
**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 December 31, 2022

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 1-05129

MOOG Inc.

(Exact name of registrant as specified in its charter)

New York

(State or other jurisdiction of
incorporation or organization)

16-0757636

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

400 Jamison Road East Aurora, New York

(Address of Principal Executive Offices)

14052-0018

(Zip Code)

(716) 652-2000

(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
Class A common stock	MOG.A	New York Stock Exchange
Class B common stock	MOG.B	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

[Table of Contents](#)

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

The number of shares outstanding of each class of common stock as of January 23, 2023 was:

Class A common stock, 28,715,563 shares

Class B common stock, 3,130,993 shares



**QUARTERLY REPORT ON FORM 10-Q
TABLE OF CONTENTS**

PART I	FINANCIAL INFORMATION	PAGE	
	<u>Item 1</u>	Financial Statements (Unaudited):	
		Consolidated Condensed Statements of Earnings	4
		Consolidated Condensed Statements of Comprehensive Income	5
		Consolidated Condensed Balance Sheets	6
		Consolidated Condensed Statements of Shareholders' Equity	7
		Consolidated Condensed Statements of Cash Flows	9
		Notes to Consolidated Condensed Financial Statements	10
	<u>Item 2</u>	Management's Discussion and Analysis of Financial Condition and Results of Operations	30
	<u>Item 3</u>	Quantitative and Qualitative Disclosures about Market Risk	44
	<u>Item 4</u>	Controls and Procedures	44
PART II	OTHER INFORMATION		
	<u>Item 1A</u>	Risk Factors	45
	<u>Item 2</u>	Unregistered Sales of Equity Securities and Use of Proceeds	45
	<u>Item 6</u>	Exhibits	46
	SIGNATURES		47

PART I FINANCIAL INFORMATION

Item 1. Financial Statements



Consolidated Condensed Statements of Earnings
(Unaudited)

	Three Months Ended	
	December 31, 2022	January 1, 2022
(dollars in thousands, except share and per share data)		
Net sales	\$ 760,103	\$ 724,086
Cost of sales	556,417	529,706
Inventory write-down	—	1,500
Gross profit	203,686	192,880
Research and development	23,862	27,708
Selling, general and administrative	113,165	111,797
Interest	13,132	7,982
Restructuring	1,078	—
Gain on sale of businesses	—	(16,146)
Gain on sale of buildings	(9,503)	—
Other	1,651	116
Earnings before income taxes	60,301	61,423
Income taxes	14,285	15,158
Net earnings	\$ 46,016	\$ 46,265
Net earnings per share		
Basic	\$ 1.45	\$ 1.44
Diluted	\$ 1.44	\$ 1.44
Average common shares outstanding		
Basic	31,746,001	32,057,399
Diluted	31,874,718	32,188,158

See accompanying Notes to Consolidated Condensed Financial Statements.



Consolidated Condensed Statements of Comprehensive Income
(Unaudited)

(dollars in thousands)	Three Months Ended	
	December 31, 2022	January 1, 2022
Net earnings	\$ 46,016	\$ 46,265
Other comprehensive income (loss) ("OCI"), net of tax:		
Foreign currency translation adjustment	50,735	(6,560)
Retirement liability adjustment	1,199	4,090
Change in accumulated income on derivatives	1,919	135
Other comprehensive income (loss), net of tax	53,853	(2,335)
Comprehensive income	\$ 99,869	\$ 43,930

See accompanying Notes to Consolidated Condensed Financial Statements.

MOOG Inc.
Consolidated Condensed Balance Sheets
(Unaudited)

(dollars in thousands)	December 31, 2022	October 1, 2022
ASSETS		
Current assets		
Cash and cash equivalents	\$ 143,069	\$ 103,895
Restricted cash	22,842	15,338
Receivables, net	1,066,340	990,262
Inventories, net	648,160	588,466
Prepaid expenses and other current assets	52,772	60,349
Total current assets	1,933,183	1,758,310
Property, plant and equipment, net	689,339	668,908
Operating lease right-of-use assets	68,653	69,072
Goodwill	822,901	805,320
Intangible assets, net	85,396	85,410
Deferred income taxes	9,300	8,630
Other assets	49,273	36,191
Total assets	\$ 3,658,045	\$ 3,431,841
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities		
Current installments of long-term debt	\$ 822	\$ 916
Accounts payable	226,188	232,104
Accrued compensation	76,770	93,141
Contract advances	372,262	296,899
Accrued liabilities and other	209,624	215,376
Total current liabilities	885,666	838,436
Long-term debt, excluding current installments	916,058	836,872
Long-term pension and retirement obligations	146,919	140,602
Deferred income taxes	65,385	63,527
Other long-term liabilities	118,836	115,591
Total liabilities	2,132,864	1,995,028
Shareholders' equity		
Common stock - Class A	43,807	43,807
Common stock - Class B	7,473	7,473
Additional paid-in capital	550,511	516,123
Retained earnings	2,397,814	2,360,055
Treasury shares	(1,055,735)	(1,047,012)
Stock Employee Compensation Trust	(89,689)	(73,602)
Supplemental Retirement Plan Trust	(71,811)	(58,989)
Accumulated other comprehensive loss	(257,189)	(311,042)
Total shareholders' equity	1,525,181	1,436,813
Total liabilities and shareholders' equity	\$ 3,658,045	\$ 3,431,841

See accompanying Notes to Consolidated Condensed Financial Statements.



Consolidated Condensed Statements of Shareholders' Equity
(Unaudited)

(dollars in thousands)	Three Months Ended	
	December 31, 2022	January 1, 2022
COMMON STOCK		
Beginning and end of period	\$ 51,280	\$ 51,280
ADDITIONAL PAID-IN CAPITAL		
Beginning of period	516,123	509,622
Issuance of treasury shares	2,228	1,755
Equity-based compensation expense	2,443	2,405
Adjustment to market - SECT and SERP	29,717	5,075
End of period	550,511	518,857
RETAINED EARNINGS		
Beginning of period	2,360,055	2,237,848
Net earnings	46,016	46,265
Dividends ⁽¹⁾	(8,257)	(8,031)
End of period	2,397,814	2,276,082
TREASURY SHARES AT COST		
Beginning of period	(1,047,012)	(1,007,506)
Class A and B shares issued related to compensation	1,724	1,077
Class A and B shares purchased	(10,447)	(16,657)
End of period	(1,055,735)	(1,023,086)
STOCK EMPLOYEE COMPENSATION TRUST ("SECT")		
Beginning of period	(73,602)	(79,776)
Issuance of shares	2,561	2,075
Purchase of shares	(1,753)	(2,275)
Adjustment to market	(16,895)	(2,745)
End of period	(89,689)	(82,721)
SUPPLEMENTAL RETIREMENT PLAN ("SERP") TRUST		
Beginning of period	(58,989)	(63,764)
Adjustment to market	(12,822)	(2,330)
End of period	(71,811)	(66,094)
ACCUMULATED OTHER COMPREHENSIVE LOSS		
Beginning of period	(311,042)	(247,560)
Other comprehensive income (loss)	53,853	(2,335)
End of period	(257,189)	(249,895)
TOTAL SHAREHOLDERS' EQUITY	\$ 1,525,181	\$ 1,424,423

See accompanying Notes to Consolidated Condensed Financial Statements.

⁽¹⁾ Cash dividends were \$0.26 per share for the three months ended December 31, 2022 and \$0.25 per share for three months ended January 1, 2022.



Consolidated Condensed Statements of Shareholders' Equity, Shares
(Unaudited)

(share data)	Three Months Ended	
	December 31, 2022	January 1, 2022
COMMON STOCK - CLASS A		
Beginning and end of period	43,806,835	43,803,236
COMMON STOCK - CLASS B		
Beginning and end of period	7,472,878	7,476,477
TREASURY SHARES - CLASS A COMMON STOCK		
Beginning of period	(14,614,444)	(14,157,721)
Class A shares issued related to compensation	35,550	22,042
Class A shares purchased	(87,614)	(190,439)
End of period	(14,666,508)	(14,326,118)
TREASURY SHARES - CLASS B COMMON STOCK		
Beginning of period	(3,020,291)	(3,179,055)
Class B shares issued related to compensation	72,740	58,338
Class B shares purchased	(44,350)	(33,550)
End of period	(2,991,901)	(3,154,267)
SECT - CLASS A COMMON STOCK		
Beginning and end of period	(425,148)	(425,148)
SECT - CLASS B COMMON STOCK		
Beginning of period	(611,942)	(600,880)
Issuance of shares	30,069	25,000
Purchase of shares	(20,727)	(27,827)
End of period	(602,600)	(603,707)
SERP - CLASS B COMMON STOCK		
Beginning and end of period	(826,170)	(826,170)

See accompanying Notes to Consolidated Condensed Financial Statements.



Consolidated Condensed Statements of Cash Flows
(Unaudited)

(dollars in thousands)	Three Months Ended	
	December 31, 2022	January 1, 2022
CASH FLOWS FROM OPERATING ACTIVITIES		
Net earnings	\$ 46,016	\$ 46,265
Adjustments to reconcile net earnings to net cash provided by operating activities:		
Depreciation	18,392	19,290
Amortization	2,992	3,402
Deferred income taxes	(1,342)	7,895
Equity-based compensation expense	2,974	2,658
Gain on sale of businesses	—	(16,146)
Gain on sale of buildings	(9,503)	—
Inventory write-down	—	1,500
Other	1,145	699
Changes in assets and liabilities providing (using) cash:		
Receivables	(53,957)	38,941
Inventories	(44,435)	7,179
Accounts payable	(9,679)	(20,833)
Contract advances	72,889	105,548
Accrued expenses	(35,186)	(26,914)
Accrued income taxes	12,632	5,173
Net pension and post retirement liabilities	3,988	4,501
Other assets and liabilities	1,157	(21,973)
Net cash provided by operating activities	8,083	157,185
CASH FLOWS FROM INVESTING ACTIVITIES		
Purchase of property, plant and equipment	(30,125)	(37,059)
Net proceeds from businesses sold	1,124	38,611
Net proceeds from buildings sold	7,432	—
Other investing transactions	(3,724)	(1,275)
Net cash provided (used) by investing activities	(25,293)	277
CASH FLOWS FROM FINANCING ACTIVITIES		
Proceeds from revolving lines of credit	241,000	215,200
Payments on revolving lines of credit	(160,300)	(263,476)
Payments on long-term debt	(93)	(80,060)
Payments on finance lease obligations	(884)	(505)
Payment of dividends	(8,257)	(8,031)
Proceeds from sale of treasury stock	1,869	2,144
Purchase of outstanding shares for treasury	(12,721)	(16,657)
Proceeds from sale of stock held by SECT	2,561	2,075
Purchase of stock held by SECT	(1,753)	(2,275)
Other financing transactions	(2,026)	—
Net cash provided (used) by financing activities	59,396	(151,585)
Effect of exchange rate changes on cash	4,492	(65)
Increase in cash, cash equivalents and restricted cash	46,678	5,812
Cash, cash equivalents and restricted cash at beginning of period	119,233	100,914
Cash, cash equivalents and restricted cash at end of period	\$ 165,911	\$ 106,726
SUPPLEMENTAL CASH FLOW INFORMATION		
Treasury shares issued as compensation	\$ 1,532	\$ 688
Equipment and property acquired through lease financing	5,970	8,755

See accompanying Notes to Consolidated Condensed Financial Statements.



Notes to Consolidated Condensed Financial Statements
Three Months Ended December 31, 2022
(Unaudited)
(dollars in thousands, except per share data)

Note 1 - Basis of Presentation

The accompanying unaudited consolidated condensed financial statements have been prepared by management in accordance with U.S. generally accepted accounting principles for interim financial information and with the instructions to Form 10-Q and Article 10 of Regulation S-X. In the opinion of management, all adjustments consisting of normal recurring adjustments considered necessary for the fair presentation of results for the interim period have been included. The results of operations for the three months ended December 31, 2022 are not necessarily indicative of the results expected for the full year. The accompanying unaudited consolidated condensed financial statements should be read in conjunction with the financial statements and notes thereto included in our Form 10-K for the fiscal year ended October 1, 2022. All references to years in these financial statements are to fiscal years.

Reclassifications

Certain prior year amounts have been reclassified to conform to current year's presentation, which management does not consider to be material.

Recent Accounting Pronouncements Adopted

There have been no accounting pronouncements adopted for the three months ended December 31, 2022.

Recent Accounting Pronouncements Not Yet Adopted

We consider the applicability and impact of all Accounting Standard Updates ("ASU"). ASUs not listed were assessed and determined to be either not applicable, or had or are expected to have an immaterial impact on our financial statements and related disclosures.

Note 2 - Revenue from Contracts with Customers

We recognize revenue from contracts with customers using the five-step model prescribed in ASC 606. The first step is identifying the contract. The identification of a contract with a customer requires an assessment of each party's rights and obligations regarding the products or services to be transferred, including an evaluation of termination clauses and presently enforceable rights and obligations. Each party's rights and obligations and the associated terms and conditions are typically determined in purchase orders. For sales that are governed by master supply agreements under which provisions define specific program requirements, purchase orders are issued under these agreements to reflect presently enforceable rights and obligations for the units of products and services being purchased.

Contracts are sometimes modified to account for changes in contract specifications and requirements. When this occurs, we assess the modification as prescribed in ASC 606 and determine whether the existing contract needs to be modified (and revenue cumulatively caught up), whether the existing contract needs to be terminated and a new contract needs to be created, or whether the existing contract remains and a new contract needs to be created. This is determined based on the rights and obligations within the modification as well as the associated transaction price.

The next step is identifying the performance obligations. A performance obligation is a promise to transfer goods or services to a customer that is distinct in the context of the contract, as defined by ASC 606. We identify a performance obligation for each promise in a contract to transfer a distinct good or service to the customer. As part of our assessment, we consider all goods and/or services promised in the contract, regardless of whether they are explicitly stated or implied by customary business practices. The products and services in our contracts are typically not distinct from one another due to their complexity and reliance on each other or, in many cases, we provide a significant integration service. Accordingly, many of our contracts are accounted for as one performance obligation. In limited cases, our contracts have more than one distinct performance obligation, which occurs when we perform activities that are not highly complex or interrelated or involve different product life cycles. Warranties are provided on certain contracts, but do not typically provide for services beyond standard assurances and are therefore not distinct performance obligations under ASC 606.

The third step is determining the transaction price, which represents the amount of consideration we expect to be entitled to receive from a customer in exchange for providing the goods or services. There are times when this consideration is variable, for example a volume discount, and must be estimated. Sales, use, value-added, and excise taxes are excluded from the transaction price, where applicable.

The fourth step is allocating the transaction price. The transaction price must be allocated to the performance obligations identified in the contract based on relative stand-alone selling prices when available, or an estimate for each distinct good or service in the contract when standalone prices are not available. Our contracts with customers generally require payment under normal commercial terms after delivery. Payment terms are typically within 30 to 60 days of delivery. The timing of satisfaction of our performance obligations does not significantly vary from the typical timing of payment.

The final step is the recognition of revenue. We recognize revenue as the performance obligations are satisfied. ASC 606 provides guidance to help determine if we are satisfying the performance obligation at a point in time or over time. In determining when performance obligations are satisfied, we consider factors such as contract terms, payment terms and whether there is an alternative use of the product or service. In essence, we recognize revenue when, or as control of, the promised goods or services transfer to the customer.

Revenue is recognized either over time using the cost-to-cost method, or point in time method. The over-time method of revenue recognition is predominantly used in Aircraft Controls and Space and Defense Controls. We use this method for U.S. Government contracts and repair and overhaul arrangements as we are creating or enhancing assets that the customer controls as the assets are being created or enhanced. In addition, many of our large commercial contracts qualify for over-time accounting as our performance does not create an asset with an alternative use and we have an enforceable right to payment for performance completed to date. Our over-time contracts are primarily firm fixed price.

Revenue recognized at the point in time control is transferred to the customer is used most frequently in Industrial Systems. We use this method for commercial contracts in which the asset being created has an alternative use. We determine the point in time control transfers to the customer by weighing the five indicators provided by ASC 606 - the entity has a present right to payment; the customer has legal title; the customer has physical possession; the customer has significant risks and rewards of ownership; and the customer has accepted the asset. When control has transferred to the customer, profit is generated as cost of sales is recorded and as revenue is recognized. Inventory costs include all product manufacturing costs such as direct material, direct labor, other direct costs and indirect overhead cost allocations. Shipping and handling costs are considered costs to fulfill a contract and not considered performance obligations. They are included in cost of sales as incurred.

Revenue is recognized on contracts using the cost-to-cost method of accounting as work progresses toward completion as determined by the ratio of cumulative costs incurred to date to estimated total contract costs at completion, multiplied by the total estimated contract revenue, less cumulative revenue recognized in prior periods. We believe that cumulative costs incurred to date as a percentage of estimated total contract costs at completion is an appropriate measure of progress toward satisfaction of performance obligations as this measure most accurately depicts the progress of our work and transfer of control to our customers. Changes in estimates affecting sales, costs and profits are recognized in the period in which the change becomes known using the cumulative catch-up method of accounting, resulting in the cumulative effect of changes reflected in the period. Estimates are reviewed and updated quarterly for substantially all contracts. For the three months ended December 31, 2022 and January 1, 2022, we recognized lower revenue of \$4,300 and additional revenue of \$10,978, respectively, for adjustments made to performance obligations satisfied (or partially satisfied) in previous periods.

Contract costs include only allocable, allowable and reasonable costs which are included in cost of sales when incurred. For applicable U.S. Government contracts, contract costs are determined in accordance with the Federal Acquisition Regulations and the related Cost Accounting Standards. The nature of these costs includes development engineering costs and product manufacturing costs such as direct material, direct labor, other direct costs and indirect overhead costs. Contract profit is recorded as a result of the revenue recognized less costs incurred in any reporting period. Variable consideration and contract modifications, such as performance incentives, penalties, contract claims or change orders are considered in estimating revenues, costs and profits when they can be reliably estimated and realization is considered probable. Revenue recognized on contracts for unresolved claims or unapproved contract change orders was not material for the three months ended December 31, 2022.

As of December 31, 2022, we had contract reserves of \$43,739. For contracts with anticipated losses at completion, a provision for the entire amount of the estimated remaining loss is charged against income in the period in which the loss becomes known. Contract losses are determined considering all direct and indirect contract costs, exclusive of any selling, general or administrative cost allocations that are treated as period expenses. Loss reserves are more common on firm fixed-price contracts that involve, to varying degrees, the design and development of new and unique controls or control systems to meet the customers' specifications. In accordance with ASC 606, we calculate contract losses at the contract level, versus the performance obligation level. Recall reserves are recorded when additional work is needed on completed products for them to meet contract specifications. Contract-related loss reserves are recorded for the additional work needed on completed and delivered products in order for them to meet contract specifications.

Contract Assets and Liabilities

Unbilled receivables (contract assets) primarily represent revenues recognized for performance obligations that have been satisfied but for which amounts have not been billed. These are included as Receivables on the Consolidated Condensed Balance Sheets. Contract advances (contract liabilities) relate to payments received from customers in advance of the satisfaction of performance obligations for a contract. We do not consider contract advances to be significant financing components as the intent of these payments in advance are for reasons other than providing a significant financing benefit and are customary in our industry.

Total contract assets and contract liabilities are as follows:

	December 31, 2022	October 1, 2022
Unbilled receivables	\$ 645,234	\$ 614,760
Contract advances	372,262	296,899
Net contract assets	\$ 272,972	\$ 317,861

The increase in contract assets reflects the net impact of additional unbilled revenues recorded in excess of revenue recognized during the period. The increase in contract liabilities reflects the net impact of additional deferred revenues recorded in excess of revenue recognized during the period. For the three months ended December 31, 2022, we recognized \$88,799 of revenue, that was included in the contract liability balance at the beginning of the period.

Remaining Performance Obligations

As of December 31, 2022, the aggregate amount of the transaction price allocated to the performance obligations that are unsatisfied (or partially unsatisfied) was \$5,200,000. We expect to recognize approximately 44% of that amount as sales over the next twelve months and the balance thereafter.

Disaggregation of Revenue

See Note 20 - Segments, for disclosures related to disaggregation of revenue.

Note 3 - Acquisitions and Divestitures

Acquisitions

On February 21, 2022, we acquired TEAM Accessories Limited ("TEAM") based in Dublin, Ireland for a purchase price, net of acquired cash, of \$14,885, consisting of \$11,832 in cash and contingent consideration with an initial fair value of \$3,053. TEAM specializes in Maintenance, Repair and Overhaul of engine and airframe components. This operation is included in our Aircraft Controls segment. The purchase price allocation is subject to adjustments as we obtain additional information for our estimates during the measurement period.

Divestitures

On September 30, 2022, we sold a sonar business based in the United Kingdom previously included in our Industrial Systems segment. We have cumulatively received net proceeds of \$13,075 and recorded a loss of \$15,246, net of transaction costs. An immaterial adjustment to the loss was recorded during the three months ended December 31, 2022.

On September 20, 2022, we sold assets of a security business based in Northbrook, Illinois previously included in our Space and Defense Controls segment. We have cumulatively received net proceeds of \$9,273 and recorded a loss of \$4,112, net of transaction costs. The loss is subject to adjustments associated with amounts currently held in escrow.

On December 3, 2021, we sold the assets of our Navigation Aids ("NAVAIDS") business based in Salt Lake City, Utah previously included in our Aircraft Controls segment to THALES USA Inc. We have cumulatively received net proceeds of \$36,550 and recorded a gain of \$16,146, net of transaction costs. The gain is subject to adjustments associated with amounts currently held in escrow.

Note 4 - Receivables

Receivables consist of:

	December 31, 2022	October 1, 2022
Accounts receivable	\$ 399,705	\$ 363,137
Unbilled receivables	645,234	614,760
Other	26,149	16,973
Less allowance for credit losses	(4,748)	(4,608)
Receivables, net	\$ 1,066,340	\$ 990,262

Moog Receivables LLC (the "Receivables Subsidiary"), a wholly owned bankruptcy remote special purpose subsidiary of Moog Inc. (the "Company"), as seller, the Company, as master servicer, Wells Fargo Bank, N.A., as administrative agent (the "Agent") and certain purchasers (collectively, the "Purchasers") entered into an Amended and Restated Receivables Purchase Agreement (the "RPA"). The RPA matures on November 4, 2024 and is subject to customary termination events related to transactions of this type.

Under the RPA, the Receivables Subsidiary may sell receivables to the Purchasers in amounts up to a \$100,000 limit. The receivables will be sold to the Purchasers in consideration for the Purchasers making payments of cash, which is referred to as "capital" for purposes of the RPA, to the Receivables Subsidiary in accordance with the terms of the RPA. The Receivables Subsidiary may sell receivables to the Purchasers so long as certain conditions are satisfied, including that, at any date of determination, the aggregate capital paid to the Receivables Subsidiary does not exceed a "capital coverage amount", equal to an adjusted net receivables pool balance minus a required reserve. Each Purchaser's share of capital accrues yield at a variable rate plus an applicable margin.

The parties intend that the conveyance of receivables to the Agent, for the ratable benefit of the Purchasers will constitute a purchase and sale of receivables and not a pledge for security. The Receivables Subsidiary has guaranteed to each Purchaser and Agent the prompt payment of sold receivables, and to secure the prompt payment and performance of such guaranteed obligations, the Receivables Subsidiary has granted a security interest to the Agent, for the benefit of the Purchasers, in all assets of the Receivables Subsidiary. The assets of the Receivables Subsidiary are not available to pay our creditors or any affiliate thereof. In our capacity as master servicer under the RPA, we are responsible for administering and collecting receivables and have made customary representations, warranties, covenants and indemnities. We also provided a performance guarantee for the benefit of the Purchaser.

The proceeds of the RPA are classified as operating activities in our Consolidated Condensed Statement of Cash Flows and were used to pay off the outstanding balance of the Securitization Program. Cash received from collections of sold receivables is used by the Receivables Subsidiary to fund additional purchases of receivables on a revolving basis or to return all or any portion of outstanding capital of the Purchaser. Subsequent collections on the pledged receivables, which have not been sold, will be classified as operating cash flows at the time of collection. Total receivables sold and cash collections under the RPA were both \$115,042 for the three months ended December 31, 2022. The fair value of the sold receivables approximated book value due to their credit quality and short-term nature, and as a result, no gain or loss on sale of receivables was recorded.

As of December 31, 2022, the amount sold to the Purchasers was \$100,000, which was derecognized from the Consolidated Condensed Balance Sheets. As collateral against sold receivables, the Receivables Subsidiary maintains a certain level of unsold receivables, which was \$730,504 at December 31, 2022.

The allowance for credit losses is based on our assessment of the collectability of customer accounts. The allowance is determined by considering factors such as historical experience, credit quality, age of the accounts receivable, current economic conditions and reasonable forecasted financial information that may affect a customer's ability to pay.

Note 5 - Inventories

Inventories, net of reserves, consist of:

	December 31, 2022	October 1, 2022
Raw materials and purchased parts	\$ 250,228	\$ 219,893
Work in progress	325,718	305,328
Finished goods	72,214	63,245
Inventories, net	\$ 648,160	\$ 588,466

There are no material inventoried costs relating to over-time contracts where revenue is accounted for using the cost-to-cost method of accounting as of December 31, 2022 and October 1, 2022.

Note 6 - Property, Plant and Equipment

Property, plant and equipment consists of:

	December 31, 2022	October 1, 2022
Land	\$ 29,714	\$ 32,164
Buildings and improvements	515,862	502,050
Machinery and equipment	816,689	786,562
Computer equipment and software	211,985	201,960
Property, plant and equipment, at cost	1,574,250	1,522,736
Less accumulated depreciation and amortization	(884,911)	(853,828)
Property, plant and equipment, net	\$ 689,339	\$ 668,908

Note 7 - Leases

We lease certain manufacturing facilities, office space and machinery and equipment globally. At inception we evaluate whether a contractual arrangement contains a lease. Specifically, we consider whether we control the underlying asset and have the right to obtain substantially all the economic benefits or outputs from the asset. If the contractual arrangement contains a lease, we then determine the classification of the lease, operating or finance, using the classification criteria described in ASC 842. We then determine the term of the lease based on terms and conditions of the contractual arrangement, including whether the options to extend or terminate the lease are reasonably certain to be exercised. We have elected to not separate lease components from non-lease components, such as common area maintenance charges and instead, account for the lease and non-lease components as a single component.

Our lease right-of-use ("ROU") assets represent our right to use an underlying asset for the lease term and our lease liabilities represent our obligation to make lease payments. Operating lease ROU assets are included in Operating lease right-of-use assets and operating lease liabilities are included in Accrued liabilities and other and Other long-term liabilities on the Consolidated Condensed Balance Sheets. Finance lease ROU assets are included in Property, plant and equipment and finance lease liabilities are included in Accrued liabilities and other and Other long-term liabilities on the Consolidated Condensed Balance Sheets. Operating lease cost is included in Cost of sales and Selling, general and administrative on the Consolidated Condensed Statements of Earnings. Finance lease cost is included in Cost of sales, Selling, general and administrative and Interest on the Consolidated Condensed Statements of Earnings.

The ROU assets and lease liabilities for both operating and finance leases are recognized as of the commencement date at the net present value of the fixed minimum lease payments over the term of the lease, using the discount rate described below. Variable lease payments are recorded in the period in which the obligation for the payment is incurred. Variable lease payments based on an index or rate are initially measured using the index or rate as of the commencement date of the lease and included in the fixed minimum lease payments. For short-term leases that have a term of 12 months or less as of the commencement date, we do not recognize a ROU asset or lease liability on our balance sheet; we recognize expense as the lease payments are made over the lease term.

The discount rate used to calculate the present value of our leases is the rate implicit in the lease. If the information necessary to determine the rate implicit in the lease is not available, we use our incremental borrowing rate for collateralized debt, which is determined using our credit rating and other information available as of the lease commencement date.

The components of lease expense were as follows:

	Three Months Ended	
	December 31, 2022	January 1, 2022
Operating lease cost	\$ 7,395	\$ 6,940
Finance lease cost:		
Amortization of right-of-use assets	\$ 972	\$ 587
Interest on lease liabilities	364	217
Total finance lease cost	\$ 1,336	\$ 804

Supplemental cash flow information related to leases was as follows:

	Three Months Ended	
	December 31, 2022	January 1, 2022
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flow for operating leases	\$ 7,531	\$ 7,239
Operating cash flow for finance leases	364	217
Financing cash flow for finance leases	884	505
Assets obtained in exchange for lease obligations:		
Operating leases	\$ 1,086	\$ 6,008
Finance leases	4,884	2,747

Supplemental balance sheet information related to leases was as follows:

	December 31, 2022	October 1, 2022
<u>Operating Leases:</u>		
Operating lease right-of-use assets	\$ 68,653	\$ 69,072
Accrued liabilities and other	\$ 12,939	\$ 13,002
Other long-term liabilities	65,800	66,167
Total operating lease liabilities	<u>\$ 78,739</u>	<u>\$ 79,169</u>
<u>Finance Leases:</u>		
Property, plant, and equipment, at cost	\$ 36,115	\$ 30,614
Accumulated depreciation	(6,728)	(5,606)
Property, plant, and equipment, net	<u>\$ 29,387</u>	<u>\$ 25,008</u>
Accrued liabilities and other	\$ 3,903	\$ 3,244
Other long-term liabilities	27,352	23,529
Total finance lease liabilities	<u>\$ 31,255</u>	<u>\$ 26,773</u>
<u>Weighted average remaining lease term in years:</u>		
Operating leases	7.6	7.7
Finance leases	15.6	16.7
<u>Weighted average discount rates:</u>		
Operating leases	5.1 %	5.0 %
Finance leases	5.1 %	4.8 %

Maturities of lease liabilities were as follows:

	December 31, 2022	
	Operating Leases	Finance Leases
2023	\$ 12,602	\$ 4,021
2024	14,525	5,348
2025	12,339	5,167
2026	11,291	4,884
2027	10,074	4,131
Thereafter	36,953	29,346
Total lease payments	<u>97,784</u>	<u>52,897</u>
Less: imputed interest	(19,045)	(21,642)
Total	<u>\$ 78,739</u>	<u>\$ 31,255</u>

Note 8 - Goodwill and Intangible Assets

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

	Aircraft Controls	Space and Defense Controls	Industrial Systems	Total
Balance at October 1, 2022	\$ 199,519	\$ 259,407	\$ 346,394	\$ 805,320
Foreign currency translation	3,825	62	13,694	17,581
Balance at December 31, 2022	\$ 203,344	\$ 259,469	\$ 360,088	\$ 822,901

Goodwill in our Space and Defense Controls segment is net of a \$4,800 accumulated impairment loss at December 31, 2022. Goodwill in our Medical Devices reporting unit, included in our Industrial Systems segment, is net of a \$38,200 accumulated impairment loss at December 31, 2022.

The components of intangible assets are as follows:

	Weighted-Average Life (years)	December 31, 2022		October 1, 2022	
		Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
Customer-related	11	\$ 139,068	\$ (91,325)	\$ 135,899	\$ (88,179)
Technology-related	9	71,334	(54,811)	69,856	(52,951)
Program-related	23	37,250	(20,296)	35,305	(18,817)
Marketing-related	8	22,328	(18,371)	21,925	(17,833)
Other	10	1,848	(1,629)	1,693	(1,488)
Intangible assets	12	\$ 271,828	\$ (186,432)	\$ 264,678	\$ (179,268)

All acquired intangible assets other than goodwill are being amortized. Customer-related intangible assets primarily consist of customer relationships. Technology-related intangible assets primarily consist of technology, patents, intellectual property and software. Program-related intangible assets consist of long-term programs represented by current contracts and probable follow on work. Marketing-related intangible assets primarily consist of trademarks, trade names and non-compete agreements.

Amortization of acquired intangible assets is as follows:

	Three Months Ended	
	December 31, 2022	January 1, 2022
Acquired intangible asset amortization	\$ 2,987	\$ 3,398

Based on acquired intangible assets recorded at December 31, 2022, amortization is estimated to be approximately:

	2023	2024	2025	2026	2027
Estimated future amortization of acquired intangible assets	\$ 11,700	\$ 10,900	\$ 9,800	\$ 9,600	\$ 8,600

Note 9 - Equity Method Investments and Joint Ventures

Investments and operating results in which we do not have a controlling interest, however we do have the ability to exercise significant influence over operations are accounted for using the equity method of accounting. Equity method investments and joint ventures consists of:

	December 31, 2022	
	Net investment balance	Income (loss) for the three months ended
Moog Aircraft Service Asia	\$ 1,056	\$ (128)
NOVI LLC	609	—
Suffolk Technologies Fund 1, L.P.	851	(77)
Total	\$ 2,516	\$ (205)

Net investment balances are included as Other assets in the Consolidated Condensed Balance Sheets. Income (loss) from equity method investments and joint ventures is included in Other in the Consolidated Condensed Statements of Earnings.

Moog Aircraft Services Asia ("MASA") is a joint venture included in our Aircraft Controls segment in which we currently hold a 51% ownership share. MASA is intended to provide maintenance, repair and overhaul services for our manufactured flight control systems.

We hold a 42.5% ownership interest in NOVI LLC ("NOVI") that is included in our Space and Defense Controls segment. NOVI specializes in applying machine learning algorithms to space situational awareness.

Suffolk Technologies Fund 1, L.P., is a limited partnership included in our Industrial Systems segment that invests in startups to transform the construction, real estate and property maintenance industries in the U.S. We have a remaining on-call capital commitment of up to \$6,976.

Hybrid Motion Solutions ("HMS") is a joint venture in our Industrial Systems segment in which we hold a 50% ownership interest. HMS specializes in hydrostatic servo drives and leverages synergies to enter new markets. The joint venture focuses on research and development, design and assembly as well as service. Our share of cumulative losses to date has exceeded our initial investment, and as such, we had no net investment balance recorded as of December 31, 2022. In addition to the investment, we have also loaned HMS \$2,654 that is included as Other assets in the Consolidated Condensed Balance Sheet.

Investments in, and the operating results of, entities in which we do not have a controlling financial interest or the ability to exercise significant influence over the operations are accounted for using the cost method of accounting. As of December 31, 2022 we had cost method investments of \$9,730, which are included as Other assets in the Consolidated Condensed Balance Sheets.

Note 10 - Indebtedness

We maintain short-term line of credit facilities with banks throughout the world that are principally demand lines subject to revision by the banks.

Long-term debt consists of:

	December 31, 2022	October 1, 2022
U.S. revolving credit facility	\$ 399,000	\$ 321,300
SECT revolving credit facility	23,000	20,000
Senior notes 4.25%	500,000	500,000
Other long-term debt	822	916
Senior debt	922,822	842,216
Less deferred debt issuance cost	(5,942)	(4,428)
Less current installments	(822)	(916)
Long-term debt	\$ 916,058	\$ 836,872

On October 27, 2022, we amended our U.S. revolving credit facility, which extended the maturity date of the credit facility from October 15, 2024 to October 27, 2027. The credit facility has a capacity of \$1,100,000 and provides an expansion option, which permits us to request an increase of up to \$400,000 to the credit facility upon satisfaction of certain conditions. Interest on the majority of our outstanding borrowings is principally based on SOFR plus the applicable margin. The credit facility is secured by substantially all of our U.S. assets. The loan agreement contains various covenants which, among others, specify interest coverage and maximum leverage. We are in compliance with all covenants.

The SECT has a revolving credit facility with a borrowing capacity of \$35,000, maturing on July 26, 2024. Interest is based on LIBOR plus an applicable margin. A commitment fee is also charged based on a percentage of the unused amounts available and is not material.

We have \$500,000 aggregate principal amount of 4.25% senior notes due December 15, 2027 with interest paid semiannually on June 15 and December 15 of each year. The senior notes are unsecured obligations, guaranteed on a senior unsecured basis by certain subsidiaries and contain normal incurrence-based covenants and limitations such as the ability to incur additional indebtedness, pay dividends, make other restricted payments and investments, create liens and certain corporate acts such as mergers and consolidations. We are in compliance with all covenants.

Note 11 - Other Accrued Liabilities

Other accrued liabilities consists of:

	December 31, 2022	October 1, 2022
Employee benefits	\$ 54,090	\$ 56,136
Contract reserves	43,739	46,547
Warranty accrual	22,429	23,072
Accrued income taxes	24,223	17,776
Other	65,143	71,845
Other accrued liabilities	\$ 209,624	\$ 215,376

In the ordinary course of business, we warrant our products against defects in design, materials and workmanship typically over periods ranging from twelve to sixty months. We determine warranty reserves needed by product line based on historical experience and current facts and circumstances. Activity in the warranty accrual is summarized as follows:

	Three Months Ended	
	December 31, 2022	January 1, 2022
Warranty accrual at beginning of period	\$ 23,072	\$ 26,602
Warranties issued during current period	1,958	565
Adjustments to pre-existing warranties	(214)	(24)
Reductions for settling warranties	(2,805)	(1,715)
Divestiture adjustment	—	(330)
Foreign currency translation	418	(72)
Warranty accrual at end of period	\$ 22,429	\$ 25,026

Note 12 - Derivative Financial Instruments

We principally use derivative financial instruments to manage foreign exchange risk related to foreign operations and foreign currency transactions and interest rate risk associated with long-term debt. We enter into derivative financial instruments with a number of major financial institutions to minimize counterparty credit risk.

Derivatives designated as hedging instruments

We use foreign currency contracts as cash flow hedges to effectively fix the exchange rates on future payments and revenue. To mitigate exposure in movements between various currencies, including the Philippine peso and the British pound, we had outstanding foreign currency contracts with notional amounts of \$22,572 at December 31, 2022. These contracts mature at various times through March 1, 2024.

We use forward currency contracts to hedge our net investment in certain foreign subsidiaries. As of December 31, 2022, we had no outstanding net investment hedges.

Interest rate swaps are used to adjust the proportion of total debt that is subject to variable and fixed interest rates. The interest rate swaps are designated as hedges of the amount of future cash flows related to interest payments on variable-rate debt that, in combination with the interest payments on the debt, convert a portion of the variable-rate debt to fixed-rate debt. At December 31, 2022, we had no outstanding interest rate swaps.

Foreign currency contracts, net investment hedges and interest rate swaps are recorded in the Consolidated Condensed Balance Sheets at fair value and the related gains or losses are deferred in Shareholders' Equity as a component of Accumulated Other Comprehensive Income (Loss) ("AOCIL"). These deferred gains and losses are reclassified into the Consolidated Condensed Statements of Earnings, as necessary, during the periods in which the related payments or receipts affect earnings. However, to the extent the foreign currency contracts and interest rate swaps are not perfectly effective in offsetting the change in the value of the payments and revenue being hedged, the ineffective portion of these contracts is recognized in earnings immediately. Ineffectiveness was not material in the first three months of 2023 or 2022.

Derivatives not designated as hedging instruments

We also have foreign currency exposure on balances, primarily intercompany, that are denominated in a foreign currency and are adjusted to current values using period-end exchange rates. The resulting gains or losses are recorded in the Consolidated Condensed Statements of Earnings. To minimize foreign currency exposure, we have foreign currency contracts with notional amounts of \$89,000 at December 31, 2022. The foreign currency contracts are recorded in the Consolidated Condensed Balance Sheets at fair value and resulting gains or losses are recorded in the Consolidated Condensed Statements of Earnings. We recorded the following gains and losses on foreign currency contracts which are included in other income or expense and generally offset the gains or losses from the foreign currency adjustments on the intercompany balances that are also included in other income or expense:

		Three Months Ended	
		December 31, 2022	January 1, 2022
Statements of Earnings location			
Net gain (loss)			
Foreign currency contracts	Other	\$ 3,955	\$ (1,904)

Summary of derivatives

The fair value and classification of derivatives is summarized as follows:

		Balance Sheets location	December 31,	October 1,
			2022	2022
Derivatives designated as hedging instruments:				
Foreign currency contracts	Other current assets	\$ 693	\$ 562	
Foreign currency contracts	Other assets	97	165	
Total asset derivatives		\$ 790	\$ 727	
Foreign currency contracts	Accrued liabilities and other	\$ 1,991	\$ 3,877	
Foreign currency contracts	Other long-term liabilities	190	751	
Total liability derivatives		\$ 2,181	\$ 4,628	
Derivatives not designated as hedging instruments:				
Foreign currency contracts	Other current assets	\$ 348	\$ 679	
Foreign currency contracts	Accrued liabilities and other	\$ 602	\$ 738	

Note 13 - Fair Value

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Depending on the nature of the asset or liability, various techniques and assumptions can be used to estimate fair value. The definition of the fair value hierarchy is as follows:

Level 1 – Quoted prices in active markets for identical assets and liabilities.

Level 2 – Observable inputs other than quoted prices in active markets for similar assets and liabilities.

Level 3 – Inputs for which significant valuation assumptions are unobservable in a market and therefore value is based on the best available data, some of which is internally developed and considers risk premiums that a market participant would require.

Our derivatives are valued using various pricing models or discounted cash flow analyses that incorporate observable market data, such as interest rate yield curves and currency rates, and are classified as Level 2 within the valuation hierarchy.

The following table presents the fair values and classification of our financial assets and liabilities measured on a recurring basis, all of which are classified as Level 2, except for the acquisition contingent consideration, which is classified as Level 3:

	Balance Sheets location	December 31, 2022	October 1, 2022
Foreign currency contracts	Other current assets	\$ 1,041	\$ 1,241
Foreign currency contracts	Other assets	97	165
	Total assets	\$ 1,138	\$ 1,406
Foreign currency contracts	Accrued liabilities and other	\$ 2,593	\$ 4,615
Foreign currency contracts	Other long-term liabilities	190	751
Acquisition contingent consideration	Other long-term liabilities	3,365	3,272
	Total liabilities	\$ 6,148	\$ 8,638

The changes in financial liabilities classified as Level 3 within the fair value hierarchy are as follows:

	Three Months Ended December 31, 2022
Balance at beginning of period	\$ 3,272
Increase in discounted future cash flows recorded as interest expense	93
Balance at end of period	\$ 3,365

Our only financial instrument for which the carrying value differs from its fair value is long-term debt. At December 31, 2022, the fair value of long-term debt was \$884,378 compared to its carrying value of \$922,822. The fair value of long-term debt is classified as Level 2 within the fair value hierarchy and was estimated based on quoted market prices.

Note 14 - Restructuring

Restructuring activity for severance and other costs by segment and reconciliation to consolidated amounts is as follows:

	Aircraft Controls	Space and Defense Controls	Industrial Systems	Total
Balance at October 1, 2022	\$ 229	\$ 228	\$ 6,678	\$ 7,135
Charged to expense - 2022 plan	—	175	903	1,078
Cash payments - 2022 plan	—	(366)	(355)	(721)
Cash payments - 2020 plan	—	—	(22)	(22)
Cash payments - 2018 plan	(153)	—	(97)	(250)
Foreign currency translation	—	—	390	390
Balance at December 31, 2022	\$ 76	\$ 37	\$ 7,497	\$ 7,610

As of December 31, 2022, the restructuring accrual consists of \$3,317 for the 2022 plan, \$2,965 for the 2020 plan and \$1,328 for the 2018 plan. Restructuring is expected to be paid within a year, except portions classified as long-term liabilities based on the nature of the reserve.

Note 15 - Employee Benefit Plans

Pension expense for our defined contribution plans consists of:

	Three Months Ended	
	December 31, 2022	January 1, 2022
U.S. defined contribution plans	\$ 10,185	\$ 10,545
Non-U.S. defined contribution plans	2,065	2,152
Total expense for defined contribution plans	\$ 12,250	\$ 12,697

Net periodic benefit costs for our defined benefit pension plans are as follows:

	Three Months Ended	
	December 31, 2022	January 1, 2022
U.S. Plans		
Service cost	\$ 3,228	\$ 4,957
Interest cost	7,028	4,562
Expected return on plan assets	(7,147)	(7,451)
Amortization of actuarial loss	3,362	3,896
Expense for U.S. defined benefit plans	\$ 6,471	\$ 5,964
Non-U.S. Plans		
Service cost	\$ 642	\$ 1,122
Interest cost	1,303	634
Expected return on plan assets	(1,017)	(897)
Amortization of prior service cost	13	15
Amortization of actuarial loss	96	1,022
Expense for non-U.S. defined benefit plans	\$ 1,037	\$ 1,896

Note 16 - Income Taxes

The effective tax rate for the three months ended December 31, 2022 and January 1, 2022 was 23.7% and 24.7%, respectively. The effective tax rates for the three months ended December 31, 2022 and January 1, 2022 are higher than expected from applying the U.S. federal statutory tax rate of 21% to earnings before income taxes due to tax on earnings generated outside the U.S.

Note 17 - Accumulated Other Comprehensive Income (Loss)

The changes in AOCIL, net of tax, by component for the three months ended December 31, 2022 are as follows:

	Accumulated foreign currency translation	Accumulated retirement liability	Accumulated gain (loss) on derivatives	Total
AOCIL at October 1, 2022	\$ (182,024)	\$ (125,231)	\$ (3,787)	\$ (311,042)
OCI before reclassifications	50,399	(1,013)	928	50,314
Amounts reclassified from AOCIL	336	2,212	991	3,539
OCI, net of tax	50,735	1,199	1,919	53,853
AOCIL at December 31, 2022	\$ (131,289)	\$ (124,032)	\$ (1,868)	\$ (257,189)

Net gains and losses on net investment hedges are recorded in Accumulated foreign currency translation to the extent that the instruments are effective in hedging the designated risk.

The amounts reclassified from AOCIL into earnings are as follows:

	Statements of Earnings location	Three Months Ended	
		December 31, 2022	January 1, 2022
Retirement liability:			
Prior service cost		\$ 13	\$ 15
Actuarial losses		2,877	4,600
Reclassification from AOCIL into earnings		2,890	4,615
Tax effect		(678)	(1,093)
Net reclassification from AOCIL into earnings		\$ 2,212	\$ 3,522
Derivatives:			
Foreign currency contracts	Sales	\$ 306	\$ 68
Foreign currency contracts	Cost of sales	972	50
Reclassification from AOCIL into earnings		1,278	118
Tax effect		(287)	(24)
Net reclassification from AOCIL into earnings		\$ 991	\$ 94

Reclassification from AOCIL into earnings for the Retirement liability are included in the computation of non-service pension expense, which is included in Other on the Consolidated Condensed Statement of Earnings.

The effective portion of amounts deferred in AOCIL are as follows:

	Three Months Ended	
	December 31, 2022	January 1, 2022
Foreign currency contracts	\$ 1,198	\$ 55
Net gain	1,198	55
Tax effect	(270)	(14)
Net deferral in AOCIL of derivatives	\$ 928	\$ 41

Note 18 - Stock Employee Compensation Trust and Supplemental Retirement Plan Trust

The SECT assists in administering and provides funding for equity-based compensation plans and benefit programs, including the Moog Inc. Retirement Savings Plan ("RSP"), RSP(+) and the Employee Stock Purchase Plan ("ESPP"). The SERP Trust provides funding for benefits under the SERP provisions of the Moog Inc. Plan to Equalize Retirement Income and Supplemental Retirement Income. Both the SECT and the SERP Trust hold Moog shares as investments. The shares in the SECT and SERP Trust are not considered outstanding for purposes of calculating earnings per share. However, in accordance with the trust agreements governing the SECT and SERP Trust, the trustees vote all shares held by the SECT and SERP Trust on all matters submitted to shareholders.

Note 19 - Earnings per Share

Basic and diluted weighted-average shares outstanding, as well as shares considered to be anti-dilutive, are as follows:

	Three Months Ended	
	December 31, 2022	January 1, 2022
Basic weighted-average shares outstanding	31,746,001	32,057,399
Dilutive effect of equity-based awards	128,717	130,759
Diluted weighted-average shares outstanding	31,874,718	32,188,158
Anti-dilutive shares from equity-based awards	21,727	62,350

Note 20 - Segments

Disaggregation of net sales by segment for the three months ended December 31, 2022 and January 1, 2022 are as follows:

Market Type	Three Months Ended	
	December 31, 2022	January 1, 2022
Net sales:		
Military	\$ 171,718	\$ 185,949
Commercial	138,541	117,368
Aircraft Controls	310,259	303,317
Space	95,885	87,583
Defense	121,900	120,273
Space and Defense Controls	217,785	207,856
Energy	31,570	31,466
Industrial Automation	111,118	102,143
Simulation and Test	28,325	22,175
Medical	61,046	57,129
Industrial Systems	232,059	212,913
Net sales	\$ 760,103	\$ 724,086

Customer Type	Three Months Ended	
	December 31, 2022	January 1, 2022
Net sales:		
Commercial	\$ 138,541	\$ 117,368
U.S. Government (including OEM)	129,783	143,879
Other	41,935	42,070
Aircraft Controls	310,259	303,317
Commercial	24,573	24,323
U.S. Government (including OEM)	179,438	170,015
Other	13,774	13,518
Space and Defense Controls	217,785	207,856
Commercial	225,839	207,235
U.S. Government (including OEM)	1,280	3,786
Other	4,940	1,892
Industrial Systems	232,059	212,913
Commercial	388,953	348,926
U.S. Government (including OEM)	310,501	317,680
Other	60,649	57,480
Net sales	\$ 760,103	\$ 724,086

Revenue Recognition Method	Three Months Ended	
	December 31, 2022	January 1, 2022
Net sales:		
Over-time	\$ 246,895	\$ 246,649
Point in time	63,364	56,668
Aircraft Controls	310,259	303,317
Over-time	202,090	192,446
Point in time	15,695	15,410
Space and Defense Controls	217,785	207,856
Over-time	33,056	29,025
Point in time	199,003	183,888
Industrial Systems	232,059	212,913
Over-time	482,041	468,120
Point in time	278,062	255,966
Net sales	\$ 760,103	\$ 724,086

Operating profit is net sales less cost of sales and other operating expenses, excluding interest expense, equity-based compensation expense, non-service pension expense and other corporate expenses. Cost of sales and other operating expenses are directly identifiable to the respective segment or allocated on the basis of sales, manpower or profit. Operating profit by segment for the three months ended December 31, 2022 and January 1, 2022 and a reconciliation of segment operating profit to earnings before income taxes are as follows:

	Three Months Ended	
	December 31, 2022	January 1, 2022
Operating profit:		
Aircraft Controls	\$ 29,718	\$ 41,915
Space and Defense Controls	20,294	21,299
Industrial Systems	36,751	17,191
Total operating profit	86,763	80,405
Deductions from operating profit:		
Interest expense	13,132	7,982
Equity-based compensation expense	2,974	2,658
Non-service pension expense	3,099	1,485
Corporate and other expenses, net	7,257	6,857
Earnings before income taxes	\$ 60,301	\$ 61,423

Note 21 - Related Party Transactions

John Scannell, Moog's Non-Executive Chairman of the Board of Directors, is a member of the Board of Directors of M&T Bank Corporation and M&T Bank. We currently engage with M&T Bank in the ordinary course of business for various financing activities, all of which were initiated prior to the election of Mr. Scannell to the Board. M&T Bank provides credit extension for routine purchases, which for the three months ended December 31, 2022 and January 1, 2022 totaled \$3,417 and \$3,643, respectively. At December 31, 2022, we held outstanding leases with a total original cost of \$16,994. At December 31, 2022, outstanding deposits on our behalf for future equipment leases totaled \$2,559. M&T Bank also maintains an interest of approximately 12% in our U.S. revolving credit facility. Further details of the U.S. revolving credit facility can be found in Note 10 - Indebtedness. Wilmington Trust, a subsidiary of M&T Bank, is the trustee of the pension assets for our qualified U.S. defined benefit plan.

Note 22 - Commitments and Contingencies

From time to time, we are involved in legal proceedings. We are not a party to any pending legal proceedings which management believes will result in a material adverse effect on our financial condition, results of operations or cash flows.

We are engaged in administrative proceedings with governmental agencies and legal proceedings with governmental agencies and other third parties in the normal course of our business, including litigation under Superfund laws, regarding environmental matters. We believe that adequate reserves have been established for our share of the estimated cost for all currently pending environmental administrative or legal proceedings and do not expect that these environmental matters will have a material adverse effect on our financial condition, results of operations or cash flows.

In the ordinary course of business we could be subject to ongoing claims or disputes from our customers, the ultimate settlement of which could have a material adverse impact on our consolidated results of operations. While the receivables and any loss provisions recorded to date reflect management's best estimate of the projected costs to complete a given project, there is still significant effort required to complete the ultimate deliverable. Future variability in internal cost and future profitability is dependent upon a number of factors including deliveries, performance and government budgetary pressures. The inability to achieve a satisfactory contractual solution, further unplanned delays, additional developmental cost growth or variations in any of the estimates used in the existing contract analysis could lead to further loss provisions. Additional losses could have a material adverse impact on our financial condition, results of operations or cash flows in the period in which the loss may be recognized.

We are contingently liable for \$19,315 of standby letters of credit issued by a bank to third parties on our behalf at December 31, 2022.

Note 23 - Subsequent Event

On February 2, 2023, we declared a \$0.27 per share quarterly dividend payable on issued and outstanding shares of our Class A and Class B common stock on March 6, 2023 to shareholders of record at the close of business on February 17, 2023.

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

The following should be read in conjunction with Management's Discussion and Analysis of Financial Condition and Results of Operations contained in the Company's Annual Report filed on Form 10-K for the fiscal year ended October 1, 2022. In addition, the following should be read in conjunction with our Consolidated Financial Statements and Notes to Consolidated Condensed Financial Statements contained herein. All references to years in this Management's Discussion and Analysis of Financial Condition and Results of Operations are to fiscal years. Amounts may differ from reported values due to rounding.

OVERVIEW

We are a worldwide designer, manufacturer and systems integrator of high performance precision motion and fluid controls and control systems for a broad range of applications in aerospace and defense and industrial markets.

Within the aerospace and defense market, our products and systems include:

- Defense market - primary and secondary flight controls for military aircraft, turreted weapon systems, stabilization and automatic ammunition loading controls for armored combat vehicles, tactical and strategic missile steering controls and gun aiming controls.
- Commercial aircraft market - primary and secondary flight controls for commercial aircraft.
- Space market - satellite positioning controls and thrust vector controls, as well as integrated space launch vehicles and hypersonic applications.

In the industrial market, our products are used in a wide range of applications including:

- Industrial automation market - components and systems for injection and blow molding machinery, heavy industry applications for steel and aluminum production, metal forming presses, flight simulation motion control systems and material and automotive structural and fatigue testing systems.
- Medical market - components and systems for enteral clinical nutrition and infusion therapy pumps, CT scan medical equipment, ultrasonic sensors and surgical handpieces and sleep apnea equipment.
- Energy market - control and safety components for steam and gas power generation turbines and oil and gas exploration components and systems.

We operate under three segments, Aircraft Controls, Space and Defense Controls and Industrial Systems. Our principal manufacturing facilities are located in the United States, Philippines, United Kingdom, Germany, Italy, Costa Rica, China, Netherlands, Luxembourg, Japan, Czech Republic, Canada, India and Lithuania.

Under ASC 606, 63% of revenue was recognized over time for the quarter ended December 31, 2022, using the cost-to-cost method of accounting. The over-time method of revenue recognition is predominantly used in Aircraft Controls and Space and Defense Controls. We use this method for U.S. Government contracts and repair and overhaul arrangements as we are creating or enhancing assets that the customer controls. In addition, many of our large commercial contracts qualify for over-time accounting as our performance does not create an asset with an alternative use and we have an enforceable right to payment for performance completed to date.

For the quarter ended December 31, 2022, 37% of revenue was recognized at the point in time control transferred to the customer. This method of revenue recognition is used most frequently in Industrial Systems. We use this method for commercial contracts in which the asset being created has an alternative use. We determine the point in time control transfers to the customer by weighing the five indicators provided by ASC 606. When control has transferred to the customer, profit is generated as cost of sales is recorded and as revenue is recognized.

We concentrate on providing our customers with products designed and manufactured to the highest quality standards. Our technical experts work collaboratively around the world, delivering capabilities for mission-critical solutions. These core operational principles are necessary as our products are applied in demanding applications, "When Performance Really Matters®." By capitalizing on these core foundational strengths, we believe we have achieved a leadership position in the high performance, precision controls market. Additionally, these strengths yield a broad control product portfolio, across a diverse base of customers and end markets.

By focusing on customer intimacy and commitment to solving our customers' most demanding technical problems, we have been able to expand our control product franchise to multiple markets; organically growing from a high-performance components manufacturer to a high-performance systems designer, manufacturer and systems integrator. In addition, we continue expanding our content positions on our current platforms, seeking to be the market-leading supplier in the niche markets we serve. We also look for innovation in all aspects of our business, employing new technologies to improve productivity and operational performance.

Our path to success comes from our talented employees building a sustainable company for current and future generations. Our strategies include focusing on the customer, focusing on our culture, community and the planet, and focusing on financial strength. These focus areas will drive accountability and improved operational performance, will increase engagement and workforce diversity and, with business simplification, result in improved financial results and increased shareholder value.

We will improve shareholder value through strategic revenue growth, both organic and acquired, through improving operating efficiencies and manufacturing initiatives and through utilizing low cost manufacturing facilities without compromising quality. Historically, we have taken a balanced approach to capital deployment in order to maximize shareholder returns over the long term. These activities have included strategic acquisitions, share buybacks and dividend payments. Today, we believe we can create long term value for our shareholders by continuing to invest in our business through both capital expenditures as well as investments in new market opportunities. We will also continue exploring opportunities to make strategic acquisitions and return capital to shareholders.

Acquisitions and Divestitures

Acquisitions

On February 21, 2022, we acquired TEAM Accessories Limited ("TEAM") based in Dublin, Ireland for a purchase price, net of acquired cash, of \$15 million, consisting of \$12 million in cash and contingent consideration with an initial fair value of \$3 million. TEAM specializes in Maintenance, Repair and Overhaul of engine and airframe components. This operation is included in our Aircraft Controls segment.

Divestitures

On September 30, 2022, we sold a sonar business based in the United Kingdom previously included in our Industrial Systems segment. We have cumulatively received net proceeds of \$13 million and recorded a loss of \$15 million, net of transaction costs. An immaterial adjustment to the loss was recorded during the three months ended December 31, 2022.

On September 20, 2022, we sold assets of a security business based in Northbrook, Illinois previously included in our Space and Defense Controls segment. We have cumulatively received net proceeds of \$9 million and recorded a loss of \$4 million, net of transaction costs. The loss is subject to adjustments associated with amounts currently held in escrow.

On December 3, 2021, we sold the assets of our Navigation Aids ("NAVAIDS") business based in Salt Lake City, Utah previously included in our Aircraft Controls segment to THALES USA Inc. We have cumulatively received net proceeds of \$37 million and recorded a gain of \$16 million, net of transaction costs. The gain is subject to adjustments associated with amounts currently held in escrow.

CRITICAL ACCOUNTING POLICIES

On a regular basis, we evaluate the critical accounting policies used to prepare our consolidated financial statements, including revenue recognition on long-term contracts, contract reserves, reserves for inventory valuation, reviews for impairment of goodwill, reviews for impairment of long-lived assets, pension assumptions and income taxes.

RECENT ACCOUNTING PRONOUNCEMENTS

See Note 1 - Basis of Presentation in the Consolidated Condensed Financial Statements included in Item 1, Financial Statements of this report for further information regarding Financial Accounting Standards Board issued ASUs.

CONSOLIDATED RESULTS OF OPERATIONS

(dollars and shares in millions, except per share data)	Three Months Ended			
	December 31, 2022	January 1, 2022	\$ Variance	% Variance
Net sales	\$ 760	\$ 724	\$ 36	5%
Gross margin	26.8 %	26.6 %		
Research and development expenses	\$ 24	\$ 28	\$ (4)	(14%)
Selling, general and administrative expenses as a percentage of sales	14.9 %	15.4 %		
Interest expense	\$ 13	\$ 8	\$ 5	65%
Restructuring expense	\$ 1	\$ —	\$ 1	n/a
Gain on sale of buildings	\$ (10)	\$ —	\$ (10)	n/a
Gain on sale of business	\$ —	\$ (16)	\$ 16	(100)%
Other	\$ 2	\$ —	\$ 2	n/a
Effective tax rate	23.7 %	24.7 %		
Net earnings	\$ 46	\$ 46	\$ —	(1%)
Diluted earnings per share	\$ 1.44	\$ 1.44	\$ —	—%
Twelve-month backlog	\$ 2,343	\$ 2,167	\$ 176	8%

Net sales increased across all of our segments in the first quarter of 2023 compared to the first quarter of 2022. Weaker foreign currencies, primarily the Euro and the British Pound, relative to the U.S. Dollar, decreased sales \$17 million. Additionally, the absence of sales associated with our divested businesses in 2022 decreased sales \$12 million in the first quarter of 2023. The resulting sales increase in the first quarter of 2023 was 9% compared to the first quarter of 2022.

Gross margin in the first quarter of 2023 benefited from higher sales volumes in Industrial Systems as well as favorable sales mixes in both Aircraft Controls and in Industrial Systems when compared to the same period of 2022. Mostly offsetting these benefits were charges in Space and Defense Controls associated with development programs.

Research and development expenses decreased in the first quarter of 2023 compared to the same period of 2022, as we had lower activity in Aircraft Controls.

Selling, general and administrative expense as a percentage of sales decreased in the first quarter of 2023 compared to the first quarter of 2022 reflecting the higher sales volume.

Interest expense increased \$5 million in the first quarter of 2023 compared to the first quarter of 2022 due to higher interest rates on our outstanding debt balances.

The first quarter of 2023 included a \$10 million gain from the sale of two buildings in Industrial Systems. The first quarter of 2022 included a \$16 million gain from the sale of our NAVAIDS business in Aircraft Controls.

The effective tax rate in the first quarter of 2022 included impacts associated with the divestiture of our NAVAIDS business that did not repeat in the first quarter of 2023.

The twelve-month backlog increased in the first quarter of 2023 as compared with the first quarter of 2022 across all of our segments. The twelve-month backlog increased in Aircraft Controls due to higher orders for our commercial programs. Industrial Systems' backlog increased due to recovering demand in industrial automation and industrial components. Within Space and Defense Controls, the increase is driven by orders for defense components.

SEGMENT RESULTS OF OPERATIONS

Operating profit, as presented below, is net sales less cost of sales and other operating expenses, excluding interest expense, equity-based compensation expense, non-service pension expense and other corporate expenses. Cost of sales and other operating expenses are directly identifiable to the respective segment or allocated on the basis of sales, manpower or profit. Operating profit is reconciled to earnings before income taxes in Note 20 - Segments in the Notes to Consolidated Condensed Financial Statements included in this report.

Aircraft Controls

(dollars in millions)	Three Months Ended			
	December 31, 2022	January 1, 2022	\$ Variance	% Variance
Net sales - military aircraft	\$ 172	\$ 186	\$ (14)	(8%)
Net sales - commercial aircraft	139	117	21	18%
	\$ 310	\$ 303	\$ 7	2%
Operating profit	\$ 30	\$ 42	\$ (12)	(29%)
Operating margin	9.6 %	13.8 %		

Aircraft Controls' net sales increased in the first quarter of 2023 compared to the first quarter of 2022, as the continued commercial aircraft market recovery was partially offset by lower military sales.

In the first quarter of 2023, sales increased \$18 million in our commercial aftermarket programs and \$3 million in our commercial OEM programs. Within commercial aftermarket programs, higher spares and repair volumes, driven by recovering flight-hour levels on the 787 and A350 programs, as well as additional retrofit activity increased sales \$13 million. Across our commercial OEM programs, higher sales volumes for business jets and higher bookings for our Genesys programs were partially offset by delayed material receipt timing in other OEM programs.

Also in the first quarter of 2023, sales decreased \$10 million in our military OEM programs and \$4 million in our military aftermarket programs. Within military OEM programs, delayed material receipts across several programs, including the V-22 and KC-46 programs, and lower activity on development programs reduced sales. Additionally, sales decreased \$4 million due to the absence of prior year sales related to our NAVAIDS business that we divested in the first quarter of 2022. Within military aftermarket programs, we had lower repair activity across various programs, including the F-15 and V-22 programs.

Operating margin decreased in the first quarter of 2023 compared to the first quarter of 2022. Last year's first quarter included a \$16 million gain associated with the divestiture of our NAVAIDS business. Excluding this gain, the adjusted operating margin for the first quarter of 2022 was 8.5%. The increase in adjusted margin was driven by a favorable sales mix due to higher commercial aftermarket sales. We also benefited from \$3 million of lower research and development expense.

Space and Defense Controls

(dollars in millions)	Three Months Ended			
	December 31, 2022	January 1, 2022	\$ Variance	% Variance
Net sales	\$ 218	\$ 208	\$ 10	5%
Operating profit	\$ 20	\$ 21	\$ (1)	(5%)
Operating margin	9.3 %	10.2 %		

Space and Defense Controls' net sales increased in the first quarter of 2023 compared to the first quarter of 2022 primarily driven by growth in our defense market.

In the first quarter of 2023, sales increased \$14 million due to the production ramp on our RIWP turret program within defense controls. This increase was partially offset by a \$5 million sales decrease due to the absence of prior year sales related to our security business that we divested in the fourth quarter of 2022.

Operating margin decreased in the first quarter of 2023 compared to the same period of 2022. In the first quarter of 2023, we incurred cost growth on our space vehicle development programs and experienced continued supply chain pressures.

Industrial Systems

(dollars in millions)	Three Months Ended			
	December 31, 2022	January 1, 2022	\$ Variance	% Variance
Net sales	\$ 232	\$ 213	\$ 19	9%
Operating profit	\$ 37	\$ 17	\$ 20	114%
Operating margin	15.8 %	8.1 %		

Industrial Systems' net sales increased in all of our markets in the first quarter of 2023 compared to the first quarter of 2022. Weaker foreign currencies, primarily the Euro and the British Pound relative to the U.S. Dollar, decreased sales \$12 million. Also, sales decreased \$3 million due to the absence of prior year sales associated with our sonar business that we divested in the fourth quarter of 2022. Excluding the impacts of weaker foreign currencies and the divested sales, the resulting sales increase in the first quarter of 2023 was 17%.

In the first quarter of 2023 compared to the same period of 2022, net sales increased \$9 million in our industrial automation market, driven by increased demand for industrial components and electric construction vehicles. Sales also increased \$6 million in our simulation and test market driven by the timing of orders received for flight training simulators. Additionally, sales increased \$4 million in our medical market as we benefited from higher demand for our medical components and devices.

Operating margin increased in the first quarter of 2023 compared to the first quarter of 2022. The first quarter of 2023 included a \$10 million gain related to the sales of two buildings as we consolidated operations. Excluding this gain, as well as \$1 million of restructuring charges incurred in the quarter, adjusted operating margin in the first quarter of 2023 was 12.3%. The increase in adjusted operating margin was driven by the incremental margin from higher sales volumes, as well as a more favorable sales mix.

CONSOLIDATED SEGMENT OUTLOOK

(dollars in millions, except per share data)	2023 Outlook	2022	2023 vs. 2022	
			\$ Variance	% Variance
Net sales:				
Aircraft Controls	\$ 1,330	\$ 1,256	\$ 74	6%
Space and Defense Controls	920	872	48	5%
Industrial Systems	925	907	18	2%
	<u>\$ 3,175</u>	<u>\$ 3,036</u>	<u>\$ 139</u>	<u>5%</u>
Operating profit:				
Aircraft Controls	\$ 137	\$ 124	\$ 13	11%
Space and Defense Controls	110	87	23	26%
Industrial Systems	109	72	37	51%
	<u>\$ 356</u>	<u>\$ 283</u>	<u>\$ 73</u>	<u>26%</u>
Operating margin:				
Aircraft Controls	10.3 %	9.8 %		
Space and Defense Controls	11.9 %	10.0 %		
Industrial Systems	11.8 %	8.0 %		
	<u>11.2 %</u>	<u>9.3 %</u>		
Net earnings	\$ 188	\$ 155		
Diluted earnings per share	\$ 5.89	\$ 4.83		

Total Company – We expect higher sales in 2023, driven by continued market recoveries in commercial OEM and industrial programs. However the lost sales associated with our divestitures in 2022 will moderate our sales growth. We expect operating margin will increase due to operational improvements within all segments, combined with the absence of charges related to restructuring, impairments and losses associated with the sales of businesses in 2022. Excluding these charges, we expect adjusted operating margin will also increase. Net earnings in 2023 are expected to benefit from the incremental operating margin, which we expect to be partially offset by higher interest expense due to higher interest rates. We expect adjusted diluted earnings per share will range between \$5.50 and \$5.90, with a midpoint of \$5.70. Management believes that the adjusted outlook may be useful in evaluating the financial condition and results of operations of the company.

Aircraft Controls – In 2023, we anticipate sales increases across all of our major commercial OEM programs as the commercial aircraft market recovers and as our customers match the increasing air travel demand with increased orders. We also anticipate a slight sales decrease across our military programs. We expect operating margin in 2023 will increase slightly due to improved factory utilization from the higher sales volume.

Space and Defense Controls – In 2023, we anticipate sales increases in our space programs from the continued higher activity for integrated space vehicles programs and for our launch vehicle programs. Excluding the impact of lost sales associated with our security business divestiture, we expect sales increases across our defense programs, primarily driven by the continued production ramp of our RIWP program and by defense components programs. We expect operating margin will increase in 2023 resulting from the incremental margin from higher sales volume, in addition to the absence of charges from portfolio refinements, our business sale and incremental costs associated with our constrained supply chain.

Industrial Systems – In 2023, we anticipate sales increases across our markets. The sales growth is expected primarily in our flight simulation products, driven by the continued demand for flight training simulators, and in our medical device products. We expect operating margin will increase in 2023 resulting from the higher sales volumes and due to the absence of charges from our portfolio refinements, impairments and business sale.

LIQUIDITY AND CAPITAL RESOURCES

Consolidated Statement of Cash Flows

(dollars in millions)	Three Months Ended		
	December 31, 2022	January 1, 2022	\$ Variance
Net cash provided (used) by:			
Operating activities	\$ 8	\$ 157	\$ (149)
Investing activities	(25)	—	(26)
Financing activities	59	(152)	211

Operating activities

Net cash provided by operating activities decreased in the first quarter of 2023 compared to the first quarter of 2022. The prior year's first quarter included a \$90 million benefit from our Receivables Purchase Agreement ("RPA") program. Additionally, inventory used \$52 million more cash in the first quarter of 2023 as all our segments experienced supply chain constraints preventing the release of products, Aircraft Controls' continued higher production levels for the 787 program and delayed milestones for billing in Space and Defense Controls.

We expect cash from operations in 2023 to be \$250 million, a slight increase compared to 2022, driven primarily due to improved cash generation from net working capital.

Investing activities

Net cash used by investing activities in the first quarter of 2023 included \$30 million of capital expenditures, which was partially offset by the proceeds from the sale of a building.

Net cash used by investing activities in the first quarter of 2022 included \$37 million for capital expenditures, as we increased investment in infrastructure, facilities and advanced manufacturing systems. These outflows were offset by the proceeds from the sale of the NAVAIDS business.

We expect capital expenditures in 2023 to be \$150 million, as we continue to invest in facilities and infrastructure to support future growth and operational improvements.

Financing activities

Net cash provided by financing activities in the first quarter of 2023 included \$81 million of net borrowings on our credit facilities. Additionally, financing activities included \$8 million of share repurchases and an additional \$8 million of cash dividends.

Net cash provided by financing activities in the first quarter of 2022 included \$128 million of net pay down on our credit facilities. Additionally, financing activities in the first quarter of 2022 included \$13 million of share repurchases and \$8 million of dividends.

General

Cash flows from our operations, together with our various financing arrangements, fund on-going activities, debt service requirements, organic growth, acquisition opportunities and the ability to return capital to shareholders. We believe these sources of funding will be sufficient to meet our cash requirements for the next 12 months and for the foreseeable future thereafter.

At December 31, 2022, our cash balances were \$166 million, which includes \$115 million held outside of the U.S. by foreign operations. We regularly assess our cash needs, including repatriation of foreign earnings which may be subject to regulatory approvals and withholding taxes, where applicable by law.

Financing Arrangements

In addition to operations, our capital resources include bank credit facilities and an accounts receivable financing program to fund our short and long-term capital requirements. We continuously evaluate various forms of financing to improve our liquidity and position ourselves for future opportunities, which from time to time, may result in selling debt and equity securities to fund acquisitions or take advantage of favorable market conditions.

We are generally not required to obtain the consent of lenders of the U.S. revolving credit facility before raising significant additional debt financing; however, certain limitations and conditions may apply that would require consent to be obtained. We have demonstrated our ability to secure consents to access debt markets. We have also been successful in accessing equity markets from time to time. We believe that we will be able to obtain additional debt or equity financing as needed.

In the normal course of business, we are exposed to interest rate risk from our long-term debt. To manage these risks, we may enter into derivative instruments such as interest rate swaps which are used to adjust the proportion of total debt that is subject to variable and fixed interest rates.

Our U.S. revolving credit facility, which matures on October 27, 2027, has a capacity of \$1.1 billion and also provides an expansion option, which permits us to request an increase of up to \$400 million to the credit facility upon satisfaction of certain conditions. The weighted-average interest rate on the majority of the outstanding credit facility borrowings was 5.86% and is principally based on SOFR plus the applicable margin, which was 1.60% at December 31, 2022.

The U.S. revolving credit facility contains various covenants. The minimum for the interest coverage ratio, defined as the ratio of EBITDA to interest expense for the most recent four quarters, is 3.0. The maximum for the leverage ratio, defined as the ratio of net debt to EBITDA for the most recent four quarters, is 4.0. EBITDA is defined in the loan agreement as (i) the sum of net income, interest expense, income taxes, depreciation expense, amortization expense, other non-cash items reducing consolidated net income and non-cash equity-based compensation expenses minus (ii) other non-cash items increasing consolidated net income.

The SECT has a revolving credit facility with a borrowing capacity of \$35 million, maturing on July 26, 2024. Interest was 6.47% as of December 31, 2022 and is based on LIBOR plus a margin of 2.13%.

We have \$500 million aggregate principal amount of 4.25% senior notes due December 15, 2027 with interest paid semiannually on June 15 and December 15 of each year. The senior notes are unsecured obligations, guaranteed on a senior unsecured basis by certain subsidiaries and contain normal incurrence-based covenants and limitations such as the ability to incur additional indebtedness, pay dividends, make other restricted payments and investments, create liens and certain corporate acts such as mergers and consolidations.

Our Receivables Purchase Agreement, which matures on November 4, 2024, allows the Receivables Subsidiary to sell receivables to the Purchasers in amounts up to a \$100 million limit so long as certain conditions are satisfied. The receivables are sold to the Purchasers in consideration for the Purchasers making payments of cash. Each Purchaser's share of capital accrues yield at a variable rate plus an applicable margin, which totaled 5.29% as of December 31, 2022.

At December 31, 2022, we had \$709 million of unused capacity, including \$686 million from the U.S. revolving credit facility after considering standby letters of credit. Our leverage ratio covenant limits our ability to increase net debt by \$659 million as of December 31, 2022.

We are in compliance with all covenants under each of our financing arrangements.

See Note 10 – Indebtedness, of Part I, Item 1, Financial Information of this report for additional details.

Dividends and Common Stock

We believe we can create long term value for our shareholders by continuing to invest in our business through both capital expenditures as well as investments in new market opportunities. We will also continue exploring opportunities to make strategic acquisitions and return capital to shareholders.

We are currently paying quarterly cash dividends on our Class A and Class B common stock and expect to continue to do so for the foreseeable future. See the Consolidated Condensed Statement of Shareholders Equity and Cash Flows, of Part I, Item 1, Financial Information, of this reports for additional details.

The Board of Directors authorized a share repurchase program that permits repurchases for both Class A and Class B common stock, and allows us to buy up to an aggregate 3 million common shares. There are approximately 2.2 million shares common shares remaining under this authorization. See the Consolidated Condensed Statement of Shareholders Equity and Cash Flows, of Part I, Item 1, Financial Information and Part II, Item 2, Unregistered Sales of Equity Securities and Use of Proceeds, of this report for additional details.

Today, we believe we can create long term value for our shareholders by continuing to invest in our business through both capital expenditures as well as investments in new market opportunities. We will also continue exploring opportunities to make strategic acquisitions and return capital to shareholders.

Off Balance Sheet Arrangements

We do not have any material off balance sheet arrangements that have or are reasonably likely to have a material future effect on our financial condition, results of operations or cash flows.

Contractual Obligations and Commercial Commitments

Our contractual obligations and commercial commitments have not changed materially from the disclosures in our Annual Report on Form 10-K for the year ended October 1, 2022. See Note 7 - Leases, Note 10 - Indebtedness, Note 15 - Employee Benefit Plans and Note 22 - Commitments and Contingencies, of Part I, Item 1, Financial Information, of this report for additional details.

ECONOMIC CONDITIONS AND MARKET TRENDS

We operate within the aerospace and defense and industrial markets. Our businesses are facing varying levels of supply chain and production level pressures from the residual impacts of the COVID-19 pandemic.

Our aerospace and defense businesses represented 70% of our 2022 sales. Within the defense market, our programs are directly affected by funding levels, which have remained relatively stable. Our commercial aircraft market, which represented less than 18% of our 2022 sales, is still recovering from the initial, dramatic, reductions in air travel at the onset of the COVID-19 pandemic. While domestic travel has recovered, global international travel remains below pre-pandemic levels.

Within our industrial markets, which represented 30% of our 2022 sales, our programs benefited from increased order demand within industrial automation, simulation and test and energy markets. However, as customer demand increases, across these markets, we are now experiencing supply chain pressures.

A common factor throughout our markets is the continuing demand for technologically advanced products.

Aerospace and Defense

Within aerospace and defense, we serve three end markets: defense, commercial aircraft and space.

The defense market is dependent on military spending for development and production programs. We have a growing development program order book for future generation aircraft and hypersonic missiles, and we strive to embed our technologies within these high-performance military programs of the future. Aircraft production programs are typically long-term in nature, offering predictable capacity needs and future revenues. We maintain positions on numerous high priority programs, including the Lockheed Martin F-35 Lightning II and V-22 Osprey. The large installed base of our products leads to attractive aftermarket sales and service opportunities. The tactical and strategic missile, missile defense and defense controls markets are dependent on many of the same market conditions as military aircraft, including overall military spending and program funding levels. At times when there are perceived threats to national security, U.S. defense spending can increase; at other times, defense spending can decrease. Future levels of defense spending are uncertain, subject to presidential and congressional approval, and could increase in the near-term given the current global tensions.

The commercial OEM aircraft market has depended on a number of factors, including both the last decade's increasing global demand for air travel and increasing fuel prices. Both factors contributed to the demand for new, more fuel-efficient aircraft with lower operating costs that led to large production backlogs for Boeing and Airbus. While domestic air travels has recovered from the impact of the COVID-19 pandemic, international travel utilizing wide-body aircraft will take longer to fully recover. Furthermore, as companies and employees become accustomed to working remotely, business travel and the associated flight hours may not fully reach the pre-pandemic levels. As such, we believe Boeing and Airbus will continue to directionally match their wide-body aircraft production rates with the reduced, albeit recovering, air traffic volume, which has lowered their demand for our flight control systems. We believe the commercial OEM market's recovery is heavily dependent on the return to pre-COVID-19 global international air traffic activity levels and therefore will face pressures for a prolonged period of time.

The commercial aftermarket is driven by usage and the age of the existing aircraft fleet for passenger and cargo aircraft, which drives the need for maintenance and repairs. While there were initial dramatic reductions in flight hours at the onset of the COVID-19 pandemic, we have seen a recovery in the demand volume for our maintenance services and spare parts.

The space market is comprised of four customer markets: the civil market, the U.S. Department of Defense market, the commercial space market and the new space market. The civil market, namely NASA, is driven by investment for commercial and exploration activities, including NASA's return to the moon. The U.S. Department of Defense market is driven by governmental-authorized levels of defense spending, including funding for hypersonic defense technologies. Levels of U.S. defense spending could increase as there is growing emphasis on space as the next frontier of potential future conflicts. The commercial space market is comprised of large satellite customers, which traditionally sell to communications companies. Trends for this market, as well as for commercial launch vehicles, follow demand for increased capacity. This, in turn tends to track with underlying demand for increased consumption of telecommunication services, satellite replacements and global navigation needs. The new space market is driven by investments to increase the speed and access to space through smaller satellites at reduced cost.

Industrial

Within industrial, we serve two end markets: industrial and medical. The industrial market consists of industrial automation products, simulation and test products and energy generation and exploration products. The medical market consists of medical devices and medical components products.

The industrial market we serve with our industrial automation products is influenced by several factors including capital investment levels, the pace of product innovation, economic conditions, cost-reduction efforts, technology upgrades and the subsequent effects of the COVID-19 pandemic. As our industrial market continues to recover, ongoing supply chain constraints continue to impact our operations, as will potential future economic recessions.

Our simulation and test products operate in markets that were largely affected by the same factors and investment challenges stemming from the COVID-19 pandemic. However, we have seen stronger order demand for flight simulation systems as the airline training market recovers.

Our energy generation and exploration products operate in a market that is influenced by changing oil and natural gas prices, global urbanization and the resulting change in supply and demand for global energy. Historically, drivers for global growth include investments in power generation infrastructure and exploration of new oil and gas resources. Recently, we have seen oil prices rise above pre-pandemic levels due, in part, to global disruptions; but future energy crises could increase the market's uncertainty.

The medical market we serve, in general, is influenced by economic conditions, regulatory environments, hospital and outpatient clinic spending on equipment, population demographics, medical advances, patient demands and the need for precision control components and systems. When the COVID-19 pandemic altered the way hospitals provided care by asking non-critical patients to recuperate at home, our medical devices products saw an increase in orders. This surge in demand has waned, as our customers have resized their inventory levels.

Foreign Currencies

We are affected by the movement of foreign currencies compared to the U.S. dollar, particularly in Aircraft Controls and Industrial Systems. About one-fifth of our 2022 sales were denominated in foreign currencies. During the first three months of 2023, average foreign currency rates generally weakened against the U.S. dollar compared to 2022. The translation of the results of our foreign subsidiaries into U.S. dollars decreased sales by \$17 million compared to the same period one year ago.

Cautionary Statement

Information included or incorporated by reference in this report that does not consist of historical facts, including statements accompanied by or containing words such as “may,” “will,” “should,” “believes,” “expects,” “expected,” “intends,” “plans,” “projects,” “approximate,” “estimates,” “predicts,” “potential,” “outlook,” “forecast,” “anticipates,” “presume” and “assume,” are forward-looking statements. Such forward-looking statements are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. These forward-looking statements are not guarantees of future performance and are subject to several factors, risks and uncertainties, the impact or occurrence of which could cause actual results to differ materially from the expected results described in the forward-looking statements. In evaluating these forward-looking statements, you should carefully consider the factors set forth below.

Although it is not possible to create a comprehensive list of all factors that may cause actual results to differ from the results expressed or implied by our forward-looking statements or that may affect our future results, some of these factors and other risks and uncertainties that arise from time to time are described in Item 1A “Risk Factors” of our Annual Report on Form 10-K and in our other periodic filings with the SEC and include the following:

STRATEGIC RISKS

- We operate in highly competitive markets with competitors who may have greater resources than we possess;
- Our research and development and innovation efforts are substantial and may not be successful, which could reduce our sales and earnings;
- If we are unable to adequately enforce and protect our intellectual property or defend against assertions of infringement, our business and our ability to compete could be harmed; and
- Our sales and earnings may be affected if we cannot identify, acquire or integrate strategic acquisitions, or as we conduct divestitures.

MARKET CONDITION RISKS

- The markets we serve are cyclical and sensitive to domestic and foreign economic conditions and events, which may cause our operating results to fluctuate;
- We depend heavily on government contracts that may not be fully funded or may be terminated, and the failure to receive funding or the termination of one or more of these contracts could reduce our sales and increase our costs;
- The loss of The Boeing Company or Lockheed Martin as a customer or a significant reduction in sales to either company could adversely impact our operating results; and
- We may not realize the full amounts reflected in our backlog as revenue, which could adversely affect our future revenue and growth prospects.

OPERATIONAL RISKS

- A reduced supply, as well as inflated prices, across various raw materials and third-party provided components and sub-assemblies within our supply chain could have a material impact on our ability to manufacture and ship our products, in addition to adversely impacting our operating profit and balance sheet;
- We face various risks related to health pandemics, such as the COVID-19 pandemic, which have had material adverse consequences on our operations, financial position, cash flows, and those of our customers and suppliers;
- If our subcontractors or suppliers fail to perform their contractual obligations, our prime contract performance and our ability to obtain future business could be materially and adversely impacted;
- We face, and may continue to face, risks related to information systems interruptions, intrusions or new software implementations, which may adversely affect our business operations;
- We may not be able to prevent, or timely detect, issues with our products and our manufacturing processes, which may adversely affect our operations and our earnings; and
- The failure or misuse of our products may damage our reputation, necessitate a product recall or result in claims against us that exceed our insurance coverage, thereby requiring us to pay significant damages.

FINANCIAL RISKS

- We make estimates in accounting for over-time contracts, and changes in these estimates may have significant impacts on our earnings;
- We enter into fixed-price contracts, which could subject us to losses if we have cost overruns;
- Our indebtedness and restrictive covenants under our credit facilities and indenture governing our senior notes could limit our operational and financial flexibility;
- Significant changes in discount rates, rates of return on pension assets, mortality tables and other factors could adversely affect our earnings and equity and increase our pension funding requirements;
- A write-off of all or part of our goodwill or other intangible assets could adversely affect our operating results and net worth; and
- Unforeseen exposure to additional income tax liabilities may affect our operating results.

LEGAL AND COMPLIANCE RISKS

- Contracting on government programs is subject to significant regulation, including rules related to bidding, billing and accounting standards, and any false claims or non-compliance could subject us to fines, penalties or possible debarment;
- Our operations in foreign countries expose us to currency, political and trade risks and adverse changes in local legal and regulatory environments could impact our results of operations;
- Government regulations could limit our ability to sell our products outside the United States and otherwise adversely affect our business;
- We are involved in various legal proceedings, the outcome of which may be unfavorable to us;
- Our operations are subject to environmental laws and complying with those laws may cause us to incur significant costs; and
- We may face reputational, regulatory or financial risks from a perceived, or an actual, failure to achieve our sustainability goals.

GENERAL RISKS

- Future terror attacks, war, natural disasters or other catastrophic events beyond our control could negatively impact our business; and
- Our performance could suffer if we cannot maintain our culture as well as attract, retain and engage our employees.

While we believe we have identified and discussed above the material risks affecting our business, there may be additional factors, risks and uncertainties not currently known to us or that we currently consider immaterial that may affect the forward-looking statements made herein. Given these factors, risks and uncertainties, investors should not place undue reliance on forward-looking statements as predictive of future results. Any forward-looking statement speaks only as of the date on which it is made, and we disclaim any obligation to update any forward-looking statement made in this report, except as required by law.

Item 3. Quantitative and Qualitative Disclosures about Market Risk.

Refer to the Company's Annual Report on Form 10-K for the year ended October 1, 2022 for a complete discussion of our market risk. There have been no material changes in the current year regarding this market risk information.

Item 4. Controls and Procedures.

- (a) Disclosure Controls and Procedures. We carried out an evaluation, under the supervision and with the participation of our management, including the Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures as defined in Exchange Act Rules 13a-15(e) and 15d-15(e). Based on that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that these disclosure controls and procedures are effective as of December 31, 2022 to ensure that information required to be disclosed in reports filed or submitted under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms, and that such information is accumulated and communicated to management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosures.
- (b) Changes in Internal Control over Financial Reporting. There have been no changes during the most recent fiscal quarter that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II OTHER INFORMATION

Item 1A. Risk Factors.

Refer to the Company's Annual Report on Form 10-K for the year ended October 1, 2022 for a complete discussion of our risk factors. There have been no material changes in the current year regarding our risk factors.

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

(c) The following table summarizes our purchases of our common stock for the quarter ended December 31, 2022.

Period	(a) Total Number of Shares Purchased (1)(2)(3)	(b) Average Price Paid Per Share	(c) Total number of Shares Purchased as Part of Publicly Announced Plans or Programs (3)	(d) Maximum Number (or Approx. Dollar Value) of Shares that May Yet Be Purchased Under Plans or Programs (3)
October 2, 2022 - October 29, 2022	81,981	\$ 75.03	71,849	2,198,081
October 30, 2022 - December 3, 2022	67,698	85.41	—	2,198,081
December 4, 2022 - December 31, 2022	3,012	88.32	—	2,198,081
Total	152,691	\$ 79.90	71,849	2,198,081

(1) Reflects purchases by the SECT of shares of Class B common stock from the ESPP, the RSP and from equity-based compensation award recipients under right of first refusal terms at average prices as follows: 9,954 shares at \$82.10 in October; 7,988 shares at \$86.31 in November and 2,785 shares at \$88.34 in December.

(2) In connection with the exercise of equity-based compensation awards, we accept delivery of shares to pay for the exercise price and withhold shares for tax withholding obligations at average prices as follows: In October, we accepted delivery of 109 Class A shares at \$75.62. In November, we accepted delivery of 15,553 Class A shares at \$85.11 and 14,157 Class B shares at \$85.76. In December, we accepted delivery of 103 Class A shares at \$87.49 and 124 Class B shares at \$88.48. In connection with the issuance of equity-based awards, we purchased 69 Class B shares at \$82.94 per share from the SECT in October and 30,000 Class B shares at \$85.17 in November.

(3) The Board of Directors has authorized a share repurchase program that permits the purchase of up to 3 million common shares of Class A or Class B common stock in open market or privately negotiated transactions at the discretion of management. In October we purchased 71,849 Class A shares at an average price of \$74.04.

Item 6. Exhibits.

(a) Exhibits

- [10.1](#) Form of Restricted Stock Unit Award under the 2014 Long Term Incentive Plan (for awards granted on or after November 15, 2022). (Filed herewith).
- [31.1](#) Certification of Chief Executive Officer pursuant to Exchange Act Rule 13a-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
- [31.2](#) Certification of Chief Financial Officer pursuant to Exchange Act Rule 13a-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
- [32.1](#) Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
- 101 Interactive Data files (submitted electronically herewith)
 - (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) XBRL Taxonomy Extension Schema Document
 - (101.CAL) XBRL Taxonomy Extension Calculation Linkbase Document
 - (101.DEF) XBRL Taxonomy Extension Definition Linkbase Document
 - (101.LAB) XBRL Taxonomy Extension Label Linkbase Document
 - (101.PRE) XBRL Taxonomy Extension Presentation Linkbase Document
- 104 Cover Page Interactive Data File - the cover page XBRL tags are embedded within the Inline XBRL document and are contained within Exhibit 101.

SIGNATURES

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

Moog Inc.

(Registrant)

Date: February 3, 2023

By /s/ Pat Roche

Pat Roche
Chief Executive Officer
(Principal Executive Officer)

Date: February 3, 2023

By /s/ Jennifer Walter

Jennifer Walter
Vice President and Chief Financial Officer
(Principal Financial Officer)

Date: February 3, 2023

By /s/ Michael J. Swope

Michael J. Swope
Controller (Principal Accounting Officer)

MOOG INC. 2014 LONG TERM INCENTIVE PLAN

PERFORMANCE STOCK UNIT AWARD TERMS AND CONDITIONS

THIS PERFORMANCE STOCK UNIT AWARD, effective as of the date of grant specified on the cover sheet (the “Grant Date”), is between MOOG INC. (“Moog” and, together with its Subsidiaries, the “Company”), and the named employee of the Company (the “Employee”), pursuant to the Moog Inc. 2014 Long Term Incentive Plan (the “Plan”).

WHEREAS, the Company wishes to provide the Employee with an incentive to continue in the service of the Company and to acquire a meaningful, significant and growing proprietary interest in Moog by providing them with the opportunity to own Common Stock of Moog; and

WHEREAS, the Employee is an officer of the Company;

NOW, THEREFORE, in consideration of the promises and mutual agreements set forth in these Terms and Conditions and the attached cover sheet (together “the Agreement”), the Employee and the Company hereby agree as follows:

1. Grant of PSUs.

The Company hereby grants to the Employee an Award of Restricted Stock Units that will vest, subject to the terms and conditions of this Agreement, based upon the achievement of the Performance Goals (“PSUs”). This Award represents the right to receive shares of Class B Common Stock, subject to the fulfillment of the vesting and performance requirements and other terms and conditions set forth in this Agreement, the attached Appendices A and B, and the Plan, which is incorporated into and made a part of this Agreement by reference.

Unless otherwise defined in this Agreement, the terms used in this Agreement have the meanings given them in the Plan.

2. Earned and Vested Shares; Settlement.

(a) **Right to Receive Shares.** The number of PSUs granted under this Agreement (the “Target Number of PSUs”) represents a target number of Shares that may be earned, based upon satisfaction of the target performance goals as set forth in Appendix A (“Performance Goals”). The actual number of PSUs earned and vested may be greater or less than the Target Number of PSUs, or even zero, and will be determined based on the Company’s actual performance level achieved in accordance with Appendix A. Each earned and vested PSU represents the right to receive one share of Class B Common Stock (a “Share”) on the applicable settlement date. Unless and until the PSUs have vested, the Employee will have no right to payment of any such PSUs.

(b) **Earning and Vesting.** The PSUs granted under this Agreement will vest on the last day of the Performance Period designated for this Award, subject to achievement of the Performance Goals set forth in Appendix A and to the provisions of Sections 3 and 4 below. The

“Performance Period” for this Award is the three-year period set forth in Appendix A that begins on the first day of the fiscal year in which the grant is made (“Beginning Date”) and ends on the last day of the fiscal year that is closest to September 30th of the third fiscal year following the Beginning Date (the “End Date”). The actual number of PSUs earned as of the End Date will be based upon the performance level achieved with respect to the Performance Goals and will be determined by multiplying the Target Number of PSUs by the Payout Percentage achieved in accordance with Appendix A. The Performance Goals are based upon the performance of the Company during the designated Performance Period. The PSUs granted under this Agreement will not be subject to Section 11 of the Plan.

(c) Employment Requirement; Forfeiture. Unless otherwise provided in Sections 3 and 4, (i) PSUs will not vest in the Employee unless the Employee has been continuously employed by the Company from the Grant Date through the End Date, and (ii) all PSUs that have not been earned as of the End Date, because the Performance Goals established in Appendix A have not been satisfied with respect to the Performance Period, will be forfeited on the close of business on the End Date.

(d) Settlement. Subject to Section 3, as soon as practicable, but no later than 90 days, following the End Date of the Performance Period, the Company will issue to the Employee (or to his or her beneficiary or estate, as the case may be) on the applicable settlement date, one whole Share for each earned PSU not previously forfeited or terminated. Issuance of the Shares will be subject to Sections 5 and 8 below.

3. Effect of Termination of Employment.

(a) Terminations Before End Date. If the Employee’s employment with the Company terminates before the End Date of the Performance Period, the following vesting and forfeiture provisions will apply:

(i) General Rule. Unless otherwise provided below, if the Employee’s employment with the Company terminates for any reason prior to the End Date, all of the Employee’s PSUs will be forfeited and the Employee will have no further rights to earn or vest in the PSUs granted under this Agreement.

(ii) Terminations on or After Age 65 or Age Plus Service of 90 and the First Anniversary of the Beginning Date. Notwithstanding the general rule in Section 3(a)(i), if

(1) the Employee’s employment with the Company terminates on or after the first anniversary of the Beginning Date,

(2) at the time of the Employee’s termination of employment, either (x) the Employee has attained age 65, or (y) the combined total of the Employee’s age and Years of Service (as defined below) equals at least 90 and the Employee has continuously served as an officer of the Company from the Grant Date through the date of termination, and

(3) the termination is for any reason (including retirement, Disability, resignation, or involuntary termination without Cause) other than on account of death or termination by the Company for Cause, the PSUs subject to this Award will not be forfeited, but will remain available to be earned, subject to actual achievement of the Performance Goals.

The earned and vested PSUs will be settled under the general provisions of Section 2 as soon as practicable, but no later than 90 days, following the End Date, based upon the actual performance level achieved during the Performance Period, where the actual number of PSUs earned as of the End Date will be determined by multiplying the Target Number of PSUs by the Payout Percentage determined in accordance with Appendix A.

For purposes of determining the Employee's Years of Service under Section 3(a)(ii)(2)(y), "Year of Service" will have the meaning set forth in the SERP portion of the Moog Inc. Plan to Equalize Retirement Income and Supplemental Retirement Plan (the "DB SERP"), as in effect on the Grant Date, without regard to whether the Employee is actually a participant in the DB SERP.

(iii) Termination on Account of Death. Notwithstanding the general rule in Section 3(a)(i), if the Employee's employment with the Company terminates before the End Date on account of death, to the extent the PSUs have not previously been forfeited or terminated, a prorated portion of the Target Number of PSUs granted to the Employee will immediately vest and be payable. The prorated portion of the PSUs vesting under this subsection will be determined based on the number of quarters the Employee performed services during the Performance Period (not including the quarter in which death occurs) as compared to the total number of quarters in the Performance Period. Settlements made on account of the Employee's death will be made in accordance with Section 23 of the Plan as soon as practicable but no later than 90 days following the date of death.

(b) Other Terminations.

(i) Termination for Cause. If the Employee is terminated by the Company for Cause, whether before or after the End Date, all of the Employee's PSUs, both vested and unvested, will be forfeited and the Employee will have no further rights to payment or settlement of PSUs under this Agreement or the Plan.

(ii) Termination On or After End Date. If the Employee's employment terminates for any reason other than for Cause on or after the End Date but before some or all of the Employee's PSUs have been settled, the termination will not affect settlement of those outstanding PSUs that have already been earned and vested.

4. **Effect of Change in Control.**

Upon the occurrence of a Change in Control, to the extent they have not previously been forfeited or terminated, all outstanding PSUs that have not previously vested will immediately vest, and payment at the maximum level of performance, as set forth in Appendix A, will be made in accordance with the provisions of Section 12(c) of the Plan. A Change in Control will constitute a Change in Control for purposes of this Agreement only if the Change in Control satisfies the requirements of a “change in control event” within the meaning of Code Section 409A, or, in the case of a liquidation or dissolution of the Company, such liquidation or dissolution complies with the procedures set forth in Treasury Regulation Section 1.409A-3(j)(4)(ix)(A).

5. **Tax Withholding.**

As a condition of this Award, the Employee agrees to pay or make arrangements for the payment to the Company of the amount of any and all federal, state, local and foreign income and employment taxes that the Company determines it is required by law to withhold with respect to the PSUs. Payment will be due on the date the Company is required to withhold such taxes. Unless the Executive Compensation Committee determines otherwise in its sole discretion, or the Employee elects to make a cash payment to the Company in an amount sufficient to satisfy the withholding requirement, notwithstanding Section 8(c) the Company will satisfy the withholding requirement in accordance with Section 18 of the Plan by withholding from delivery to the Employee, Shares having a value equal to the amount of tax required to be withheld. The Company will provide procedures for Employees electing to make a cash payment to satisfy the withholding requirement.

6. **Dividend Equivalents.**

No dividend equivalents will be issued to the Employee with respect to the PSUs granted under this Award.

7. **Rights as Shareholder.**

Neither the Employee nor any transferee has any rights as a shareholder with respect to any Shares covered by or relating to this Award until the date the Employee or transferee becomes the holder of record of the Shares.

8. **Additional Conditions to Issuance of Stock.**

(a) **Compliance with Laws and Regulations.** The Company is not obligated to issue or deliver any certificates evidencing shares of Company Stock under this Award unless and until the Company is advised by its counsel that the issuance and delivery of the certificates is in compliance with all applicable laws, regulations of governmental authority and the requirements of the securities exchange or automated quotation system on which shares of Company Stock are listed.

(b) Right of First Refusal. The Employee acknowledges and agrees that the Shares issued with respect to the PSUs are subject to repurchase under a right of first refusal in favor of the Company or any assignee of the Company, as set forth in the Company's Right of First Refusal Policy, as it may be amended from time to time (the "First Refusal Policy"). The repurchase of Shares under the First Refusal Policy may be effected by the payment to the Employee, or to the Employee's beneficiary or estate, as the case may be, of the value of the Shares as determined under the First Refusal Policy, a copy of which has been provided to the Employee.

(c) Holding Period for Shares. The Employee acknowledges and agrees that the Shares issued with respect to the PSUs are subject to a holding period requirement whereby the Employee (or the Employee's beneficiary or estate, as the case may be) may not sell or otherwise dispose of the Shares until 12 months following the date of issuance of the Shares.

(d) Restrictions on Transferability. Any stock certificates evidencing the Shares issued with respect to the PSUs may include one or more legends that set forth such restrictions on transferability as may apply to the Shares under this Section and the Plan. Alternatively, such restrictions may be enforced through such other methods as may be determined by the Company in its sole discretion, including by restrictions on electronic transfers from accounts.

9. Electronic Delivery.

The Company may, in its sole discretion, decide to deliver any documents related to PSUs awarded under the Plan or any future awards under the Plan by electronic means or request the Employee's consent to participate in the Plan by electronic means. The Employee hereby consents to receive such documents by electronic delivery and agrees to participate in the Plan through any on-line or electronic system established and maintained by the Company or another third party designated by the Company.

10. Agreement Severable.

If any provision in this Agreement is held to be invalid or unenforceable, such provision will be severable from, and such invalidity or unenforceability will not be construed to have any effect on, the remaining provisions of this Agreement.

11. Governing Law.

Except to the extent preempted by an applicable federal law, the Plan and this Agreement will be construed and administered in accordance with the laws of the State of New York, without reference to the principles of conflicts of laws thereunder.

12. Non-Transferability of PSU.

This Award may not be transferred in any manner other than by will or by the laws of descent or distribution. Any purported transfer in violation of the preceding sentence will be void and of no effect.

13. Binding Effect.

This Agreement is binding upon, and inures to the benefit of, the respective successors, assigns, heirs, executors, administrators and guardians of the parties covered by the Agreement.

14. Tax Consequences.

The Employee acknowledges that this Award will have tax consequences to the Employee and that any and all such tax consequences are the sole responsibility of the Employee. The Employee should consult a tax adviser before accepting this Award or disposing of any Shares.

15. Risks.

The Employee is advised that the value of the PSUs and the Shares acquired under the PSUs will fluctuate as the trading price of the Shares fluctuates. The Employee exclusively accepts all risks associated with a decline in the market price of the Shares and all other risks associated with the holding of Shares. No amount will be paid to, or in respect of, the Employee to compensate for a downward fluctuation in the price of the Shares, nor will any other form of benefit be conferred upon, or in respect of, the Employee for such purpose.

16. Effect of Agreement.

The Employee acknowledges receipt of a copy of the Plan and represents that he or she is familiar with its terms and provisions (and has had an opportunity to obtain advice regarding this Award), and accepts this Award and agrees to be bound by its contractual terms as set forth in this Agreement and in the Plan. The Employee agrees to accept as binding, conclusive and final all decisions and interpretations of the Executive Compensation Committee regarding any questions relating to this Award. The Employee understands that the Plan is discretionary in nature and may be amended, suspended or terminated by the Company at any time in accordance with its terms. In the event of a conflict between the terms and provisions of the Plan and the terms and provisions of this Agreement, the terms and provisions of the Plan will prevail. Modifications to this Agreement may be made only in a written agreement executed by a duly authorized officer of the Company. The Employee agrees at all times to abide by, and acknowledges that this Award is subject to, all applicable policies of the Company, including the Company's insider trading policies and any recoupment or clawback policy, as may exist from time to time.

17. No Right to Employment.

Nothing in this Agreement or the Plan confers upon the Employee any right to continued employment with the Company for any period of time, nor does it interfere in any way with the Employee's right or the Company's right to terminate the employment relationship at any time, for any reason, with or without cause.

18. **Section 409A.**

All PSUs granted under this Agreement are intended to comply with or to be exempt from Section 409A of the Internal Revenue Code of 1986 (the “Code”) and will be construed accordingly. However, the Company will not be liable to the Employee or any beneficiary with respect to any adverse tax consequences arising under Section 409A or other provision of the Code. All terms of this Agreement that are undefined or ambiguous must be interpreted in a manner that is consistent with Code Section 409A if necessary to comply with Code Section 409A.

1. **Data Privacy.**

It is a condition of participation in the Plan and acceptance of this Award that the Employee acknowledges and explicitly consents to the collection, use, processing and transfer of personal data as described in this paragraph. The Company holds certain personal information about the Employee, including, but not limited to, the Employee’s name, home address and telephone number, date of birth, social security number or other employee tax identification number, salary, nationality, job title, and any awards granted, cancelled, purchased, vested, unvested or outstanding in the Employee’s favor, for the purpose of managing and administering the Employee’s Award under the Plan and this Agreement (“Personal Data”). The Employee understands that the Company will transfer Personal Data to any third parties assisting the Company in the implementation, administration and management of the Employee’s PSUs.

These recipients may be located in the United State or elsewhere. The Employee authorizes them to receive, possess, use, retain and transfer the Personal Data, in electronic or other form, for the purposes of implementing, administering and managing the Employee’s PSUs. The Employee may, at any time, review Personal Data, require any necessary amendments to it or withdraw the consent herein in writing by contacting the Company; however, withdrawing the consent may affect the Employee’s ability to participate in the Plan and receive Shares upon vesting in the PSUs.

1. **Appendix B: Non-U.S. Employees.**

Notwithstanding any other provision in this Agreement, with respect to any Employee residing in or relocating to a country other than the United States, the PSU Award under this Agreement will be subject to such other special terms and conditions set forth for that country in the attached Appendix B as the Company determines necessary or advisable in order to comply with local law or facilitate the administration of the Plan.

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APPENDIX A

PSU GRANT: PERFORMANCE GOALS AND PAYOUT PERCENTAGE

Earned PSUs	The actual number of PSUs earned and payable will be based on achievement of performance goals and may range from 0% to 200% of the target number of PSUs awarded under this Agreement.
Vesting:	PSUs awarded under this Agreement will vest on the last day of the Performance Period specified below, subject to achievement of the Performance Goals set forth in th
Performance Period:	The 3-year fiscal period beginning on [_____] and ending on [_____]
Manner of Payment:	Shares of Class B Common Stock

The number of PSUs earned and vested for this Performance Period will be determined according to business performance in the following two areas – sales growth and operating margin. The measurement of these will be based on sales and operating margins in year 3 of the Performance Period.

For the purpose of this grant, on-target performance is defined as Moog achieving [\$___] of sales and [___ %] operating margin in year 3 of the Performance Period. In the event that both of these targets are met, 100% of the Target Number of PSUs awarded under this grant will be earned and vested. The number of PSUs that are earned and vested depends on actual performance over the Performance Period, with each performance target carrying equal weighting, as set forth below, and will be determined under the following formula:

$$\text{Earned and Vested PSUs} = \text{Payout Percentage} \times \text{Target Number of PSUs.}$$

The Payout Percentage is based on the achievement of the Performance Goals set forth for each performance target in the table below. Each performance target is measured independently and payment of a certain percentage of PSUs is not necessarily dependent on meeting both targets. The maximum percentage of PSUs that may be earned for achieving the maximum performance level for a single performance target is 100%, and the maximum number of PSUs that may be earned for achieving the maximum performance level for both performance targets is 200%.

Exhibit 10.1

Achievement between each performance level will be interpolated on a straight-line basis rounded to the nearest whole percentage; provided that if the actual performance level achieved for a performance target does not meet the Minimum Level, then the Payout Percentage for that performance target will be 0%.

The Target Number of PSUs may be prorated under certain circumstances in accordance with Section 3 of the Award Agreement.

Performance Level	Sales Performance Goal	Payout Percentage (% of Target Number of PSU Earned and Vested)	Operating Margin Performance Goal	Payout Percentage (% of Target Number of Earned and Vested)
Minimum	[\$ ___]	25%	[___ %	25%
Target	[\$ ___]	50%	[___ %	50%
Maximum	[\$ ___]	100%	[___ %	100%

APPENDIX B

ADDITIONAL TERMS AND CONDITIONS OF THE MOOG INC. PERFORMANCE STOCK UNIT AWARD AGREEMENT NON-U.S. EMPLOYEES

Terms and Conditions

This Appendix B includes special terms and conditions applicable to the Employee if the Employee resides in one of the countries listed below. These terms and conditions are in addition to or, if so indicated, in place of, the terms and conditions set forth in the Agreement.

Canada

Termination of Employment. For purposes of Section 3, the date of the Employee's termination of employment will be the date of termination specified in the written termination notification from the Company. Neither any period of notice nor any payment in lieu thereof upon termination of employment will be considered as extending the period of employment for the purposes of this Plan.

Germany

Termination of Employment. For purposes of this Agreement, the date of termination of employment will be:

- if the employment relationship is terminated by notice (*Kündigung*) of either party, the date when notice of termination is given, irrespective of the duration of any applicable notice period, and, if the Employee is a managing director, alternatively the date when notice of termination of the office as managing director (revocation or resignation) is given, whichever is earlier;
- if the employment relationship or the office as managing director is terminated by mutual agreement, the date when the termination agreement is concluded;
- in all other cases, the date when the employment relationship comes to its legal end.

Termination for Cause. Without limiting the general definition of "Cause" pursuant to Section 2 (d) of the Plan, a termination by the Company pursuant to Section 626 of the German Civil Code (*Bürgerliches Gesetzbuch*) and a termination for misconduct (*verhaltensbedingte Kündigung*) pursuant to Section 1 of the German Protection from Unfair Dismissal Act (*Kündigungsschutzgesetz*) are deemed to be terminations for Cause.

Taxes. In the event of a conflict between the requirements of German tax law regarding wage tax and the provisions of this Agreement, the requirements of German tax law shall prevail.

Exhibit 10.1

No Right to Future Participation. Participation in the Plan and acceptance of this Award does not confer upon the Employee any right to participate in the Plan at any time in the future either at all or on any particular basis.

United Kingdom

No Right to Future Participation. Participation in the Plan and acceptance of this Award does not (a) confer upon the Employee any right to participate in the Plan at any time in the future either at all or on any particular basis; or (b) afford to the Employee any additional right to compensation on the termination of his or her employment which would not have existed had the Plan not existed. Accordingly, the Employee will waive any rights to compensation or damages in consequence of the termination of his or her employment with the Company for any reason whatsoever insofar as these rights arise or may arise from him or her ceasing to have rights under or be entitled to any Award under the Plan as a result of such termination or from the loss or diminution in value of such rights and/or entitlements, notwithstanding any provision to the contrary in his or her contract of employment.

Certification of Chief Executive Officer pursuant to Exchange Act Rule 13a-14(a) as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Pat Roche, certify that:

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

Date February 3, 2023

/s/ Pat Roche
Pat Roche
Chief Executive Officer

**Certification of Chief Financial Officer pursuant to Exchange Act Rule 13a-14(a) as adopted
pursuant to Section 302 of the Sarbanes-Oxley Act of 2002**

I, Jennifer Walter, certify that:

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

Date February 3, 2023

/s/ Jennifer Walter
Jennifer Walter
Chief Financial Officer

**Certification pursuant to
18 U.S.C. Section 1350,
as adopted pursuant to
Section 906 of the Sarbanes-Oxley Act of 2002**

Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, the undersigned officers of Moog Inc. (the "Company") hereby certify that:

The Company's Quarterly Report on Form 10-Q for the quarter ended December 31, 2022 fully complies with the requirements of section 13(a) or 15(d) of the Securities and Exchange Act of 1934 and the information contained in the Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: February 3, 2023

/s/ Pat Roche
Pat Roche
Chief Executive Officer

/s/ Jennifer Walter
Jennifer Walter
Chief Financial Officer

This certification shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liability of that section. This certification shall not be deemed to be incorporated by reference into any filing under the Securities Act of 1933, as amended, or the Exchange Act, except to the extent specifically incorporated by the Company into such filing.