
**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 January 2, 2021

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 Rd 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 and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

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

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 Act).

Yes No

The number of shares outstanding of each class of common stock as of January 25, 2021 was:

Class A common stock, 29,358,960 shares

Class B common stock, 2,793,492 shares

Moog Inc.
QUARTERLY REPORT ON FORM 10-Q
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PART I FINANCIAL INFORMATION**Item 1. Financial Statements****Consolidated Condensed Statements of Earnings**
(Unaudited)

	Three Months Ended	
	January 2, 2021	December 28, 2019
(dollars in thousands, except share and per share data)		
Net sales	\$ 683,954	\$ 754,843
Cost of sales	494,311	543,586
Gross profit	189,643	211,257
Research and development	28,008	28,208
Selling, general and administrative	99,603	98,367
Interest	8,420	10,232
Other	3,241	7,546
Earnings before income taxes	50,371	66,904
Income taxes	12,529	16,877
Net earnings	\$ 37,842	\$ 50,027
Net earnings per share		
Basic	\$ 1.18	\$ 1.45
Diluted	\$ 1.17	\$ 1.44
Dividends declared per share	\$ 0.25	\$ 0.25
Average common shares outstanding		
Basic	32,074,873	34,510,851
Diluted	32,237,212	34,787,404
See accompanying Notes to Consolidated Condensed Financial Statements.		



Consolidated Condensed Statements of Comprehensive Income
(Unaudited)

(dollars in thousands)	Three Months Ended	
	January 2, 2021	December 28, 2019
Net earnings	\$ 37,842	\$ 50,027
Other comprehensive income, net of tax:		
Foreign currency translation adjustment	33,497	21,533
Retirement liability adjustment	1,596	4,363
Change in accumulated income on derivatives	98	1,402
Other comprehensive income, net of tax	35,191	27,298
Comprehensive income	\$ 73,033	\$ 77,325

See accompanying Notes to Consolidated Condensed Financial Statements.

MOOG Inc.
Consolidated Condensed Balance Sheets
(Unaudited)

(dollars in thousands)	January 2, 2021	October 3, 2020
ASSETS		
Current assets		
Cash and cash equivalents	\$ 97,639	\$ 84,583
Restricted cash	695	489
Receivables, net	872,843	855,535
Inventories, net	646,627	623,043
Prepaid expenses and other current assets	47,119	49,837
Total current assets	1,664,923	1,613,487
Property, plant and equipment, net	609,358	600,498
Operating lease right-of-use assets	68,772	68,393
Goodwill	866,366	821,856
Intangible assets, net	117,717	85,046
Deferred income taxes	20,524	18,924
Other assets	18,888	17,627
Total assets	\$ 3,366,548	\$ 3,225,831
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities		
Current installments of long-term debt	\$ 69,148	\$ 350
Accounts payable	173,256	176,868
Accrued compensation	102,138	109,510
Contract advances	234,480	203,338
Accrued liabilities and other	234,840	220,488
Total current liabilities	813,862	710,554
Long-term debt, excluding current installments	898,078	929,982
Long-term pension and retirement obligations	189,081	183,366
Deferred income taxes	47,829	40,474
Other long-term liabilities	114,454	118,372
Total liabilities	2,063,304	1,982,748
Shareholders' equity		
Common stock - Class A	43,802	43,799
Common stock - Class B	7,478	7,481
Additional paid-in capital	505,038	472,645
Retained earnings	2,142,566	2,112,734
Treasury shares	(1,000,795)	(990,783)
Stock Employee Compensation Trust	(78,597)	(64,242)
Supplemental Retirement Plan Trust	(65,986)	(53,098)
Accumulated other comprehensive loss	(250,262)	(285,453)
Total shareholders' equity	1,303,244	1,243,083
Total liabilities and shareholders' equity	\$ 3,366,548	\$ 3,225,831

See accompanying Notes to Consolidated Condensed Financial Statements.



Consolidated Condensed Statements of Shareholders' Equity
(Unaudited)

(dollars in thousands)	Three Months Ended	
	January 2, 2021	December 28, 2019
COMMON STOCK		
Beginning and end of period	\$ 51,280	\$ 51,280
ADDITIONAL PAID-IN CAPITAL		
Beginning of period	472,645	510,546
Issuance of treasury shares	3,118	4,489
Equity-based compensation expense	2,412	2,381
Adjustment to market - SECT and SERP	26,863	1,406
End of period	505,038	518,822
RETAINED EARNINGS		
Beginning of period	2,112,734	2,128,739
Net earnings	37,842	50,027
Dividends	(8,010)	(8,661)
End of period	2,142,566	2,170,105
TREASURY SHARES AT COST		
Beginning of period	(990,783)	(769,569)
Class A and B shares issued related to compensation	850	527
Class A and B shares purchased	(10,862)	(59,411)
End of period	(1,000,795)	(828,453)
STOCK EMPLOYEE COMPENSATION TRUST (SECT)		
Beginning of period	(64,242)	(111,492)
Issuance of shares	274	—
Purchase of shares	(655)	(2,440)
Adjustment to market	(13,974)	(1,571)
End of period	(78,597)	(115,503)
SUPPLEMENTAL RETIREMENT PLAN (SERP) TRUST		
Beginning of period	(53,098)	(71,546)
Adjustment to market	(12,888)	165
End of period	(65,986)	(71,381)
ACCUMULATED OTHER COMPREHENSIVE LOSS		
Beginning of period	(285,453)	(415,477)
Other comprehensive income	35,191	27,298
End of period	(250,262)	(388,179)
TOTAL SHAREHOLDERS' EQUITY	\$ 1,303,244	\$ 1,336,691

See accompanying Notes to Consolidated Condensed Financial Statements.



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

(share data)	Three Months Ended	
	January 2, 2021	December 28, 2019
COMMON STOCK - CLASS A		
Beginning of period	43,799,229	43,794,935
Conversion of Class B to Class A	3,000	1,400
End of period	43,802,229	43,796,335
COMMON STOCK - CLASS B		
Beginning of period	7,480,484	7,484,778
Conversion of Class B to Class A	(3,000)	(1,400)
End of period	7,477,484	7,483,378
TREASURY SHARES - CLASS A COMMON STOCK		
Beginning of period	(13,959,998)	(11,101,512)
Class A shares issued related to compensation	14,452	3,078
Class A shares purchased	(72,575)	(669,106)
End of period	(14,018,121)	(11,767,540)
TREASURY SHARES - CLASS B COMMON STOCK		
Beginning of period	(3,344,877)	(3,345,489)
Class B shares issued related to compensation	71,059	94,567
Class B shares purchased	(92,861)	(9,680)
End of period	(3,366,679)	(3,260,602)
SECT - CLASS A COMMON STOCK		
Beginning and end of period	(425,148)	(425,148)
SECT - CLASS B COMMON STOCK		
Beginning of period	(557,543)	(886,300)
Issuance of shares	4,135	—
Purchase of shares	(8,543)	(28,596)
End of period	(561,951)	(914,896)
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	
	January 2, 2021	December 28, 2019
CASH FLOWS FROM OPERATING ACTIVITIES		
Net earnings	\$ 37,842	\$ 50,027
Adjustments to reconcile net earnings to net cash provided by operating activities:		
Depreciation	18,647	18,386
Amortization	2,841	3,281
Deferred income taxes	(139)	3,205
Equity-based compensation expense	2,502	2,381
Other	1,544	(1,017)
Changes in assets and liabilities providing (using) cash:		
Receivables	3,664	(19,519)
Inventories	(4,058)	(13,782)
Accounts payable	(7,510)	(29,153)
Contract advances	29,712	40,215
Accrued expenses	6,989	(26,998)
Accrued income taxes	8,831	5,349
Net pension and post retirement liabilities	5,022	8,327
Other assets and liabilities	(11,792)	1,404
Net cash provided by operating activities	94,095	42,106
CASH FLOWS FROM INVESTING ACTIVITIES		
Acquisitions of businesses, net of cash acquired	(77,708)	(53,906)
Purchase of property, plant and equipment	(20,309)	(27,310)
Other investing transactions	1,604	(3,684)
Net cash used by investing activities	(96,413)	(84,900)
CASH FLOWS FROM FINANCING ACTIVITIES		
Proceeds from revolving lines of credit	271,700	272,000
Payments on revolving lines of credit	(235,700)	(617,500)
Proceeds from long-term debt	25,100	—
Payments on long-term debt	(27,586)	—
Proceeds from senior notes, net of issuance costs	—	492,750
Payments on finance lease obligations	(488)	(88)
Payment of dividends	(8,010)	(8,661)
Purchase of outstanding shares for treasury	(11,674)	(57,776)
Proceeds from sale of stock held by SECT	274	—
Purchase of stock held by SECT	(655)	(2,440)
Other financing transactions	—	(1,895)
Net cash provided by financing activities	12,961	76,390
Effect of exchange rate changes on cash	2,619	1,147
Increase in cash, cash equivalents and restricted cash	13,262	34,743
Cash, cash equivalents and restricted cash at beginning of period	85,072	92,548
Cash, cash equivalents and restricted cash at end of period	\$ 98,334	\$ 127,291
SUPPLEMENTAL CASH FLOW INFORMATION		
Treasury shares issued as compensation	\$ 3,967	\$ 5,016
Equipment acquired through lease financing	3,081	568

See accompanying Notes to Consolidated Condensed Financial Statements.



Notes to Consolidated Condensed Financial Statements
Three Months Ended January 2, 2021
(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 January 2, 2021 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 3, 2020. All references to years in these financial statements are to fiscal years.

COVID-19 Impacts On Our Business

On March 11, 2020, the World Health Organization classified the COVID-19 outbreak as a pandemic. In response, we established two clear priorities; first, the health and safety of our employees and their families and, second, continuing to meet the needs of our customers and secure the financial well-being of the Company by implementing short-term actions to maintain liquidity. While substantially all of our operations and production activities have, to-date, remained operational as many are considered essential and exempt from closure directives, the pandemic did have a material impact on our financial statements in the last six months of the fiscal year ended October 3, 2020. We recorded impairment charges on long-lived assets and recorded inventory reserves for businesses impacted by lower sales. We continue to monitor the impacts of COVID-19 on the fair value of assets. While we do not currently anticipate any additional material impairments on assets as a result of COVID-19, future changes in sales, earnings and cash flows related to long-lived assets to be held and used and goodwill could cause these assets to become impaired. COVID-19 is discussed in more detail throughout "Management's Discussion and Analysis of Financial Condition and Results of Operations."

Reclassifications

Certain prior year amounts have been reclassified to conform to current year's presentation. Management does not consider the amounts reclassified to be material.

Recent Accounting Pronouncements Adopted

Standard	Description	Financial Statement Effect or Other Significant Matters
<p>ASU no. 2016-13 <i>Measurement of Credit Losses on Financial Instruments</i></p>	<p>The standard replaces the incurred loss model with the current expected credit loss (CECL) model to estimate credit losses for financial assets measured at amortized cost and certain off-balance sheet credit exposures. The CECL model requires a Company to estimate credit losses expected over the life of the financial assets based on historical experience, current conditions and reasonable and supportable forecasts. The provisions of the standard are effective for fiscal years beginning after December 15, 2019 and interim periods within those fiscal years. Early adoption is permitted. The amendment requires a modified retrospective approach by recording a cumulative-effect adjustment to retained earnings as of the beginning of the period of adoption.</p>	<p>We adopted this standard using a modified retrospective approach. Based on immateriality, there was no cumulative-effect adjustment to retained earnings as of the beginning of period of adoption. Upon adoption, we now calculate current expected credits losses for financial assets measured at amortized cost. We utilize factors such as historical experience, credit quality, age of accounts receivable, current economic conditions and reasonable forecasted financial information in order to determine expected credit losses for these assets. We are not subject to material receivable credit risk given a significant portion of our sales are generated from contracts with the U.S. Government, prime contractors to the U.S. Government and reputable Fortune 500 companies. The impact of this standard was immaterial to financial statements, related disclosures and internal controls.</p>

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.

Under ASC 606, revenue recognized over time using an input method that uses costs incurred to date to measure progress toward completion ("cost-to-cost") was 63% for the three months ended January 2, 2021. 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 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 January 2, 2021 and December 28, 2019 we recognized revenues of \$1,882 and \$14,619, 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 January 2, 2021.

As of January 2, 2021, we had contract reserves of \$70,807. 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.

Revenue recognized at the point in time control was transferred to the customer was 37% for the three months ended January 2, 2021. 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 - the entity has a present right to payment; the customer has legal title; the customer has physical possession; the customer has the 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.

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:

	January 2, 2021	October 3, 2020
Unbilled receivables	\$ 490,297	\$ 493,734
Contract advances	234,480	203,338
Net contract assets	\$ 255,817	\$ 290,396

The decrease in contract assets reflects the net impact of billings 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 January 2, 2021, we recognized \$57,955 of revenue, that was included in the contract liability balance at the beginning of the period.

Remaining Performance Obligations

As of January 2, 2021, the aggregate amount of the transaction price allocated to the performance obligations that are unsatisfied (or partially unsatisfied) was \$4,741,532. We expect to recognize approximately 40% of that amount as sales over the next twelve months and the balance thereafter.

Disaggregation of Revenue

See Note 19, Segments, for disclosures related to disaggregation of revenue.

Note 3 - Acquisitions and Divestitures

On December 18, 2020, we acquired Genesys Aerosystems Group, Inc. (Genesys), headquartered in Mineral Wells, Texas for a purchase price of \$77,708, net of acquired cash. Genesys designs and manufactures a full suite of electronic flight instrument systems and autopilot solutions. 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.

In the first quarter of 2021, we sold a non-core business in our Aircraft Controls segment for \$2,081 in net consideration and recorded a loss in other income of \$442.

On November 28, 2019, we acquired Gesellschaft für Antriebstechnik mbH and GAT Inc. (GAT), headquartered in Geisenheim, Germany for a purchase price of \$54,265, net of acquired cash. GAT designs and manufactures high-end fluid rotating unions and slip rings. This operation is included in our Industrial Systems segment.

In the first quarter of 2020, we sold a non-core business of our Industrial Systems segment for \$1,775 in net consideration and recorded a gain in other income of \$169.

Note 4 - Receivables

Receivables consist of:

	January 2, 2021	October 3, 2020
Accounts receivable	\$ 382,836	\$ 363,089
Unbilled receivables	490,297	493,734
Other	6,472	5,025
Less allowance for credit losses	(6,762)	(6,313)
Receivables, net	\$ 872,843	\$ 855,535

We securitize certain trade receivables in transactions that are accounted for as secured borrowings (Securitization Program). We maintain a subordinated interest in a portion of the pool of trade receivables that are securitized. The retained interest, which is included in Receivables in the Consolidated Condensed Balance Sheets, is recorded at fair value, which approximates the total amount of the designated pool of accounts receivable. Refer to Note 9, Indebtedness, for additional disclosures related to the Securitization Program.

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:

	January 2, 2021	October 3, 2020
Raw materials and purchased parts	\$ 245,646	\$ 235,906
Work in progress	334,959	327,990
Finished goods	66,022	59,147
Inventories, net	\$ 646,627	\$ 623,043

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 January 2, 2021 and October 3, 2020.

Note 6 - Property, Plant and Equipment

Property, plant and equipment consists of:

	January 2, 2021	October 3, 2020
Land	\$ 39,015	\$ 37,463
Buildings and improvements	487,214	476,659
Machinery and equipment	795,206	782,194
Computer equipment and software	164,402	158,683
Property, plant and equipment, at cost	1,485,837	1,454,999
Less accumulated depreciation and amortization	(876,479)	(854,501)
Property, plant and equipment, net	\$ 609,358	\$ 600,498

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 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 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	
	January 2, 2021	December 28, 2019
Operating lease cost	\$ 6,884	\$ 6,160
Finance lease cost:		
Amortization of right-of-use assets	\$ 494	\$ 76
Interest on lease liabilities	161	48
Total finance lease cost	\$ 655	\$ 124

Supplemental cash flow information related to leases was as follows:

	Three Months Ended	
	January 2, 2021	December 28, 2019
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flow for operating leases	\$ 7,058	\$ 6,027
Operating cash flow for finance leases	161	48
Financing cash flow for finance leases	488	88
Assets obtained in exchange for lease obligations:		
Operating leases	3,081	\$ 568
Finance leases	—	—

Supplemental balance sheet information related to leases was as follows:

	January 2, 2021	October 3, 2020
Operating Leases		
Operating lease right-of-use assets	\$ 68,772	\$ 68,393
Accrued liabilities and other	\$ 15,117	\$ 15,034
Other long-term liabilities	61,066	60,837
Total operating lease liabilities	\$ 76,183	\$ 75,871
Finance Leases		
Property, plant, and equipment, at cost	\$ 14,169	\$ 13,930
Accumulated depreciation	(2,061)	(1,497)
Property, plant, and equipment, net	\$ 12,108	\$ 12,433
Accrued liabilities and other	\$ 2,264	\$ 2,199
Other long-term liabilities	10,998	11,392
Total finance lease liabilities	\$ 13,262	\$ 13,591
Weighted average remaining lease term in years		
Operating leases	7.5	7.4
Finance leases	12.2	12.3
Weighted average discount rate		
Operating leases	4.7 %	4.7 %
Finance leases	4.9 %	4.8 %

Maturities of lease liabilities were as follows:

	January 2, 2021	
	Operating Leases	Finance Leases
2021	\$ 13,161	\$ 1,886
2022	16,956	2,288
2023	13,191	2,174
2024	9,584	2,109
2025	7,913	1,855
Thereafter	37,365	8,695
Total lease payments	98,170	19,007
Less: imputed interest	(21,987)	(5,745)
Total	\$ 76,183	\$ 13,262

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 3, 2020	\$ 179,521	\$ 261,726	\$ 380,609	\$ 821,856
Acquisition	32,608	—	—	32,608
Divestiture	(312)	—	—	(312)
Foreign currency translation	2,912	47	9,255	12,214
Balance at January 2, 2021	\$ 214,729	\$ 261,773	\$ 389,864	\$ 866,366

Goodwill in our Space and Defense Controls segment is net of a \$4,800 accumulated impairment loss at January 2, 2021. Goodwill in our Medical Devices reporting unit, included in our Industrial Systems segment, is net of a \$38,200 accumulated impairment loss at January 2, 2021.

The components of intangible assets are as follows:

	Weighted-Average Life (years)	January 2, 2021		October 3, 2020	
		Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
Customer-related	11	\$ 166,380	\$ (106,303)	\$ 140,048	\$ (103,733)
Technology-related	9	84,568	(56,241)	77,060	(54,833)
Program-related	23	40,444	(18,475)	38,963	(17,340)
Marketing-related	8	28,490	(21,431)	25,581	(20,981)
Other	10	4,553	(4,268)	4,134	(3,853)
Intangible assets	12	\$ 324,435	\$ (206,718)	\$ 285,786	\$ (200,740)

Substantially 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	
	January 2, 2021	December 28, 2019
Acquired intangible asset amortization	\$ 2,833	\$ 3,223

Based on acquired intangible assets recorded at January 2, 2021, amortization is estimated to be approximately:

	2021	2022	2023	2024	2025
Estimated future amortization of acquired intangible assets	\$ 13,400	\$ 13,600	\$ 12,700	\$ 12,200	\$ 11,200

Note 9 - 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:

	January 2, 2021	October 3, 2020
U.S. revolving credit facility	\$ 399,817	\$ 362,136
SECT revolving credit facility	5,000	6,000
Senior notes 4.25%	500,000	500,000
Securitization program	66,600	69,000
Other long-term debt	3,769	1,661
Senior debt	975,186	938,797
Less deferred debt issuance cost	(7,960)	(8,465)
Less current installments	(69,148)	(350)
Long-term debt	\$ 898,078	\$ 929,982

Our U.S. revolving credit facility, which matures on October 15, 2024 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. 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, 2022. 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.

On December 13, 2019, we completed the sale of \$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, which commenced on June 15, 2020. 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. The aggregate net proceeds were used to repay indebtedness under our U.S. revolving credit facility, thereby increasing the unused portion of our U.S. revolving credit facility.

On December 13, 2019, we issued a notice of redemption to the holders of our 5.25% senior notes due on December 1, 2022, to redeem and retire all of the outstanding notes. The notes were redeemed on January 13, 2020 at 101.313% pursuant to an early redemption right. We redeemed the aggregate principal amount of \$300,000 using proceeds drawn from our U.S. revolving credit facility. The associated loss on the redemption includes \$3,939 of call premium paid to external bondholders.

The Securitization Program matures on October 29, 2021 and effectively increases our borrowing capacity by up to \$80,000. Under the Securitization Program, we sell certain trade receivables and related rights to an affiliate, which in turn sells an undivided variable percentage ownership interest in the trade receivables to a financial institution, while maintaining a subordinated interest in a portion of the pool of trade receivables. Interest for the Securitization Program is based on 30-day LIBOR plus an applicable margin. A commitment fee is also charged based on a percentage of the unused amounts available and is not material. The agreement governing the Securitization Program contains restrictions and covenants which include limitations on the making of certain restricted payments, creation of certain liens, and certain corporate acts such as mergers, consolidations and sale of substantially all assets. The Securitization Program has a minimum borrowing requirement equal to the lesser of either 80% of our borrowing capacity or 100% of our borrowing base, which is a subset of the trade receivables sold under this agreement. As of January 2, 2021, our minimum borrowing requirement was \$53,280.

Note 10 - Other Accrued Liabilities

Other accrued liabilities consists of:

	January 2, 2021	October 3, 2020
Contract reserves	\$ 70,807	\$ 72,412
Employee benefits	61,699	40,734
Warranty accrual	29,338	27,707
Accrued income taxes	13,830	11,785
Other	59,166	67,850
Other accrued liabilities	\$ 234,840	\$ 220,488

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	
	January 2, 2021	December 28, 2019
Warranty accrual at beginning of period	\$ 27,707	\$ 28,061
Additions from acquisitions	990	542
Warranties issued during current period	4,064	3,843
Adjustments to pre-existing warranties	36	(181)
Reductions for settling warranties	(3,783)	(3,172)
Foreign currency translation	324	276
Warranty accrual at end of period	\$ 29,338	\$ 29,369

Note 11 - 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, the British pound and the Czech koruna, we had outstanding foreign currency forwards with notional amounts of \$28,357 at January 2, 2021. These contracts mature at various times through November 26, 2021.

We use forward currency contracts to hedge our net investment in certain foreign subsidiaries. As of January 2, 2021, 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 January 2, 2021, we had no outstanding interest rate swaps.

These 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 (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 2021 or 2020.

Derivatives not designated as hedging instruments

We also have foreign currency exposure on balances, primarily intercompany, that are denominated in foreign currencies 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 had foreign currency contracts with notional amounts of \$141,712 at January 2, 2021. 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 or 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	
		January 2, 2021	December 28, 2019
Statements of Earnings location			
Net gain			
Foreign currency contracts	Other	\$ 3,984	\$ 1,571

Summary of derivatives

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

		Balance Sheets location	January 2, 2021	October 3, 2020
Derivatives designated as hedging instruments:				
Foreign currency contracts	Other current assets		\$ 2,063	\$ 1,818
Foreign currency contracts	Other assets		—	169
	Total asset derivatives		\$ 2,063	\$ 1,987
Foreign currency contracts	Accrued liabilities and other		\$ 27	\$ 169
	Total liability derivatives		\$ 27	\$ 169
Derivatives not designated as hedging instruments:				
Foreign currency contracts	Other current assets		\$ 1,200	\$ 1,044
Foreign currency contracts	Accrued liabilities and other		\$ 163	\$ 245

Note 12 - 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.

	Balance Sheets location	January 2, 2021	October 3, 2020
Foreign currency contracts	Other current assets	\$ 3,263	\$ 2,862
Foreign currency contracts	Other assets	—	169
	Total assets	\$ 3,263	\$ 3,031
Foreign currency contracts	Accrued liabilities and other	\$ 190	\$ 414
	Total liabilities	\$ 190	\$ 414

Our only financial instrument for which the carrying value differs from its fair value is long-term debt. At January 2, 2021, the fair value of long-term debt was \$997,164 compared to its carrying value of \$975,186. 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 13 - Restructuring

Restructuring activity for severance and other costs is as follows:

	Aircraft Controls	Space and Defense Controls	Industrial Systems	Total
Balance at October 3, 2020	\$ 1,247	\$ —	\$ 9,095	\$ 10,342
Adjustments to provision		—	(564)	(564)
Cash payments - 2018 plan	—	—	(104)	(104)
Cash payments - 2020 plan	(190)	—	(1,168)	(1,358)
Foreign currency translation	—	—	183	183
Balance at January 2, 2021	\$ 1,057	\$ —	\$ 7,442	\$ 8,499

As of January 2, 2021, the restructuring accrual consists of \$5,945 for the 2020 plan and \$2,554 for the 2018 plan. Restructuring is expected to be paid within a year, except for portions classified as a long-term liabilities based on the nature of the reserve.

Note 14 - Employee Benefit Plans

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

	Three Months Ended	
	January 2, 2021	December 28, 2019
U.S. Plans		
Service cost	\$ 5,622	\$ 5,759
Interest cost	4,276	7,649
Expected return on plan assets	(7,636)	(11,021)
Amortization of prior service cost (credit)	—	33
Amortization of actuarial loss	3,430	6,329
Expense for U.S. defined benefit plans	\$ 5,692	\$ 8,749
Non-U.S. Plans		
Service cost	\$ 1,668	\$ 1,671
Interest cost	705	697
Expected return on plan assets	(1,143)	(1,139)
Amortization of prior service cost (credit)	(2)	—
Amortization of actuarial loss	1,387	1,216
Expense for non-U.S. defined benefit plans	\$ 2,615	\$ 2,445

Pension expense for our defined contribution plans consists of:

	Three Months Ended	
	January 2, 2021	December 28, 2019
U.S. defined contribution plans	\$ 8,573	\$ 5,398
Non-U.S. defined contribution plans	1,594	1,402
Total expense for defined contribution plans	\$ 10,167	\$ 6,800

Note 15 - Income Taxes

The effective tax rate for the three months ended January 2, 2021 and December 28, 2019 was 24.9% and 25.2%, respectively. The effective tax rate for the three months ended January 2, 2021 varies from what would be expected by applying the U.S. federal statutory tax rate of 21% to earnings before income taxes, primarily due to tax on earnings generated outside of the U.S.

Note 16 - Accumulated Other Comprehensive Income (Loss)

The changes in AOCIL, net of tax, by component for the three months ended January 2, 2021 are as follows:

	Accumulated foreign currency translation (1)	Accumulated retirement liability	Accumulated gain (loss) on derivatives	Total
AOCIL at October 3, 2020	\$ (102,994)	\$ (183,653)	\$ 1,194	\$ (285,453)
Other comprehensive income (loss) before reclassifications	33,497	(1,973)	501	32,025
Amounts reclassified from AOCIL	—	3,569	(403)	3,166
Other comprehensive income, net of tax	33,497	1,596	98	35,191
AOCIL at January 2, 2021	\$ (69,497)	\$ (182,057)	\$ 1,292	\$ (250,262)

- (1) Net gains and losses on net investment hedges are recorded as cumulative translation adjustments in AOCIL 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		
	January 2, 2021	December 28, 2019	
Retirement liability:			
Prior service cost (credit)	\$ (2)	\$ (32)	
Actuarial losses	4,689	7,394	
Reclassification from AOCIL into earnings (2)	4,687	7,362	
Tax effect	(1,118)	(1,762)	
Net reclassification from AOCIL into earnings	\$ 3,569	\$ 5,600	
Derivatives:			
Foreign currency contracts	Sales	\$ 28	\$ 2
Foreign currency contracts	Cost of sales	(557)	40
Interest rate swaps	Interest	—	(41)
Reclassification from AOCIL into earnings	(529)	1	
Tax effect	126	—	
Net reclassification from AOCIL into earnings	\$ (403)	\$ 1	

- (2) The reclassifications 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	
	January 2, 2021	December 28, 2019
Foreign currency contracts	\$ 631	\$ 1,794
Interest rate swaps	—	(4)
Net gain	631	1,790
Tax effect	(130)	(389)
Net deferral in AOCIL of derivatives	\$ 501	\$ 1,401

Note 17 - Stock Employee Compensation Trust and Supplemental Retirement Plan Trust

The Stock Employee Compensation Trust (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 Supplemental Retirement Plan (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 18 - Earnings per Share and Dividends

Basic and diluted weighted-average shares outstanding are as follows:

	Three Months Ended	
	January 2, 2021	December 28, 2019
Basic weighted-average shares outstanding	32,074,873	34,510,851
Dilutive effect of equity-based awards	162,339	276,553
Diluted weighted-average shares outstanding	32,237,212	34,787,404

For the three months ended January 2, 2021 and December 28, 2019, there were 91,918 and 34,635 common shares from equity-based awards, respectively, excluded from the calculation of diluted earnings per share as they would be anti-dilutive.

We declared and paid cash dividends of \$0.25 per share on our Class A and Class B common stock in the first quarters of 2021 and 2020.

Note 19 - Segment Information

Disaggregation of net sales by segment for the three months ended January 2, 2021 and December 28, 2019 are as follows:

Market Type	Three Months Ended	
	January 2, 2021	December 28, 2019
Net sales:		
Military	\$ 205,698	\$ 173,694
Commercial	81,076	166,260
Aircraft Controls	286,774	339,954
Space	77,811	62,740
Defense	110,351	123,500
Space and Defense Controls	188,162	186,240
Energy	28,644	29,939
Industrial Automation	95,231	106,831
Simulation and Test	20,126	28,468
Medical	65,017	63,411
Industrial Systems	209,018	228,649
Net sales	\$ 683,954	\$ 754,843

Customer Type	Three Months Ended	
	January 2, 2021	December 28, 2019
Net sales:		
Commercial	\$ 81,076	\$ 166,260
U.S. Government (including OEM)	156,677	132,209
Other	49,021	41,485
Aircraft Controls	286,774	339,954
Commercial	31,134	34,152
U.S. Government (including OEM)	138,172	134,687
Other	18,856	17,401
Space and Defense Controls	188,162	186,240
Commercial	201,953	220,519
U.S. Government (including OEM)	6,321	6,421
Other	744	1,709
Industrial Systems	209,018	228,649
Commercial	314,163	420,931
U.S. Government (including OEM)	301,170	273,317
Other	68,621	60,595
Net sales	\$ 683,954	\$ 754,843

Operating profit is net sales less cost of sales and other operating expenses, excluding interest expense, equity-based compensation 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, number of employees or profit. Operating profit by segment for the three months ended January 2, 2021 and December 28, 2019 and a reconciliation of segment operating profit to earnings before income taxes are as follows:

	Three Months Ended	
	January 2, 2021	December 28, 2019
Operating profit:		
Aircraft Controls	\$ 27,922	\$ 38,592
Space and Defense Controls	23,046	25,282
Industrial Systems	19,898	26,799
Total operating profit	70,866	90,673
Deductions from operating profit:		
Interest expense	8,420	10,232
Equity-based compensation expense	2,502	2,381
Non-service pension expense	920	3,601
Corporate and other expenses, net	8,653	7,555
Earnings before income taxes	\$ 50,371	\$ 66,904

Note 20 - Related Party Transactions

John Scannell, Moog's Chairman of the Board and Director and Chief Executive Officer, 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 January 2, 2021 and December 28, 2019 totaled \$3,429 and \$4,574, respectively. At January 2, 2021, we held outstanding leases with a total original cost of \$25,882. 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 9, Indebtedness.

Note 21 - 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 may still be significant effort required to complete the ultimate deliverable. Future variability in internal cost as well as 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 \$39,839 of standby letters of credit issued to third parties on our behalf at January 2, 2021.

Note 22 - Subsequent Event

On January 28, 2021, the Board of Directors declared a \$0.25 per share quarterly dividend payable on issued and outstanding shares of our Class A and Class B common stock on March 1, 2021 to shareholders of record at the close of business on February 12, 2021.

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 3, 2020. All references to years in this Management's Discussion and Analysis of Financial Condition and Results of Operations are to fiscal years and 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, 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.
- Commercial space market - satellite positioning controls and thrust vector controls for space launch vehicles.

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, Czech Republic, Italy, Costa Rica, China, Netherlands, Luxembourg, Japan, Canada, India and Lithuania.

Under ASC 606, 63% of revenue was recognized over time for the quarter ended January 2, 2021, 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 January 2, 2021, 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 dominant 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 fundamental long-term strategies to achieve our goals center around talent, lean and innovation and include:

- a strong leadership team that has positioned the Company for growth,
- utilizing our global capabilities and strong engineering heritage to innovate,
- maintaining our technological excellence by solving our customers' most demanding technical problems in applications "When Performance Really Matters®,"
- continuing to invest in talent development to strengthen employee performance, and
- maximizing customer value by implementing lean enterprise principles.

These activities will help us achieve our financial objective of increasing shareholder value with sustainable competitive advantages across our segments. In doing so, we expect to maintain a balanced, diversified portfolio in terms of markets served, product applications, customer base and geographic presence.

We focus on improving 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. Our activities have included strategic acquisitions, share buybacks and dividend payments. As we progress in the current COVID-19 environment, we believe we are well positioned to invest in our business and therefore have returned to a balanced capital deployment strategy. We will invest in our operations and explore opportunities to make strategic acquisitions and return capital to shareholders.

Acquisitions, Divestitures and Equity Method Investments

All of our acquisitions are accounted for under the purchase method and, accordingly, the operating results for the acquired companies are included in the Consolidated Condensed Statements of Earnings from the respective dates of acquisition. Under purchase accounting, we record assets and liabilities at fair value and such amounts are reflected in the respective captions on the Consolidated Condensed Balance Sheets. The purchase price described for each acquisition below is net of any cash acquired, includes debt issued or assumed and the fair value of contingent consideration.

On December 18, 2020, we acquired Genesys Aerosystems Group, Inc. (Genesys), headquartered in Mineral Wells, Texas for a purchase price of \$78 million, net of acquired cash. Genesys designs and manufactures a full suite of electronic flight instrument systems and autopilot solutions. 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.

In the first quarter of 2021, we sold a non-core business in our Aircraft Controls segment for \$2 million in net consideration and recorded a minimal loss in other income.

On November 28, 2019, we acquired Gesellschaft für Antriebstechnik mbH and GAT Inc. (GAT), headquartered in Geisenheim, Germany for a purchase price of \$54 million, net of acquired cash. GAT designs and manufactures high-end fluid rotating unions and slip rings. This operation is included in our Industrial Systems segment.

In the first quarter of 2020, we sold a non-core business in our Industrial Systems segment for \$2 million in net consideration and recorded a minimal gain in other income.

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 of the Consolidated Condensed Financial Statements included in Item 1, Financial Statements of this report for further information regarding Financial Accounting Standards Board issued Accounting Standards Updates ("ASU").

COVID-19 IMPACTS ON OUR BUSINESS

The spread of the COVID-19 outbreak has disrupted businesses on a global scale. On March 11, 2020, the World Health Organization classified the outbreak as a pandemic. As we entered this crisis, the Company established two clear priorities: first and foremost the health and safety of our employees and their families, and second, continuing to meet the needs of our customers and secure the financial well-being of the Company. Substantially all of our operations and production activities have, to-date, remained operational. Many are considered essential and are exempt from closure directives. However, such directives could change at any time. We have implemented changes in our work practices maintaining a safe working environment for production employees at our facilities, while enabling other employees to productively work from home. We will continue to monitor the situation, assessing further possible implications on our operations, supply chain, liquidity, cash flow and customer orders, and will take action in an effort to mitigate any adverse consequences. We believe that our existing financial arrangements, along with our actions to mitigate the business pressures we are facing, will be sufficient to meet our operating needs over the short-term. We have available borrowings under short and long-term arrangements that could provide relief should the situation become more stressed.

Recognizing the unprecedented nature, scope and continued uncertainty associated with this global health crisis, the duration and extent of the ongoing impact cannot be reasonably estimated at this time. Our businesses are facing varying levels of pressure depending on the markets they serve. As such, we have suspended our practice of providing detailed guidance for fiscal 2021. However, we expect that COVID-19 will be with us for all of fiscal 2021, and as such, our factories will continue operating with the current work practices and that the majority of our office staff will continue to work remotely. We believe our defense, space and medical markets will remain strong; however, our medical market could soften as the initial surge of demand during the beginning of COVID-19 does not repeat. We do not expect any recovery in our industrial markets from the level of the second half of fiscal 2020. Also, we are working to the production schedules of our major commercial aerospace OEM customers, while recognizing that there remains considerable uncertainty in their outlooks. Additionally, we believe we may see a modest growth in commercial aftermarket demand in the second half of 2021.

CONSOLIDATED RESULTS OF OPERATIONS

(dollars and shares in millions, except per share data)	Three Months Ended			
	January 2, 2021	December 28, 2019	\$ Variance	% Variance
Net sales	\$ 684	\$ 755	\$ (71)	(9%)
Gross margin	27.7 %	28.0 %		
Research and development expenses	\$ 28	\$ 28	\$ —	(1%)
Selling, general and administrative expenses as a percentage of sales	14.6 %	13.0 %		
Interest expense	\$ 8	\$ 10	\$ (2)	(18%)
Other	\$ 3	\$ 8	\$ (4)	(57%)
Effective tax rate	24.9 %	25.2 %		
Net earnings	\$ 38	\$ 50	\$ (12)	(24%)
Diluted earnings per share	\$ 1.17	\$ 1.44	\$ (0.27)	(19%)
Twelve-month backlog	\$ 1,898	\$ 1,670	\$ 228	14%

Net sales decreased in the first quarter of 2021 compared to the first quarter of 2020 as the impacts of the global COVID-19 pandemic adversely affected our commercial aircraft programs and our industrial automation products. These declines were partially offset by higher demand for our military aircraft programs and our space programs.

Gross margin decreased in the first quarter of 2021 compared to the first quarter of 2020. As a result of the macro-economic conditions from the COVID-19 pandemic, facilities in our Aircraft Controls and Industrial Systems segments were under-utilized due to significantly lower sales volumes, which negatively impacted gross margin.

Selling, general and administrative expenses as a percentage of sales increased in the first quarter of 2021 compared to the first quarter of 2020, as we could not decrease our cost structure at the same rate as our sales decline. Additionally, in the first quarter of 2020, we benefited from favorable timing of administrative expenses which did not repeat in the first quarter of 2021. However, the implementation of cost containment actions in response to the COVID-19 pandemic helped to reduce expenses, primarily in Space and Defense Controls and in Industrial Systems.

Other expense in 2020 includes a \$4 million call premium as we redeemed our \$300 million aggregate principal 5.25% senior notes.

The change in twelve-month backlog at January 2, 2021 compared with December 28, 2019 was driven by increases in our defense and space markets. Backlog increased in Aircraft Controls due to additional military development programs and due to the production ramp and associated orders for the F-35 program. Backlog also increased in Space and Defense Controls supporting the expected incremental sales for launch vehicles and satellite programs. These increases were partially offset by our commercial aircraft customers' responses to the COVID-19 pandemic as we have lower orders across all of our OEM programs.

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 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 19 of the Notes to Consolidated Condensed Financial Statements included in this report.

Aircraft Controls

(dollars in millions)	Three Months Ended			
	January 2, 2021	December 28, 2019	\$ Variance	% Variance
Net sales - military aircraft	\$ 206	\$ 174	\$ 32	18%
Net sales - commercial aircraft	81	166	(85)	(51%)
	\$ 287	\$ 340	\$ (53)	(16%)
Operating profit	\$ 28	\$ 39	\$ (11)	(28%)
Operating margin	9.7 %	11.4 %		

Aircraft Controls' net sales decreased in the first quarter of 2021 compared to first quarter of 2020. The impacts of the global COVID-19 pandemic adversely affected our commercial OEM and aftermarket programs, but were partially offset by higher demand for our military OEM and aftermarket programs.

Across our commercial aircraft programs, the COVID-19 pandemic greatly reduced airline traffic and orders for new aircraft while, concurrently, our airframe customers continued to reduce their production forecasts and burn down their inventory levels. These factors started in the second half of our fiscal 2020. In the first quarter of 2021 compared to the first quarter of 2020, our sales declined \$75 million across our commercial OEM programs and \$11 million across our commercial aftermarket programs. Partially offsetting these declines in 2021 compared to 2020 was a \$31 million sales increase across our military OEM programs. Higher F-35 activity as the active fleet grew increased OEM sales \$17 million. Additionally, work on funded development programs increased sales \$11 million and sales for foreign military programs increased \$7 million when compared to the first quarter of 2020.

Operating margin decreased in the first quarter of 2021 compared to the first quarter of 2020 due mostly to the dramatic decline in sales in our commercial aircraft market. In addition, higher operating costs further reduced operating margins, offsetting the incremental margin associated with higher levels of military sales.

Space and Defense Controls

	Three Months Ended			
(dollars in millions)	January 2, 2021	December 28, 2019	\$ Variance	% Variance
Net sales	\$ 188	\$ 186	\$ 2	1%
Operating profit	\$ 23	\$ 25	\$ (2)	(9%)
Operating margin	12.2 %	13.6 %		

Space and Defense Controls' net sales were relatively unchanged in the first quarter of 2021 compared to the first quarter of 2020, as growth in our space market was mostly offset by declines in our defense market.

Across our space programs, we are benefiting from increased government spending on military applications and civil missions. Sales in our space market increased \$15 million in the first quarter of 2021 when compared to the first quarter of 2020. Sales for launch vehicle programs increased \$13 million due to higher NASA activity for the Space Launch System and higher amounts of development work. Sales also increased \$5 million for integrated space vehicles. Within our defense market, sales decreased \$13 million. Sales for missile steering systems decreased \$8 million due to delays across production programs. Also, security application sales declined \$7 million as COVID-19 pandemic restrictions delayed on-site installations.

Operating margin decreased in the first quarter of 2021 compared to the first quarter of 2020 due primarily to an unfavorable sales mix, as we have higher amounts of development work coupled with lower amounts of defense-related production work.

Industrial Systems

	Three Months Ended			
(dollars in millions)	January 2, 2021	December 28, 2019	\$ Variance	% Variance
Net sales	\$ 209	\$ 229	\$ (20)	(9%)
Operating profit	\$ 20	\$ 27	\$ (7)	(26%)
Operating margin	9.5 %	11.7 %		

The decline in Industrial Systems' net sales in the first quarter of 2021 compared to the first quarter of 2020 was driven by macroeconomic factors on our legacy industrial products.

The COVID-19 pandemic, and the associated macroeconomic slowdown and reduced capital investments by our customers, have created productivity and demand challenges. Additionally, with the decline of the global airline market, demand for flight simulation products has weakened. These factors started in the second half of our fiscal 2020. In the first quarter of 2021 compared to the first quarter of 2020, sales declined \$12 million in our industrial automation market and \$8 million in our simulation and test market. Modestly lower sales in our energy market for components used in exploration applications offset a slight sales growth in our medical markets.

Operating margin decreased in the first quarter of 2021 compared to the first quarter of 2020 due mostly to the dramatic sales decline in our industrial automation and simulation and test markets. In addition, factory inefficiencies due to the COVID-19 pandemic across our global footprint further depressed operating margin in the first quarter of 2021 compared to the first quarter of 2020.

FINANCIAL CONDITION AND LIQUIDITY

(dollars in millions)	Three Months Ended		
	January 2, 2021	December 28, 2019	\$ Variance
Net cash provided (used) by:			
Operating activities	\$ 94	\$ 42	\$ 52
Investing activities	(96)	(85)	(12)
Financing activities	13	76	(63)

Our available borrowing capacity and our cash flow from operations have provided us with the financial resources needed to make organic investments, fund acquisitive growth and return capital to shareholders.

At January 2, 2021, our cash balances were \$98 million, which were primarily held outside of the U.S. Cash flow from our U.S. operations, together with borrowings on our credit facility, fund on-going activities, debt service requirements and future growth investments.

Operating activities

Net cash provided by operating activities increased in the first quarter of 2021 compared to the first quarter of 2020 as cash from working capital offset \$12 million of lower earnings. In the first quarter of 2021, receivables activity provided \$24 million more cash, driven primarily by the continued strong cash receipts associated with U.S. government defense contracts. Also, accounts payable used \$21 million less cash than a year ago, as we have lower amounts of vendor payments. Additionally, cash used by inventory improved \$9 million, primarily in our Space and Defense Controls and Aircraft Controls segments.

Investing activities

Net cash used by investing activities in the first quarter of 2021 included \$78 million for our acquisition of Genesys and \$20 million for capital expenditures.

Net cash used by investing activities in the first quarter of 2020 included \$54 million for our acquisition of GAT and \$27 million for capital expenditures.

Financing activities

Net cash provided by financing activities in the first quarter of 2021 included \$34 million of net proceeds on our credit facility. Additionally, financing activities in the first quarter of 2021 included \$11 million to fund our stock repurchase program and \$8 million of cash dividends.

Net cash provided by financing activities in the first quarter of 2020 included the net proceeds of issuing our \$500 million aggregate principal 4.25% senior notes, which were used to repay a portion of our outstanding borrowings. Additionally, financing activities in the first quarter of 2020 included \$57 million to fund our stock repurchase program and \$9 million of cash dividends.

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 results of operations or financial condition.

Contractual Obligations and Commercial Commitments

Our contractual obligations and commercial commitments have not changed materially from the disclosures in our 2020 Annual Report on Form 10-K.

CAPITAL STRUCTURE AND RESOURCES

We maintain bank credit facilities to fund our short and long-term capital requirements, including acquisitions. From time to time, we also sell debt and equity securities to fund acquisitions or take advantage of favorable market conditions.

Our U.S. revolving credit facility, which matures on October 15, 2024 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 U.S. revolving credit facility had an outstanding balance of \$400 million at January 2, 2021. The weighted-average interest rate on primarily all of the outstanding credit facility borrowings was 1.66% and is based on LIBOR plus an applicable margin, which was 1.50% at January 2, 2021. The credit facility is secured by substantially all of our U.S. assets.

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. We are in compliance with all covenants. 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.

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. In recent years, 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.

The SECT has a revolving credit facility with a borrowing capacity of \$35 million, maturing on July 26, 2022. Interest was 2.27% as of January 2, 2021 and is based on LIBOR plus a margin of 2.13%. As of January 2, 2021, there was \$5 million of outstanding borrowings.

On December 13, 2019, we completed the sale of \$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, which commenced on June 15, 2020. 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. The aggregate net proceeds were used to repay indebtedness under our U.S. bank facility, thereby increasing the unused portion of our U.S. revolving credit facility.

On December 13, 2019, we issued a notice of redemption to the holders of our 5.25% senior notes due on December 1, 2022, to redeem and retire all of the outstanding notes. The notes were redeemed on January 13, 2020 at 101.313%, pursuant to an early redemption right. We redeemed the aggregate principal amount of \$300 million using proceeds drawn from our U.S. revolving credit facility. The associated loss on the redemption includes \$4 million of call premium paid to external bondholders.

We have a trade receivables securitization facility (the "Securitization Program") that matures on October 29, 2021. The Securitization Program provides up to \$80 million of borrowing capacity and lowers our cost to borrow funds as compared to the U.S. revolving credit facility. Under the Securitization Program, we sell certain trade receivables and related rights to an affiliate, which in turn sells an undivided variable percentage ownership interest in the trade receivables to a financial institution, while maintaining a subordinated interest in a portion of the pool of trade receivables. We had an outstanding balance of \$67 million at January 2, 2021. The Securitization Program has a minimum borrowing requirement, which was \$53 million at January 2, 2021. Interest on the secured borrowings under the Securitization Program was 1.02% at January 2, 2021 and is based on 30-day LIBOR plus an applicable margin.

At January 2, 2021, we had \$703 million of unused capacity, including \$660 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 \$474 million as of January 2, 2021.

Net debt to capitalization was 40% at January 2, 2021 and October 3, 2020, respectively.

We declared and paid cash dividends of \$0.25 per share on our Class A and Class B common stock in the first quarter of 2021.

The Board of Directors authorized a share repurchase program. This program was amended from time to time to authorize additional repurchases that includes both Class A and Class B common stock, and allowed us to buy up to an aggregate 13 million common shares. Under this program, we purchased approximately 13 million shares for \$899 million.

On November 20, 2020, the Board of Directors authorized a share repurchase program to replace the existing share repurchase program. This program authorizes repurchases that includes both Class A and Class B common stock, and allows us to buy up to an aggregate 3 million common shares. There have been no purchases under this program as of January 2, 2021.

As we progress in the current COVID-19 environment, we believe we are well positioned to invest in our business and we have returned to a balanced capital deployment strategy. We will invest in our operations and explore opportunities to make strategic acquisitions and return capital to shareholders.

ECONOMIC CONDITIONS AND MARKET TRENDS

We operate within the aerospace and defense and industrial markets. Our businesses are facing varying levels of pressure from the COVID-19 pandemic.

Within our aerospace and defense markets, our defense and space businesses represent approximately half of our 2020 sales. We expect these businesses may face modest supply chain and production level risks, as they are more directly affected by program funding levels which, to-date, are stable. However, our commercial aircraft market, which represents less than 20% of our 2020 sales, will continue to face the greatest pressures due to the dramatic reductions in air travel.

Within our industrial markets, our industrial automation, simulation and test and energy niche markets, which represents less than 25% of our 2020 sales, will continue to face productivity and demand challenges from the macroeconomic slowdown and reduced capital investments. Our medical business, which represents approximately 10% of our 2020 sales, has seen a surge in demand for our medical applications essential in the fight against the pandemic. As this surge in demand wanes, we expect to return to normal growth rates in the future.

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, which to-date, have not been impacted by the COVID-19 pandemic. 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 predictability as to capacity needs and future revenues. We maintain positions on numerous high priority programs, including the Lockheed Martin F-35 Lightning II, FA-18E/F Super Hornet 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 debate and could be reduced if the pandemic continues.

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 lead to large production backlogs for Boeing and Airbus. However, the impact of the COVID-19 pandemic has drastically reduced air traffic as travel restrictions and social distancing measures were implemented to help control the spread of the virus. The reduced air traffic has applied financial pressures on airlines, which have in turn dramatically reduced flight hours and delayed the purchases of new aircraft in order to preserve cash and liquidity. Given the uncertain length of this pandemic and associated restrictions to travel long distances, the commercial market may shift away from wide-body aircraft. Additionally, given the abruptly stalled global economies and social pauses, global oil production is now over-supplied, creating drastic reductions in the prices of oil. The lower prices for jet fuel mitigates the advantage of new, more fuel-efficient aircraft that created record backlogs for the OEMs. Furthermore, as companies and employees become accustomed to working remotely, business travel and the associated flight hours may not reach the pre-crisis levels. As such, we believe Boeing and Airbus will continue to directionally match their production rates with the reduced air traffic volume, which will lower their demand for our flight control systems. We believe the commercial OEM market will face these pressures for a prolonged period of time.

The commercial aftermarket is driven by usage and age of the existing aircraft fleet for passenger and cargo aircraft, which drives the need for maintenance and repairs. Given the dramatic reductions in flight hours and the airlines' cash preservation measures due to the impacts of COVID-19, we believe the demand volume for our maintenance services and spare parts will remain at depressed levels over the short-term. Also, with fewer expected new aircraft deliveries, we would see lower future initial provisioning and spares sales. However, when domestic and international travel begin to recover, we expect a faster recovery in this market as compared to the commercial OEM market.

The space market is comprised of four customer markets: the civil market, the 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 department of defense market is driven by governmental-authorized levels of funding for satellite communications, as well as funding for hypersonic defense technologies. 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. Similar to the defense market, funding for these four markets have not been impacted by the COVID-19 pandemic to-date.

Industrial

Within industrial, we serve two end markets: industrial, consisting of industrial automation products, simulation and test products and energy generation and exploration products; and medical.

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 and technology upgrades. As governments around the world implement increasingly stringent measures to help control the spread of the COVID-19 virus, the subsequent economic downturn has constrained capital investment and slowed investments in product innovation and upgrades. These unfavorable economic conditions have affected, and could for an extended period of time, affect our supply chain, productivity and customer demand as our customers are also impacted by international and domestic economic conditions.

Our simulation and test products operate in markets that are largely affected by these same factors and investment challenges stemming from the COVID-19 pandemic. Reduced air travel and the subsequent reduction in new commercial aircraft have reduced the need for flight simulator training, for which we supply motion control products. Similarly, the recent lower capital spend has reduced the need for our automotive and material testing applications.

Our energy generation and exploration products operate in a market that is affected 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. However, the COVID-19 pandemic has led to reduced oil prices, which reduces the economic feasibility for these investments and explorations.

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. The outbreak of the COVID-19 virus has created unprecedented demand for medical equipment and has shifted the way hospitals optimize their capacity. Our medical components products are critical motion control components for life saving medical equipment, including ventilators, oxygen concentrators and continuous positive airway pressure (CPAP) machines, among others. The COVID-19 pandemic has increased the demand for ventilators, of which our products are a key component of that industry's supply chain. Additionally, our medical devices products including infusion and enteral feeding pumps, and their corresponding disposable sets, are used primarily in the home healthcare environment. Since the COVID-19 pandemic has altered the way hospitals provide care by asking non-critical patients to recuperate at home, our medical devices products have seen an increase in orders. However, we don't expect this surge in demand to continue as our customers refill and resize 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 2020 sales were denominated in foreign currencies. During the first three months of 2021, average foreign currency rates generally strengthened against the U.S. dollar compared to 2020. The translation of the results of our foreign subsidiaries into U.S. dollars increased sales by \$6 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 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. These important factors, risks and uncertainties include:

COVID-19 Pandemic Risks

- We face various risks related to health pandemics such as the global COVID-19 pandemic, which may have material adverse consequences on our operations, financial position, cash flows, and those of our customers and suppliers.

Strategic Risks

- We operate in highly competitive markets with competitors who may have greater resources than we possess;
- Our new products and technology research and development efforts are substantial and may not be successful which could reduce our sales and earnings;
- Our inability to adequately enforce and protect our intellectual property or defend against assertions of infringement could prevent or restrict our ability to compete; 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 as a customer or a significant reduction in sales to The Boeing 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

- Our business operations may be adversely affected by information systems interruptions, intrusions or new software implementations;
- 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;
- 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; 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 could limit our operational and financial flexibility;
- The phase out of LIBOR may negatively impact our debt agreements and financial position, results of operations and liquidity;
- 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 political and currency risks and adverse changes in local legal and regulatory environments;
- 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; and
- Our operations are subject to environmental laws, and complying with those laws may cause us to incur significant costs.

General Risks

- The United Kingdom's decision to exit the European Union may result in short-term and long-term adverse impacts on our results of operations;
- Escalating tariffs, restrictions on imports or other trade barriers between the United States and various countries may impact our results of operations;
- 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.

These factors are not exhaustive. New factors, risks and uncertainties may emerge from time to time 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. We disclaim any obligation to update the forward-looking statements made in this report.

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 3, 2020 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 the end of the period covered by this report, 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 3, 2020 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 January 2, 2021.

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 4, 2020 - October 31, 2020	161,991	\$ 65.33	155,963	10,228
November 1, 2020 - November 28, 2020	7,297	74.39	—	3,000,000
November 29, 2020 - January 2, 2021	4,691	83.28	—	3,000,000
Total	173,979	\$ 66.19	155,963	3,000,000

(1) Reflects purchases by the Moog Inc. Stock Employee Compensation Trust Agreement ("SECT") of shares of Class B common stock from the Employee Stock Purchase Plan ("ESPP"), the Moog Inc. Retirement Savings Plan ("RSP") and from equity-based compensation award recipients under right of first refusal terms at average prices as follows: 2,490 shares at \$63.27 in October; 1,675 shares at \$77.11 in November and 4,378 shares at \$84.08 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: 3,538 Class A shares at \$65.67; 717 Class A shares at \$73.50 and 4,905 Class B shares at \$73.60; 313 Class B shares at \$72.04.

(3) The Board of Directors has authorized a share repurchase program. The previous program authorized repurchases up to an aggregate 13 million common shares. The program permitted the purchase of 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 68,320 Class A shares at an average price of \$63.72 and 87,643 Class B shares at an average price of \$66.63. On November 20, 2020 the Board of Directors approved a new share repurchase program, replacing its existing program. The new program authorizes repurchases 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.

Item 6. Exhibits.

(a) Exhibits

[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

In accordance with Rule 406T of Regulation S-T, the XBRL related information in Exhibit 101 to this Quarterly Report on Form 10-Q shall not be deemed to be “filed” for purposes of Section 18 of the Exchange Act, or otherwise subject to the liability of that section and shall not be part of any registration or other document filed under the Securities Act or the Exchange Act, except as shall be expressly set forth by specific reference in such filing.

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: January 29, 2021

By /s/ John R. Scannell

John R. Scannell
Chairman of the Board and Director
Chief Executive Officer
(Principal Executive Officer)

Date: January 29, 2021

By /s/ Jennifer Walter

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

Date: January 29, 2021

By /s/ Michael J. Swope

Michael J. Swope
Controller (Principal Accounting Officer)

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, John R. Scannell, 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 January 29, 2021

/s/ John R. Scannell
John R. Scannell
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 January 29, 2021

/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 January 2, 2021 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: January 29, 2021

/s/ John R. Scannell
John R. Scannell
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.