash flow model based on the terms of the contract and the interest rate curve (Level 2 inputs) to calculate the fair value of the swaps.

Contingent Consideration

At September 30, 2023, the Company had contingent obligations to transfer up to \$7.5 million, \$8.0 million, and C\$6.0 million (approximately \$4.5 million), to the former owners of Deist Industries, Inc. and certain of its affiliates (collectively, “Deist”), Blasters, and Trackless, respectively, if specified financial results are met over future reporting periods (i.e., an earn-out). The Deist, Blasters, and Trackless acquisitions were completed on December 30, 2021, January 3, 2023, and April 3, 2023, respectively. The Deist and Trackless contingent earn-out payments, if earned, would be due to be paid following the third anniversary of the closing date. The Blasters contingent earn-out payments, if earned, would be due to be paid annually, in each of the three years following the anniversary of the closing date. During the nine months ended September 30, 2023, the Company paid \$0.5 million to settle the contingent consideration obligation due to the former owners of Mark Rite Lines Equipment Company, Inc. (“MRL”), which was acquired on July 1, 2019.

Liabilities for contingent consideration are measured at fair value each reporting period, with the acquisition-date fair value included as part of the consideration transferred. Subsequent changes in fair value are included as a component of Acquisition and integration-related expenses (benefits) on the Condensed Consolidated Statements of Operations.

The Company uses an income approach to value the contingent consideration liability based on the present value of risk-adjusted future cash flows under either a scenario-based or option-pricing method, as appropriate. Due to the lack of relevant observable market data over fair value inputs, such as prospective financial information or probabilities of future events as of September 30, 2023, the Company has classified the contingent consideration liability within Level 3 of the fair value hierarchy outlined in ASC 820, *Fair Value Measurements*. As further described in Note 2 – Acquisitions, the Company has recognized a preliminary estimate of the fair value of the Blasters and Trackless contingent consideration liabilities as of the applicable acquisition date. Such preliminary estimates are subject to change during the measurement period as the applicable third-party valuations are finalized.

The following table summarizes the Company’s assets and liabilities that are measured at fair value on a recurring basis as of September 30, 2023:

(in millions)	Fair Value Measurement at Reporting Date Using			
	Level 1	Level 2	Level 3	Total
Assets:				
Cash equivalents	\$ 7.4	\$ —	\$ —	\$ 7.4
Interest rate swaps	—	1.2	—	1.2
Liabilities:				
Contingent consideration	—	—	10.4	10.4

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The following table provides a roll-forward of the fair value of recurring Level 3 fair value measurements in the three months ended September 30, 2023 and 2022:

(in millions)	2023	2022
Contingent consideration liability, at July 1	\$ 10.5	\$ 2.7
Foreign currency translation	(0.1)	—
Contingent consideration liability, at September 30	<u>\$ 10.4</u>	<u>\$ 2.7</u>

The following table provides a roll-forward of the fair value of recurring Level 3 fair value measurements in the nine months ended September 30, 2023 and 2022:

(in millions)	2023	2022
Contingent consideration liability, at January 1	\$ 2.7	\$ 2.7
Issuance of contingent consideration in connection with acquisitions	8.5	—
Settlements of contingent consideration liabilities	(0.5)	—
Foreign currency translation	(0.1)	—
Total gains included in earnings ^(a)	(0.2)	—
Contingent consideration liability, at September 30	<u>\$ 10.4</u>	<u>\$ 2.7</u>

(a) Included as a component of acquisition and integration-related expenses on the Condensed Consolidated Statements of Operations.

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

Management’s Discussion and Analysis of Financial Condition and Results of Operations (“MD&A”) is designed to provide information that is supplemental to, and should be read together with, the condensed consolidated financial statements and the accompanying notes contained in this Form 10-Q, as well as Federal Signal Corporation’s Annual Report on Form 10-K for the year ended December 31, 2022. References herein to the “Company,” “we,” “our,” or “us” refer collectively to Federal Signal Corporation and its subsidiaries. Information in MD&A is intended to assist the reader in obtaining an understanding of (i) the condensed consolidated financial statements, (ii) the Company’s business segments and how the results of those segments impact the Company’s results of operations and financial condition as a whole and (iii) how certain accounting principles affect the Company’s condensed consolidated financial statements. The Company’s results for interim periods should not be regarded as necessarily indicative of results that may be expected for the entire year, which may differ materially due to, among other things, the risk factors described under Part I, Item 1A, *Risk Factors*, of the Company’s Annual Report on Form 10-K for the year ended December 31, 2022, which was filed with the SEC on March 1, 2023.

Executive Summary

The Company is a leading global manufacturer and supplier of (i) vehicles and equipment for maintenance and infrastructure end-markets, including sewer cleaners, industrial vacuum loaders, vacuum- and hydro-excavation trucks (collectively, “safe-digging trucks”), street sweepers, waterblasting equipment, road-marking and line-removal equipment, dump truck bodies, trailers, metal extraction support equipment and multi-purpose tractors, and (ii) public safety equipment, such as vehicle lightbars and sirens, industrial signaling equipment, public warning systems and general alarm/public address systems. In addition, we engage in the sale of parts, service and repair, equipment rentals and training as part of a comprehensive aftermarket offering to our customer base. We operate 23 principal manufacturing facilities in five countries and provide products and integrated solutions to municipal, governmental, industrial and commercial customers in all regions of the world.

As described in Note 12 – Segment Information to the accompanying condensed consolidated financial statements, the Company’s business units are organized in two reportable segments: the Environmental Solutions Group and the Safety and Security Systems Group.

Operating Results

Net sales for the three months ended September 30, 2023 increased by \$100.0 million, or 29%, compared to the prior-year quarter, primarily due to higher sales volumes, inclusive of the effects of acquisitions, pricing actions and increased chassis sales. Our Environmental Solutions Group reported a net sales increase of \$88.2 million, or 31%, primarily due to increases in sales of sewer cleaners, street sweepers, refuse trucks, metal extraction support equipment, safe-digging trucks and industrial vacuum loaders of \$18.1 million, \$11.1 million, \$10.1 million, \$6.6 million, \$6.5 million and \$6.3 million, respectively. In addition, aftermarket revenues improved by \$15.8 million. Within our Safety and Security Systems Group, net sales increased by \$11.8 million, or 19%, primarily due to improvements in sales of public safety equipment and warning systems of \$7.1 million and \$2.8 million, respectively.

Net sales for the nine months ended September 30, 2023 increased by \$231.0 million, or 22%, compared to the prior-year period, primarily due to higher sales volumes, inclusive of the effects of acquisitions, pricing actions and increased chassis sales. Our Environmental Solutions Group reported a net sales increase of \$199.5 million, or 23%, primarily due to increases in sales of sewer cleaners, street sweepers, refuse trucks, metal extraction support equipment, multi-purpose tractors, industrial vacuum loaders and safe-digging trucks of \$39.2 million, \$27.8 million, \$26.1 million, \$19.8 million, \$14.3 million, \$11.7 million and \$9.8 million, respectively. In addition, aftermarket revenues improved by \$47.2 million. Within our Safety and Security Systems Group, net sales increased by \$31.5 million, or 18%, primarily due to improvements in sales of public safety equipment and industrial signaling equipment of \$16.3 million and \$10.2 million, respectively.

Operating income for the three months ended September 30, 2023 increased by \$23.0 million, or 58%, compared to the prior-year quarter, primarily driven by a \$34.9 million improvement in gross profit, partially offset by a \$10.8 million increase in Selling, Engineering, General and Administrative (“SEG&A”) expenses, a \$0.8 million increase in amortization expense, and a \$0.3 million increase in acquisition and integration-related expenses. Consolidated operating margin for the three months ended September 30, 2023 was 14.0%, compared to 11.4% in the prior-year quarter.

Operating income for the nine months ended September 30, 2023 increased by \$47.2 million, or 41%, compared to the prior-year period, primarily driven by a \$82.5 million improvement in gross profit, partially offset by a \$30.5 million increase in SEG&A expenses, a \$3.0 million increase in acquisition and integration-related expenses, and a \$1.8 million increase in amortization expense. Consolidated operating margin for the nine months ended September 30, 2023 was 12.7%, compared to 10.9% in the prior-year period.

Income before income taxes for the three months ended September 30, 2023 increased by \$20.4 million, or 56%, compared to the prior-year quarter. The increase resulted from the higher operating income, partially offset by a \$2.4 million increase in interest expense and a \$0.2 million increase in other expense.

Income before income taxes for the nine months ended September 30, 2023 increased by \$35.6 million, or 33%, compared to the prior-year period. The increase resulted from the higher operating income, partially offset by a \$9.5 million increase in interest expense and a \$2.1 million increase in other expense.

Net income for the three months ended September 30, 2023 increased by \$11.5 million compared to the prior-year quarter, largely due to the aforementioned increase in income before taxes, partially offset by a \$8.9 million increase in income tax expense. The effective tax rate for the three months ended September 30, 2023 was 24.2%, compared to 13.4% in the prior-year quarter.

Net income for the nine months ended September 30, 2023 increased by \$25.2 million compared to the prior-year period, largely due to the aforementioned increase in income before taxes, partially offset by a \$10.4 million increase in income tax expense. The effective tax rate for the nine months ended September 30, 2023 was 23.2%, compared to 21.2% in the prior-year period. We currently expect our full-year effective tax rate to be approximately 24%, excluding additional discrete items.

Total orders for the three months ended September 30, 2023 were \$450 million, an increase of \$68 million, or 18%, as compared to the prior-year quarter. Our Environmental Solutions Group reported total orders of \$375 million in the three months ended September 30, 2023, an increase of \$53 million, or 17% in comparison to the prior-year quarter. Orders in the three months ended September 30, 2023 within our Safety and Security Systems Group were \$75 million, an increase of \$15 million, or 24%, compared to the prior-year quarter.

Total orders for the nine months ended September 30, 2023 were \$1.41 billion, an increase of \$157 million, or 13%, as compared to the prior-year period. Our Environmental Solutions Group reported total orders of \$1.18 billion in the nine months ended September 30, 2023, an increase of \$119 million, or 11% in comparison to the prior-year period. Orders in the nine months ended September 30, 2023 within our Safety and Security Systems Group were \$226 million, an increase of \$39 million, or 21%, compared to the prior-year period.

Our consolidated backlog at September 30, 2023 was \$1.01 billion, an increase of \$182 million, or 22%, compared to the prior-year quarter.

Results of Operations

The following table summarizes our Condensed Consolidated Statements of Operations and illustrates the key financial indicators used to assess our consolidated financial results:

(\$ in millions, except per share data)	Three Months Ended September 30,			Nine Months Ended September 30,		
	2023	2022	Change	2023	2022	Change
Net sales	\$ 446.4	\$ 346.4	\$ 100.0	\$1,274.3	\$1,043.3	\$ 231.0
Cost of sales	328.7	263.6	65.1	943.5	795.0	148.5
Gross profit	117.7	82.8	34.9	330.8	248.3	82.5
Selling, engineering, general and administrative expenses	50.6	39.8	10.8	156.0	125.5	30.5
Amortization expense	3.9	3.1	0.8	11.4	9.6	1.8
Acquisition and integration-related expenses (benefits)	0.7	0.4	0.3	2.0	(1.0)	3.0
Operating income	62.5	39.5	23.0	161.4	114.2	47.2
Interest expense, net	5.1	2.7	2.4	15.4	5.9	9.5
Other expense (income), net	0.3	0.1	0.2	1.5	(0.6)	2.1
Income before income taxes	57.1	36.7	20.4	144.5	108.9	35.6
Income tax expense	13.8	4.9	8.9	33.5	23.1	10.4
Net income	\$ 43.3	\$ 31.8	\$ 11.5	\$ 111.0	\$ 85.8	\$ 25.2
Operating data:						
Operating margin	14.0 %	11.4 %	2.6 %	12.7 %	10.9 %	1.8 %
Diluted earnings per share	\$ 0.71	\$ 0.52	\$ 0.19	\$ 1.81	\$ 1.40	\$ 0.41
Total orders	450.2	382.1	68.1	1,405.1	1,248.0	157.1
Backlog	1,005.8	824.1	181.7	1,005.8	824.1	181.7
Depreciation and amortization	15.3	13.6	1.7	45.1	40.7	4.4

Net sales

Net sales for the three months ended September 30, 2023 increased by \$100.0 million, or 29%, compared to the prior-year quarter, primarily due to higher sales volumes, inclusive of the effects of acquisitions, pricing actions and increased chassis sales. The Environmental Solutions Group reported a net sales increase of \$88.2 million, or 31%, primarily due to increases in sales of sewer cleaners, street sweepers, refuse trucks, metal extraction support equipment, safe-digging trucks and industrial vacuum loaders of \$18.1 million, \$11.1 million, \$10.1 million, \$6.6 million, \$6.5 million and \$6.3 million, respectively. In addition, aftermarket revenues improved by \$15.8 million. Within the Safety and Security Systems Group, net sales increased by \$11.8 million, or 19%, primarily due to improvements in sales of public safety equipment and warning systems of \$7.1 million and \$2.8 million, respectively.

Net sales for the nine months ended September 30, 2023 increased by \$231.0 million, or 22%, compared to the prior-year period, primarily due to higher sales volumes, inclusive of the effects of acquisitions, pricing actions and increased chassis sales. The Environmental Solutions Group reported a net sales increase of \$199.5 million, or 23%, primarily due to increases in sales of sewer cleaners, street sweepers, refuse trucks, metal extraction support equipment, multi-purpose tractors, industrial vacuum loaders and safe-digging trucks of \$39.2 million, \$27.8 million, \$26.1 million, \$19.8 million, \$14.3 million, \$11.7 million and \$9.8 million, respectively. In addition, aftermarket revenues improved by \$47.2 million. Within the Safety and Security Systems Group, net sales increased by \$31.5 million, or 18%, primarily due to improvements in sales of public safety equipment and industrial signaling equipment of \$16.3 million and \$10.2 million, respectively.

Cost of sales

Cost of sales increased by \$65.1 million, or 25%, for the three months ended September 30, 2023 compared to the prior-year quarter, largely due to an increase of \$58.2 million, or 26%, within the Environmental Solutions Group, primarily related to higher sales volumes, inclusive of the effects of acquisitions, and increased chassis costs. Within the Safety and Security Systems Group, cost of sales increased by \$6.9 million, or 18%, primarily related to higher sales volumes.

Cost of sales increased by \$148.5 million, or 19%, for the nine months ended September 30, 2023 compared to the prior-year period, largely due to an increase of \$132.4 million, or 19%, within the Environmental Solutions Group, primarily related to

higher sales volumes, inclusive of the effects of acquisitions, and increased chassis costs. Within the Safety and Security Systems Group, cost of sales increased by \$16.1 million, or 14%, primarily related to higher sales volumes.

Gross profit

Gross profit increased by \$34.9 million, or 42%, for the three months ended September 30, 2023 compared to the prior-year quarter, primarily due to a \$30.0 million improvement within the Environmental Solutions Group and a \$4.9 million increase within the Safety and Security Systems Group. Gross profit as a percentage of revenues (“gross profit margin”) for the three months ended September 30, 2023 was 26.4%, compared to 23.9% in the prior-year quarter, primarily due to improvements within the Environmental Solutions Group and the Safety and Security Systems Group of 310 basis points and 70 basis points, respectively.

Gross profit increased by \$82.5 million, or 33%, for the nine months ended September 30, 2023 compared to the prior-year period, primarily due to a \$67.1 million improvement within the Environmental Solutions Group and a \$15.4 million increase within the Safety and Security Systems Group. Gross profit as a percentage of revenues (“gross profit margin”) for the nine months ended September 30, 2023 was 26.0%, compared to 23.8% in the prior-year period, primarily due to improvements within the Environmental Solutions Group and the Safety and Security Systems Group of 230 basis points and 180 basis points, respectively.

SEG&A expenses

SEG&A expenses for the three months ended September 30, 2023 increased by \$10.8 million, or 27%, compared to the prior-year quarter, primarily due to increases of \$5.5 million and \$1.7 million within the Environmental Solutions Group and the Safety and Security Systems Group, respectively, in addition to a \$3.6 million increase in Corporate SEG&A expenses. As a percentage of net sales, SEG&A expenses were 11.3% in the current-year quarter, compared to 11.5% in the prior-year quarter.

SEG&A expenses for the nine months ended September 30, 2023 increased by \$30.5 million, or 24%, compared to the prior-year quarter, primarily due to increases of \$13.1 million and \$4.2 million within the Environmental Solutions Group and the Safety and Security Systems Group, respectively, in addition to a \$13.2 million increase in Corporate SEG&A expenses. As a percentage of net sales, SEG&A expenses were 12.2% in the current-year period, compared to 12.0% in the prior-year period.

Operating income

Operating income for the three months ended September 30, 2023 increased by \$23.0 million, or 58%, compared to the prior-year quarter, primarily driven by the \$34.9 million improvement in gross profit, partially offset by the \$10.8 million increase in SEG&A expenses, a \$0.8 million increase in amortization expense, and a \$0.3 million increase in acquisition and integration-related expenses. Consolidated operating margin for the three months ended September 30, 2023 was 14.0%, compared to 11.4% in the prior-year quarter.

Operating income for the nine months ended September 30, 2023 increased by \$47.2 million, or 41%, compared to the prior-year period, primarily driven by the \$82.5 million improvement in gross profit, partially offset by the \$30.5 million increase in SEG&A expenses, a \$3.0 million increase in acquisition and integration-related expenses, and a \$1.8 million increase in amortization expense. Consolidated operating margin for the nine months ended September 30, 2023 was 12.7%, compared to 10.9% in the prior-year period.

Interest expense, net

Interest expense, net, for the three and nine months ended September 30, 2023 increased by \$2.4 million and \$9.5 million, respectively, compared to the corresponding periods of the prior year, largely due to an increase in average debt levels and higher interest rates.

Other expense (income), net

Other expense, net, for the three months ended September 30, 2023 increased by \$0.2 million, compared to the prior-year quarter, primarily due to higher foreign currency transaction losses.

Other expense, net, for the nine months ended September 30, 2023 increased by \$2.1 million, compared to the prior-year period, primarily due to an \$0.8 million increase in estimated environmental remediation costs associated with a business discontinued in 2009, a \$0.7 million increase in net periodic pension expense and higher foreign currency transaction losses.

Income tax expense

The Company recognized income tax expense of \$13.8 million and \$4.9 million for the three months ended September 30, 2023

and 2022, respectively. The increase in tax expense in the current-year quarter was largely due to higher pre-tax income levels and the non-recurrence of the discrete tax benefits recognized in the prior-year quarter. During the three months ended September 30, 2022, the Company recognized a \$2.7 million tax benefit from the release of a valuation allowance that had previously been recorded against deferred tax assets associated with foreign tax credits in the U.S., and a \$1.1 million tax benefit associated with the release of a valuation allowance in the U.K. Including these items, the Company's effective tax rate for the three months ended September 30, 2023 was 24.2%, compared to 13.4% in the prior-year quarter.

For the nine months ended September 30, 2023 and 2022, the Company recognized income tax expense of \$33.5 million and \$23.1 million, respectively. The increase in tax expense in the current-year period was largely due to higher pre-tax income levels and the non-recurrence of the discrete tax benefits recognized in the prior-year quarter, partially offset by a \$1.7 million increase in excess tax benefits associated with stock-based compensation activity and a \$0.6 million benefit associated with changes in tax reserves. Including these items, the Company's effective tax rate for the nine months ended September 30, 2023 was 23.2%, compared to 21.2% in the prior-year period.

Net income

Net income for the three months ended September 30, 2023 increased by \$11.5 million compared to the prior-year quarter, largely due to the aforementioned improvement in operating income, partially offset by the \$2.4 million increase in interest expense, a \$8.9 million increase in income tax expense and the \$0.2 million decrease in other income.

Net income for the nine months ended September 30, 2023 increased by \$25.2 million compared to the prior-year quarter, largely due to the aforementioned improvement in operating income, partially offset by the \$9.5 million increase in interest expense, a \$10.4 million increase in income tax expense and the \$2.1 million decrease in other income.

Environmental Solutions

The following table summarizes the Environmental Solutions Group's operating results as of and for the three and nine months ended September 30, 2023 and 2022:

(\$ in millions)	Three Months Ended September 30,			Nine Months Ended September 30,		
	2023	2022	Change	2023	2022	Change
Net sales	\$ 373.0	\$ 284.8	\$ 88.2	\$1,064.8	\$ 865.3	\$ 199.5
Operating income	57.2	33.9	23.3	151.0	99.8	51.2
Operating data:						
Operating margin	15.3 %	11.9 %	3.4 %	14.2 %	11.5 %	2.7 %
Total orders	\$ 374.8	\$ 321.4	\$ 53.4	\$1,179.2	\$1,060.7	\$ 118.5
Backlog	938.6	764.6	174.0	938.6	764.6	174.0
Depreciation and amortization	14.3	12.5	1.8	41.8	37.5	4.3

Three months ended September 30, 2023 vs. three months ended September 30, 2022

Total orders for the three months ended September 30, 2023 increased by \$53.4 million, or 17%, compared to the prior-year quarter. U.S. orders increased by \$39.0 million, primarily due to improvements in orders for sewer cleaners, dump truck bodies, industrial vacuum loaders and safe-digging trucks of \$9.7 million, \$8.7 million, \$7.6 million and \$4.5 million, respectively. Additionally, aftermarket demand increased by \$9.0 million. Partially offsetting these improvements was a \$3.3 million reduction in orders for street sweepers. Non-U.S. orders increased by \$14.4 million, largely due to a \$7.8 million increase in aftermarket demand, as well as improvements in orders for sewer cleaners, safe-digging trucks and metal extraction support equipment of \$4.4 million, \$4.0 million and \$3.2 million, respectively. Partially offsetting these improvements was a \$5.9 million reduction in orders for refuse trucks.

Net sales for the three months ended September 30, 2023 increased by \$88.2 million, or 31%, compared to the prior-year quarter, primarily due to higher sales volumes, inclusive of the effects of acquisitions, pricing actions and increased chassis sales. For the three months ended September 30, 2023, U.S. sales increased by \$61.7 million, largely due to increases in sales of sewer cleaners, street sweepers, safe-digging trucks, industrial vacuum loaders and road-marking and line-removal equipment of \$14.4 million, \$11.3 million, \$6.4 million, \$6.3 million and \$4.1 million, respectively. Additionally, aftermarket revenues increased by \$11.4 million. Non-U.S. sales increased by \$26.5 million, largely due to a \$4.4 million increase in aftermarket revenues, and increases in sales of refuse trucks, metal extraction support equipment and multi-purpose tractors of \$8.2 million, \$6.5 million and \$4.6 million, respectively.

Cost of sales for the three months ended September 30, 2023 increased by \$58.2 million, or 26%, compared to the prior-year quarter, primarily related to higher sales volumes, inclusive of the effects of acquisitions, and increased chassis costs. Gross

profit margin for the three months ended September 30, 2023 was 24.2%, compared to 21.1% in the prior-year quarter, with the improvement primarily attributable to improved operating leverage from higher sales volumes and benefits from pricing actions, partially offset by an increase in lower margin chassis sales.

SEG&A expenses for the three months ended September 30, 2023 increased by \$5.5 million, or 24%, compared to the prior-year quarter, primarily due to additional costs from acquired businesses, as well as increases in sales commissions and incentive-based compensation expenses. As a percentage of net sales, SEG&A expenses were 7.6% in the current-year quarter, down from 8.1% in the prior-year quarter.

Operating income for the three months ended September 30, 2023 increased by \$23.3 million, or 69%, compared to the prior-year quarter, largely due to a \$30.0 million improvement in gross profit, partially offset by the \$5.5 million increase in SEG&A expenses, a \$0.8 million increase in amortization expense, and a \$0.4 million increase in acquisition and integration-related costs.

Nine months ended September 30, 2023 vs. nine months ended September 30, 2022

Total orders for the nine months ended September 30, 2023 increased by \$118.5 million, or 11%, compared to the prior-year period. U.S. orders increased by \$64.7 million, primarily due to improvements in orders for street sweepers, road-marking and line-removal equipment, safe-digging trucks, multi-purpose tractors and sewer cleaners of \$18.5 million, \$11.5 million, \$11.1 million, \$9.8 million and \$9.2 million, respectively. Additionally, aftermarket demand increased by \$23.9 million. Partially offsetting these improvements was a \$26.6 million reduction in orders for trailers. Non-U.S. orders increased by \$53.8 million, primarily due to improvements in orders for refuse trucks, metal extraction support equipment, multi-purpose tractors and sewer cleaners of \$24.4 million, \$18.7 million, \$4.9 million and \$4.3 million, respectively. Additionally, aftermarket demand increased by \$14.8 million. Partially offsetting these improvements was a \$7.8 million reduction in street sweeper orders and a \$7.4 million unfavorable foreign currency translation impact.

Net sales for the nine months ended September 30, 2023 increased by \$199.5 million, or 23%, compared to the prior-year period, primarily due to higher sales volumes, inclusive of the effects of acquisitions, pricing actions and increased chassis sales. For the nine months ended September 30, 2023, U.S. sales increased by \$132.6 million, largely due to increases in sales of sewer cleaners, street sweepers, industrial vacuum loaders and safe-digging trucks of \$33.1 million, \$27.0 million, \$11.7 million and \$10.6 million, respectively, as well as a \$28.9 million improvement in aftermarket revenues. Non-U.S. sales increased by \$66.9 million, largely due to a \$18.3 million improvement in aftermarket revenues and increases in sales of refuse trucks, metal extraction support equipment, multi-purpose tractors and sewer cleaners of \$18.8 million, \$18.4 million, \$7.7 million and \$6.1 million, respectively. Partially offsetting these improvements was a \$6.2 million unfavorable foreign currency translation impact.

Cost of sales for the nine months ended September 30, 2023 increased by \$132.4 million, or 19%, compared to the prior-year period, primarily related to higher sales volumes, inclusive of the effects of acquisitions, and increased chassis costs, partially offset by a \$6.0 million favorable foreign currency translation impact. Gross profit margin for the nine months ended September 30, 2023 was 23.4%, compared to 21.1% in the prior-year period, with the improvement primarily attributable to improved operating leverage from higher sales volumes and benefits from pricing actions, partially offset by an increase in lower margin chassis sales.

SEG&A expenses for the nine months ended September 30, 2023 increased by \$13.1 million, or 18%, compared to the prior-year period, primarily due to additional costs from acquired businesses, as well as increases in sales commissions and incentive-based compensation expenses. As a percentage of net sales, SEG&A expenses were 8.1% in the current-year period, down from 8.4% in the prior-year period.

Operating income for the nine months ended September 30, 2023 increased by \$51.2 million, or 51%, compared to the prior-year period, largely due to a \$67.1 million improvement in gross profit, partially offset by the \$13.1 million increase in SEG&A expenses, a \$1.8 million increase in amortization expense, and a \$1.0 million increase in acquisition and integration-related costs.

Backlog was \$939 million at September 30, 2023, compared to \$765 million at September 30, 2022.

Safety and Security Systems

The following table summarizes the Safety and Security Systems Group's operating results as of and for the three and nine months ended September 30, 2023 and 2022:

(\$ in millions)	Three Months Ended September 30,			Nine Months Ended September 30,		
	2023	2022	Change	2023	2022	Change
Net sales	\$ 73.4	\$ 61.6	\$ 11.8	\$ 209.5	\$ 178.0	\$ 31.5
Operating income	13.7	10.5	3.2	39.9	28.7	11.2
Operating data:						
Operating margin	18.7 %	17.0 %	1.7 %	19.0 %	16.1 %	2.9 %
Total orders	\$ 75.4	\$ 60.7	\$ 14.7	\$ 225.9	\$ 187.3	\$ 38.6
Backlog	67.2	59.5	7.7	67.2	59.5	7.7
Depreciation and amortization	0.9	1.0	(0.1)	3.1	3.1	—

Three months ended September 30, 2023 vs. three months ended September 30, 2022

Total orders for the three months ended September 30, 2023 increased by \$14.7 million, or 24%, compared to the prior-year quarter. U.S. orders increased by \$9.5 million, primarily due to a \$9.1 million improvement in orders for public safety equipment. Non-U.S. orders increased by \$5.2 million, primarily due to improvements in orders for public safety equipment and industrial signaling equipment of \$3.1 million and \$1.7 million, respectively.

Net sales for the three months ended September 30, 2023 increased by \$11.8 million, or 19%, compared to the prior-year quarter, inclusive of the effects of higher sales volumes and pricing actions. U.S. sales increased by \$2.3 million, driven by improvements in sales of public safety equipment and warning systems of \$1.3 million and \$1.0 million, respectively. Non-U.S. sales increased by \$9.5 million, largely due to improvements in sales of public safety equipment and warning systems of \$5.8 million and \$1.8 million, respectively.

Cost of sales for the three months ended September 30, 2023 increased by \$6.9 million, or 18%, compared to the prior-year quarter, primarily related to higher sales volumes. Gross profit margin for the three months ended September 30, 2023 was 37.6%, compared to 36.9% in the prior-year quarter, with the improvement primarily attributable to improved operating leverage from higher sales volumes, benefits from pricing actions and lower freight costs.

SEG&A expenses for the three months ended September 30, 2023 increased by \$1.7 million, or 14%, compared to the prior-year quarter, primarily due to higher sales commissions and incentive-based compensation expense. As a percentage of net sales, SEG&A expenses decreased from 19.8% in the prior-year quarter, to 18.9% in the current-year quarter.

Operating income for the three months ended September 30, 2023 increased by \$3.2 million, or 30%, compared to the prior-year quarter, primarily due to a \$4.9 million improvement in gross profit, partially offset by the \$1.7 million increase in SEG&A expenses.

Nine months ended September 30, 2023 vs. nine months ended September 30, 2022

Total orders for the nine months ended September 30, 2023 increased by \$38.6 million, or 21%, compared with the prior-year period. U.S. orders increased by \$16.0 million, primarily due to improvements in orders for public safety equipment and warning systems of \$11.7 million and \$2.6 million, respectively. Non-U.S. orders increased by \$22.6 million, primarily due to a \$19.9 million improvement in orders for public safety equipment, inclusive of a large fleet order from a customer in Mexico.

Net sales for the nine months ended September 30, 2023 increased by \$31.5 million, or 18%, compared to the prior-year period, inclusive of the effects of higher sales volumes and pricing actions. U.S. sales increased by \$15.2 million, driven by improvements in sales of public safety equipment, industrial signaling equipment and warning systems of \$7.0 million, \$4.4 million and \$3.8 million, respectively. Non-U.S. sales increased by \$16.3 million, largely due to improvements in sales of public safety equipment and industrial signaling equipment of \$9.3 million and \$5.8 million, respectively.

Cost of sales for the nine months ended September 30, 2023 increased by \$16.1 million, or 14%, compared to the prior-year period, primarily related to higher sales volumes. Gross profit margin for the nine months ended September 30, 2023 was 38.9%, compared to 37.1% in the prior-year period, with the improvement primarily attributable to improved operating leverage from higher sales volumes, benefits from pricing actions and lower freight costs.

SEG&A expenses for the nine months ended September 30, 2023 increased by \$4.2 million, or 11%, compared to the prior-year period, primarily due to higher sales commissions and incentive-based compensation expense. As a percentage of net sales, SEG&A expenses decreased from 21.0% in the prior-year period, to 19.8% in the current-year period.

Operating income for the nine months ended September 30, 2023 increased by \$11.2 million, or 39%, compared to the prior-year period, primarily due to a \$15.4 million improvement in gross profit, partially offset by the \$4.2 million increase in SEG&A expenses.

Backlog was \$67 million at September 30, 2023, compared to \$60 million at September 30, 2022.

Corporate Expenses

Corporate operating expenses for the three months ended September 30, 2023 were \$8.4 million, compared to \$4.9 million in the prior-year quarter, with the increase primarily due to increases in stock compensation, incentive-based compensation and medical costs.

Corporate operating expenses for the nine months ended September 30, 2023 were \$29.5 million, compared to \$14.3 million in the prior-year period, with the increase primarily due to higher post-retirement expenses, increases in medical, incentive-based compensation, stock compensation and information technology costs, as well as a \$2.0 million increase in acquisition-related expenses. During the nine months ended September 30, 2022, the Company received a favorable settlement of \$1.9 million in a post-closing adjustment dispute associated with the 2021 acquisition of OSW Equipment & Repair, LLC. The related benefit was included as a component of Acquisition and integration-related expenses (benefits) on the Condensed Consolidated Statements of Operations.

Seasonality of Company's Business

Certain of the Company's businesses are susceptible to the influences of seasonal factors, including buying patterns, delivery patterns and productivity influences from holiday periods and weather. In general, the Company tends to have lower equipment sales in the first calendar quarter of each year compared to other quarters as a result of these factors. In addition, rental income and parts sales are generally higher in the second and third quarters of the year, because many of the Company's products are used for maintenance activities in North America, where usage is typically lower during periods of harsher weather conditions.

Financial Condition, Liquidity and Capital Resources

The Company uses its cash flow from operations to fund growth and to make capital investments that sustain its operations, reduce costs, or both. Beyond these uses, remaining cash is used to pay down debt, repurchase shares, fund dividend payments and make pension contributions. The Company may also choose to invest in the acquisition of businesses. In the absence of significant unanticipated cash demands, we believe that the Company's existing cash balances, cash flow from operations and borrowings available under the Company's credit facility will provide funds sufficient for these purposes. As of September 30, 2023, there was \$364.2 million of cash drawn and \$11.2 million of undrawn letters of credit under the 2022 Credit Agreement, with \$424.6 million of availability for borrowings. The net cash flows associated with the Company's rental equipment transactions are included in cash flow from operating activities.

The Company's cash and cash equivalents totaled \$41.0 million and \$47.5 million as of September 30, 2023 and December 31, 2022, respectively. As of September 30, 2023, \$21.4 million of cash and cash equivalents was held by foreign subsidiaries. Cash and cash equivalents held by subsidiaries outside the U.S. typically are held in the currency of the country in which it is located. The Company uses this cash to fund the operating activities of its foreign subsidiaries and for further investment in foreign operations. Generally, the Company has considered such cash to be permanently reinvested in its foreign operations and the Company's current plans do not demonstrate a need to repatriate such cash to fund U.S. operations. However, in the event that these funds are needed to fund U.S. operations or to satisfy U.S. obligations, they generally could be repatriated. The repatriation of these funds may cause the Company to incur additional U.S. income tax expense, dependent on income tax laws and other circumstances at the time any such amounts are repatriated.

Net cash of \$91.0 million was provided by operating activities in the nine months ended September 30, 2023, compared to \$32.4 million in the prior-year period, with the year-over-year increase primarily due to working capital improvements and higher net income, partially offset by increased rental fleet investments to support strong demand for rentals and used equipment and higher tax payments.

Net cash of \$75.7 million was used for investing activities in the nine months ended September 30, 2023, compared to \$50.1 million in the prior-year period. During the nine months ended September 30, 2023, the Company made initial payments of \$41.9 million and \$13.2 million to acquire Trackless and Blasters, respectively, and funded \$21.4 million of capital expenditures. During the nine months ended September 30, 2022, the Company completed the purchase of its University Park, Illinois manufacturing facility for \$27.8 million, funded \$17.8 million of other capital expenditures, paid \$4.3 million to acquire certain distribution rights from dealers, and paid \$1.6 million to fund a post-closing adjustment related to the Deist acquisition.

Net cash of \$21.2 million was used for financing activities in the nine months ended September 30, 2023, whereas in the prior-year period, net cash of \$14.4 million was provided by financing activities. In the nine months ended September 30, 2023, the Company increased debt borrowings by \$4.6 million, funded cash dividends and share repurchases of \$17.7 million and \$4.3 million, respectively, and redeemed \$5.6 million of stock in order to remit funds to tax authorities to satisfy employees' tax withholdings following the vesting of stock-based compensation and the exercise of stock options. During the nine months ended September 30, 2023, the Company also paid \$0.5 million to settle the contingent consideration obligation due to the former owners of MRL, and received \$2.3 million from stock option exercises. In the nine months ended September 30, 2022, the Company increased debt borrowings by \$49.9 million, funded cash dividends and share repurchases of \$16.4 million and \$16.1 million, respectively, and redeemed \$3.0 million of stock in order to remit funds to tax authorities to satisfy employees' tax withholdings following the vesting of stock-based compensation and the exercise of stock options.

The Company is subject to certain net leverage ratio and interest coverage ratio financial covenants under the 2022 Credit Agreement that are measured at each fiscal quarter-end. The Company was in compliance with all such covenants as of September 30, 2023.

The Company anticipates that capital expenditures for 2023 will be in the range of \$27 million to \$30 million.

The Company believes that its financial resources and major sources of liquidity, including cash flow from operations and increased borrowing capacity, will be adequate to meet its operating needs, capital needs and financial commitments.

Contractual Obligations and Off-Balance Sheet Arrangements

During the nine months ended September 30, 2023, there have been no material changes in the Company's contractual obligations and off-balance sheet arrangements as described in Item 7, *Management's Discussion and Analysis of Financial Condition and Results of Operations*, of the Company's Annual Report on Form 10-K for the year ended December 31, 2022.

Item 3. *Quantitative and Qualitative Disclosures about Market Risk.*

See Item 7A, *Quantitative and Qualitative Disclosures about Market Risk*, of the Company's Annual Report on Form 10-K for the year ended December 31, 2022. During the nine months ended September 30, 2023, there have been no significant changes in our exposure to market risk.

Item 4. *Controls and Procedures.*

As required by Rule 13a-15 under the Exchange Act, the Company's management, with the participation of the Company's Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of the design and operation of the Company's disclosure controls and procedures (as defined in Rule 13a-15(e) or Rule 15d-15(e) under the Exchange Act) as of September 30, 2023. Based on that evaluation, the Company's Chief Executive Officer and Chief Financial Officer concluded that the Company's disclosure controls and procedures were effective as of September 30, 2023.

As a matter of practice, the Company's management continues to review and document internal control and procedures for financial reporting. From time to time, the Company may make changes aimed at enhancing the effectiveness of the controls and ensuring that the systems evolve with the business. SEC guidance permits management to omit an assessment of internal control over financial reporting for an acquired business from management's assessment of internal control over financial reporting for a period not to exceed one year from the date of the acquisition. During the nine months ended September 30, 2023, the Company completed the acquisitions of Trackless and Blasters. As of September 30, 2023, management has not yet fully assessed Trackless' or Blasters' internal control over financial reporting. Excluding the acquisitions of Trackless and Blasters, there were no changes in the Company's internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting during the nine months ended September 30, 2023.

PART II. OTHER INFORMATION

Item 1. *Legal Proceedings.*

The information set forth under the heading “Legal Proceedings” in Note 9 – Commitments and Contingencies to the accompanying condensed consolidated financial statements as included in Part I of this Form 10-Q is incorporated herein by reference.

Item 1A. *Risk Factors.*

There have been no material changes in the Company’s risk factors as described in Item 1A, *Risk Factors*, of the Company’s Annual Report on Form 10-K for the year ended December 31, 2022.

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

The following table provides a summary of the Company’s repurchase activity for its common stock during the three months ended September 30, 2023:

Period	Total Number of Shares Purchased	Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Dollar Value of Shares That May Yet Be Purchased Under the Plans or Programs (a)
July 2023 (7/2/23 - 8/5/23)	—	\$ —	—	\$ 59,052,829
August 2023 (8/6/23 - 9/2/23)	24,474	59.5166	24,474	57,596,219
September 2023 (9/3/23 - 9/30/23)	47,994	58.2742	47,994	54,799,407

(a) In March 2020, the Board authorized a stock repurchase program of up to \$75.0 million of the Company’s common stock, with the remaining authorization under our previously described repurchase program adopted in 2014 being subject to the March 2020 program.

Item 3. *Defaults upon Senior Securities.*

None.

Item 4. *Mine Safety Disclosures.*

Not applicable.

Item 5. *Other Information.*

On November 2, 2023, the Company issued a press release announcing its financial results for the three and nine months ended September 30, 2023. The presentation slides for the third quarter 2023 earnings call were also posted on the Company’s website at that time. The full text of the third quarter financial results press release and earnings presentation are attached hereto as Exhibits 99.1 and 99.2, respectively, to this Form 10-Q.

Item 6. Exhibits.

- 3.1 [Restated Certificate of Incorporation of the Company. Incorporated by reference to Exhibit 3.1 to the Company's Form 8-K filed April 30, 2010.](#)
- 3.2 [Amended and Restated By-laws of the Company. Incorporated by reference to Exhibit 3.1 to the Company's Form 8-K filed October 24, 2023.](#)
- 10.1* [Employment Letter dated as of September 1, 2023, by and between the Company and Felix Boeschen.](#)
- 31.1 [CEO Certification under Section 302 of the Sarbanes-Oxley Act.](#)
- 31.2 [CFO Certification under Section 302 of the Sarbanes-Oxley Act.](#)
- 32.1 [CEO Certification of Periodic Report under Section 906 of the Sarbanes-Oxley Act.](#)
- 32.2 [CFO Certification of Periodic Report under Section 906 of the Sarbanes-Oxley Act.](#)
- 99.1 [Third Quarter Financial Results Press Release, Dated November 2, 2023.](#)
- 99.2 [Third Quarter Earnings Call Presentation Slides.](#)
- 101.INS XBRL Instance Document (the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document).
- 101.SCH Inline XBRL Taxonomy Extension Schema Document.
- 101.CAL Inline XBRL Taxonomy Calculation Linkbase Document.
- 101.DEF Inline XBRL Taxonomy Extension Definition Linkbase Document.
- 101.LAB Inline XBRL Taxonomy Label Linkbase Document.
- 101.PRE Inline XBRL Taxonomy Presentation Linkbase Document.
- 104 Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101).

*Management contract or compensatory plan or arrangement required to be filed as an exhibit pursuant to Item 15(a)(3) of Form 10-K.

SIGNATURE

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

Federal Signal Corporation

Date: November 2, 2023

/s/ Ian A. Hudson

Ian A. Hudson

*Senior Vice President and Chief Financial Officer
(Principal Financial Officer)*