

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

**FORM 11-K**

(Mark One)

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

**For the fiscal year ended December 30, 2017**

**OR**

☐ **TRANSITION REPORT PURSUANT TO SECTION 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

**For the transition period from            to**

**Commission file number 1-4801**

**A. Full title of the plan and the address of the plan, if different from that of the issuer named below:**

**BARNES GROUP INC. RETIREMENT SAVINGS PLAN**

**B. Name of issuer of the securities held pursuant to the plan and the address of its principal executive office:**

**Barnes Group Inc.  
123 Main Street  
Bristol, Connecticut 06010**

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Barnes Group Inc. Retirement Savings Plan  
Financial Statements and Supplemental Information  
Years ended December 30, 2017 and 2016  
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## Report of Independent Registered Public Accounting Firm

To the Plan Administrator and Plan Participants of the  
Barnes Group Inc. Retirement Savings Plan  
Bristol, Connecticut

### Opinion on the Financial Statements

We have audited the accompanying statements of net assets available for benefits of the Barnes Group Inc. Retirement Savings Plan (the Plan) as of December 30, 2017 and 2016, and the related statement of changes in net assets available for benefits for the years then ended, and the related notes and schedules (collectively referred to as the financial statements). In our opinion, the financial statements present fairly, in all material respects, the net assets available for benefits of the Barnes Group Inc. Retirement Savings Plan as of December 30, 2017 and 2016, and the changes in net assets available for benefits for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

### Basis for Opinion

These financial statements are the responsibility of the Plan's management. Our responsibility is to express an opinion on the Plan's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Plan in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Plan is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting, but not for the purpose of expressing an opinion on the effectiveness of the Plan's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

### Supplemental Information

The supplemental information contained in the accompanying schedules of assets (held at year end) as of December 30, 2017, and reportable transactions for the year then ended has been subjected to audit procedures performed in conjunction with the audit of the Plan's financial statements. The supplemental information is the responsibility of the Plan's management. Our audit procedures included determining whether the supplemental information reconciles to the financial statements or the underlying accounting and other records, as applicable, and performing procedures to test the completeness and accuracy of the information presented in the supplemental information. In forming our opinion on the supplemental information, we evaluated whether the supplemental information, including its form and content, is presented in conformity with the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974. In our opinion, the supplemental information is fairly stated, in all material respects, in relation to the financial statements as a whole.

/s/ Fiondella, Milone & LaSaracina LLP

We have served as the Company's auditor since 2007.  
Glastonbury, CT  
June 18, 2018

Barnes Group Inc. Retirement Savings Plan  
Statements of Net Assets Available for Benefits

	December 30,	
	2017	2016
<b>Assets</b>		
Cash and cash equivalents	\$ 3,739,226	\$ 3,142,621
Investments at fair value:		
Mutual funds	195,858,841	159,745,270
Managed income portfolio fund	44,214,583	50,521,242
Barnes Group Inc. common stock	71,138,257	58,138,532
Total investments at fair value	311,211,681	268,405,044
Receivables:		
Notes receivable from participants	4,340,780	4,310,775
Employer profit sharing contributions	3,193,010	2,524,643
Employer contributions	1,059,714	876,128
Total receivables	8,593,504	7,711,546
Net assets available for benefits	\$ 323,544,411	\$ 279,259,211

*See accompanying notes.*

Barnes Group Inc. Retirement Savings Plan  
Statements of Changes in Net Assets Available for Benefits

	Year Ended December 30,	
	2017	2016
<b>Additions</b>		
Investment income:		
Interest and dividend income	\$ 12,438,616	\$ 7,286,980
Net appreciation in fair value of investments	40,134,302	19,326,477
Total investment income	52,572,918	26,613,457
Contributions:		
Employer match	3,909,572	3,700,215
Participant	9,260,869	8,543,039
Rollover	3,304,029	845,777
Profit sharing	3,193,010	2,526,846
Total contributions	19,667,480	15,615,877
Interest on notes receivable from participants	171,906	174,921
Total additions	72,412,304	42,404,255
<b>Deductions</b>		
Benefit payments	28,090,206	24,981,183
Administrative expenses	36,898	67,416
Total deductions	28,127,104	25,048,599
Net increase in assets available for benefits	44,285,200	17,355,656
Net assets available for benefits:		
Beginning of year	279,259,211	261,903,555
End of year	\$ 323,544,411	\$ 279,259,211

*See accompanying notes.*

## Barnes Group Inc. Retirement Savings Plan

### Notes to Financial Statements

#### 1. Description of Plan

The following description of the Barnes Group Inc. (the "Company") Retirement Savings Plan (the "Plan") provides only general information. Participants should refer to the Plan document for a more complete description on the Plan's provisions.

##### General

The Plan is a defined contribution plan. Full-time salaried and non-union hourly United States employees of the Company are eligible to participate in the Plan. Members of collective bargaining units are not eligible to participate. Eligible employees may elect to enroll in the Plan immediately, however all newly eligible employees are automatically enrolled in the Plan sixty days following the date of hire.

##### Participant Accounts

Each participant's account is credited with (1) the participant's contribution and allocations of (2) the Company's contributions, if any, and (3) Plan earnings, and is charged with an allocation of administrative expenses. Allocations are based on participant earnings or account balances, as defined. Forfeited balances of terminated participants' nonvested accounts are used to reduce future Company contributions and offset administrative expenses of the Plan. The benefit to which a participant is entitled is the benefit that can be provided from the participant's account.

##### Investment Options

All investment programs are fully participant-directed. Participants may direct the investment of their contributions, the Company's discretionary matching contributions, retirement contributions, and profit sharing contributions, if any, into any of the Plan's available investment options.

##### Contributions

Subject to certain restrictions which may be applied to highly-compensated employees, participants may elect to make contributions to the Plan through payroll deductions of between 1% and 75% (in whole percentages) of their Plan compensation. In accordance with the Internal Revenue Code, participant pre-tax contributions could not exceed \$18,000 in 2017 and \$18,000 in 2016, with the exception of certain allowable catch-up contributions for participants who will be at least 50 by the end of the year. Such contributions may be made on a pre-tax or after-tax basis. After-tax contributions are not subject to matching Company contributions and the combined pre-tax and after-tax deduction cannot exceed 75% of Plan compensation (the after-tax portion of which cannot exceed 10% of Plan compensation). A participant may also elect to increase or reduce the amount of contributions at any time.

The Company completed the acquisition of certain businesses during 2017 and 2016, in which certain employees became eligible to be participants in the Plan. As a result, additions to Net Assets during 2017 and 2016 included participant rollovers of \$3,304,029 and \$845,777, respectively. A reclassification was made to the 2016 financial statement presentation to conform to the presentation of participant rollovers in 2017, however this reclassification had no impact or change on the previously reported change in net assets available for benefits. All profit sharing contributions are made by the Company. For all participating divisions, a minimum contribution is equal to 3.5% of each eligible employee's paid compensation which includes base wages, overtime, shift differential and commissions. Profit sharing contributions for the years ended December 30, 2017 and 2016 were \$3,193,010 and \$2,526,846, respectively.

The Company match is equal in value to 50% of the participants' pre-tax contribution up to 6% of their Plan compensation and may be invested in any of the Plan's investment alternatives. The Company matching contributions for the years ended December 30, 2017 and 2016 were \$2,849,858, and \$2,824,088, respectively.

The Company closed its U.S. salaried defined benefit pension plan to employees hired on or after January 1, 2013 with no impact to the benefits of existing participants. The Retirement Savings Plan was therefore amended and restated effective January 1, 2013 to incorporate a new retirement contribution for certain eligible participating division employees. Each participating division employee hired, rehired or reclassified by the Company from an ineligible to eligible participation category under the Plan on or after January 1, 2013 will be eligible to receive a Company contribution equal to 4% of their Plan compensation for each Plan year.

All retirement contributions are made by the Company. For all participating employees, a contribution equal to 4% of each eligible employee’s compensation which includes base wages, overtime, shift differential and commissions. Retirement contributions for the years ended December 30, 2017 and 2016 were \$1,059,714 and \$876,127, respectively.

**Benefits**

Upon a participant’s separation from service due to termination, death, disability or retirement, benefits may be distributed to him or her or his or her beneficiary (in the event of death) in a single lump-sum amount equal to the vested value of his or her account. Active participants may also withdraw funds from their accounts due to age or under certain hardship conditions.

**Notes Receivable from Participants**

Notes receivable from participants represent participant loans that are recorded at their unpaid principal balance plus any accrued but unpaid interest. Interest income on notes receivable from participants is recorded when it is earned. No allowances for credit losses have been recorded as of December 30, 2017 and 2016. If a participant ceases to make loan repayments and the Plan administrator deems the participant loan to be a distribution, the participant loan balance is reduced and a benefit payment is recorded.

Participants may borrow from their fund accounts a minimum of \$1,000 up to a maximum equal to the lesser of \$50,000 or 50% of their vested account balance, not including the profit sharing portion or the incremental discretionary retirement Company contribution of 4%. Loan transactions are treated as a transfer to (from) the investment fund from (to) the participant loans fund. Personal loan terms can be up to five years. The loans are collateralized by the balance in the participant’s account and bear a reasonable rate of interest as established by the Benefits Committee in a nondiscriminatory manner.

**Vesting**

A participant is 100% vested in the Company match following two completed years of service with the Company. Participants are always 100% vested with respect to their own contributions plus actual earnings thereon. In addition, Company matching contributions become 100% vested upon death, permanent disability or when the participant reaches age 55. Profit sharing or 4% retirement contribution become 100% vested upon death, permanent disability or when the participant reaches age 65.

Profit sharing vesting is as follows:

(1) For employees of participating divisions other than Bowman U.S.:

Period of Service	Vested and Nonforfeitable Percentage
Less than 1 year	0%
1 but less than 2 years	20%
2 but less than 3 years	40%
3 but less than 4 years	60%
4 but less than 5 years	80%
5 or more years	100%

(2) For employees of Bowman U.S.:

Period of Service	Vested and Nonforfeitable Percentage
Less than 5 years	0%
5 or more years	100%

Retirement contribution vesting is as follows:

<b>Period of Service</b>	<b>Vested and Nonforfeitable Percentage</b>
Less than 1 year	0%
1 but less than 2 years	20%
2 but less than 3 years	40%
3 but less than 4 years	60%
4 but less than 5 years	80%
5 or more years	100%

#### **Trustee**

Fidelity Management Trust Company ("Fidelity") is the trustee for all Plan assets. The Benefits Committee, appointed by the Board of Directors of the Company, is responsible for the general administration of the Plan.

#### **Plan Termination**

The Company presently intends to continue the Plan indefinitely; however, the Company's Board of Directors may terminate the Plan at any time. Upon termination of the Plan, all participants become fully vested in all Company contributions and earnings credited to their accounts as of the date of such termination.

## **2. Summary of Significant Accounting Policies**

#### **Basis of Accounting**

The financial statements have been prepared on the accrual basis of accounting in accordance with accounting principles generally accepted in the United States of America ("GAAP").

#### **Use of Estimates**

The preparation of financial statements in conformity with GAAP requires management to make estimates that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

#### **Risks and Uncertainties**

The Plan provides for various investment options in mutual funds, a managed income portfolio fund and Barnes Group Inc. common stock. These investments are exposed to various risks, such as interest rate, market and credit risks. Due to the level of risk associated with certain investment securities, it is at least reasonably possible that changes in the values of investment securities will occur in the near term and that such changes could materially affect participants' account balances and the amounts reported in the statements of net assets available for benefits.

#### **Investment Valuation and Income Recognition**

The Plan's mutual funds are stated at fair value, which is based on quoted market prices in an active market. The market value of mutual funds is based on the net asset value of shares held by the Plan at year-end. Purchases and sales of securities are recorded on the trade-date. Interest is recorded on the accrual basis and dividend income on the ex-dividend date.

The Plan's investment in the Managed Income Fund is accounted for in accordance with Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") 962, *Plan Accounting - Defined Contribution Pension Plans* (ASC 962). The Managed Income Fund has been reported using its net asset value ("NAV") which represents the fair value of the fund.

The fair value of investments in the Company's common stock is based upon quoted market prices.

The Plan presents, in the statements of changes in net assets available for benefits, the net appreciation (depreciation) in the fair value of investments (net of investment expenses), which consists of the realized and unrealized gains or losses on those investments.



## **Fair Value of Investments**

The Plan follows FASB ASC 820, *Fair Value Measurements and Disclosures* (ASC 820), for all financial assets and liabilities and nonfinancial assets and liabilities that are recognized or disclosed at fair value in the financial statements on a recurring basis. ASC 820 defines fair value, establishes a fair value hierarchy, and expands disclosures about fair value measurements.

ASC 820 defines fair value as the price that would be received upon sale of an asset or paid upon transfer of a liability in an orderly transaction between market participants at the measurement date and in the principal or most advantageous market for that asset or liability.

The fair value should be calculated based on assumptions that market participants would use in pricing the asset or liability, not on assumptions specific to the entity. In addition, the fair value of liabilities should include consideration of non-performance risk including the Plan's own credit risk.

In addition to defining fair value, ASC 820 expands the disclosure requirements around fair value and establishes a fair value hierarchy for valuation inputs. The hierarchy prioritizes the inputs into three levels based on the extent to which inputs used in measuring fair value are observable in the market. Each fair value measurement is reported in one of three levels which are determined by the lowest level input that is significant to the fair value measurement in its entirety.

These levels are:

Level 1 - Inputs are based upon unadjusted quoted prices for identical instruments traded in active markets.

Level 2 - Inputs are based upon quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active, and model-based valuation techniques for which all significant assumptions are observable in the market or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3 - Inputs are generally unobservable and typically reflect management's estimates of assumptions that market participants would use in pricing the asset or liability. The fair values are therefore determined using model-based valuation techniques that include option pricing models, discounted cash flow models, and similar techniques.

## **Payment of Benefits**

Benefits are recorded when paid.

## **Administrative Expenses**

The Plan provides that all expenses incurred in administering the Plan may be paid by the Plan or the Company. During 2017 and 2016, the Company elected to pay for all Plan administrative expenses other than certain record keeping fees, loan origination fees and redemption charges on certain funds.

## **Contributions**

Employee contributions are recorded in the period in which the employee payroll deductions are made.

## **3. Fair Value Measurements**

The following table summarizes the fair values and levels within the fair value hierarchy in which the fair value measurements fall for assets measured on a recurring basis as of December 30, 2017:

Description	Level 1	Level 2	Level 3	Total
<b>Investments:</b>				
Mutual funds	\$ 195,858,841	\$ —	\$ —	\$ 195,858,841
Barnes Group Inc. common stock	71,138,257	—	—	71,138,257
Total investments in the fair value hierarchy	266,997,098	—	—	266,997,098
Managed Income Fund*	—	—	—	44,214,583
Total investments at fair value	\$ 266,997,098	\$ —	\$ —	\$ 311,211,681

\*Investments measured at fair value using the NAV as a practical expedient have not been classified within the fair value hierarchy.

The following table summarizes the fair values and levels within the fair value hierarchy in which the fair value measurements fall for assets measured on a recurring basis as of December 30, 2016:

Description	Level 1	Level 2	Level 3	Total
<b>Investments:</b>				
Mutual funds	\$ 159,745,270	\$ —	\$ —	\$ 159,745,270
Barnes Group Inc. common stock	58,138,532	—	—	58,138,532
Total investments in the fair value hierarchy	217,883,802	—	—	217,883,802
Managed Income Fund*	—	—	—	50,521,242
Total investments at fair value	\$ 217,883,802	\$ —	\$ —	\$ 268,405,044

\*Investments measured at fair value using the NAV as a practical expedient have not been classified within the fair value hierarchy.

#### 4. Managed Income Portfolio Fund

The Plan maintains a managed income portfolio fund ("MIP") with Fidelity. The fund is included in the statements of net assets available for benefits using the NAV practical expedient, which represents the fund's fair value. The NAV represents contributions made, plus earnings, less participant withdrawals and administrative expenses. Participants may ordinarily direct the withdrawal or transfer of all or a portion of their investment at contract value. The average yield and crediting rates for 2017 were 2.24% and 1.77%, respectively. The average yield and crediting rates for 2016 were 2.01% and 1.58%, respectively.

There were no unfunded commitments on the MIP as of December 30, 2017. Participant level transactions take place daily with the liquidation typically being requested one day and processed the next business day. The Plan level liquidations require notice to Fidelity and could result in the MIP investment being placed into an account for investments only for up to one year.

#### 5. Notes Receivable from Participants

Participants may elect to take loans from their accumulated vested account balances in the Plan subject to certain limitations. The loans are withdrawn from the participants' fund balances based upon the percentages in which they were invested and in a sequence as prescribed by the Plan. Interest is charged on the loans at a rate determined quarterly at prime as published in the Wall Street Journal plus one half of one percent (interest rates on outstanding loans at December 30, 2017 ranged from 3.75% to 8.75%). Interest charges commence sixty days subsequent to the initial loan date.

Loan repayments are made in equal periodic installments for a period not to exceed five years and are invested on the participant's behalf in the investment funds per the participant's investment elections. As of December 30, 2017 and 2016, there were 432 and 429 participants with loans outstanding, respectively.

#### 6. Benefit Payments and Forfeitures

During 2017 and 2016, benefit payments amounted to \$28,090,206 and \$24,981,183, respectively.

If a participant terminates their employment with the Company, the portion of Company contributions not vested is forfeited. Such forfeitures amounted to \$324,726 and \$345,169 in 2017 and 2016, respectively. The amount of forfeitures used to reduce Company contributions and Plan expenses were \$493,456 and \$269,571 in 2017 and 2016, respectively. Unallocated forfeitures at December 30, 2017 and 2016 were \$275,663 and \$481,681, respectively. Profit sharing forfeitures are reallocated as Company contributions.

## 7. Federal Income Tax Status

The U.S. Treasury Department has determined, most recently as of October 31, 2016, that the Plan as originally adopted and amended through January 8, 2016 is a qualified plan under the applicable provisions of the Internal Revenue Code and, as such, is exempt from Federal income taxes. The Plan has been amended since receiving the determination letter from the U.S. Treasury Department. However, the Plan administrator, which consults regularly with outside legal counsel regarding Plan matters, believes that the Plan is designed and is currently being operated in compliance with the applicable requirements of the Code. Therefore, no provision for income taxes has been included in the Plan's financial statements.

Employees are not taxed currently on Company contributions to the Plan, contributions made under the salary deferral provisions of the Plan, or on income earned by the Plan. However, employees are currently taxed on any after-tax contributions. Internal Revenue Service and applicable state regulations in effect in the year participant distributions are made determine the tax status of such distributions. The Plan is subject to routine audits by taxing jurisdictions; however, there are currently no audits for any tax periods in progress. The Plan administrator believes it is no longer subject to income tax examinations for years prior to 2014.

## 8. Exempt Party-In-Interest / Related Party

In 2017, the Plan purchased on the open market 419,700 shares of Barnes Group Inc. common stock at a cost of \$24,452,024. The Plan also sold on the open market 521,374 shares for proceeds of \$30,045,309. In addition, there were no participant distributions of stock that resulted in the transfer out of shares from the Plan. The Plan received no shares as matching contributions from the Company.

In 2016, the Plan purchased on the open market 480,038 shares of Barnes Group Inc. common stock at a cost of \$17,436,526. The Plan also sold on the open market 820,540 shares for proceeds of \$30,820,405. In addition, participant distributions of stock resulted in the transfer out of 758 shares from the Plan, with a market value of \$26,826. The Plan received no shares as matching contributions from the Company.

The Plan owned 1,124,360 shares of Barnes Group Inc. common stock or approximately 2% of the outstanding common shares of the Company at December 30, 2017. The Plan owned 1,226,034 shares of Barnes Group Inc. common stock or approximately 2% of the outstanding common shares of the Company at December 30, 2016.

Certain Plan investments are shares of registered investment companies managed by the Trustee. Therefore, these transactions qualify as exempt party-in-interest transactions. Fees paid by the Plan for certain record keeping fees, loan origination fees and redemption charges amounted to \$36,898 and \$67,416 for the years ended December 30, 2017 and 2016, respectively.

## 9. Reconciliation of Financial Statements to Form 5500

The following is a reconciliation of net assets available for benefits per the financial statements to Form 5500 as of December 30:

	2017	2016
Net assets available for benefits per the financial statements	\$ 323,544,411	\$ 279,259,211
Deemed defaulted loans	(40,231)	(59,038)
Adjustment from NAV to fair value for the Managed Income Fund	(91,983)	174,970
Net assets available for benefits per Form 5500	<u>\$ 323,412,197</u>	<u>\$ 279,375,143</u>

The following is a reconciliation of the net change in net assets available for benefits per the financial statements to Form 5500 as of and for the years ended December 30:

	2017	2016
Total net change per the financial statements	\$ 44,285,200	\$ 17,355,656
Change in deemed defaulted loans	18,807	3,264
Change in adjustment from NAV to fair value for the Managed Income Fund	(266,953)	(137,649)
Total net change per Form 5500	<u>\$ 44,037,054</u>	<u>\$ 17,221,271</u>

Barnes Group Inc. Retirement Savings Plan  
 EIN #06-0247840 Plan #012  
 Schedule H, Line 4(i) - Schedule of Assets (Held at End of Year)

December 30, 2017

(a)	(b) Identity of Issue, Borrower, Lessor or Similar Party	(c) Description of Investment, Including Maturity Date, Rate of Interest, Par or Maturity Value	(d) Cost	Number of Units/Shares	(e) Current Value
*	Fidelity Management Trust Company	Fidelity Equity - Income K Fund	\$ 9,538,846	185,145	\$ 11,230,910
*	Fidelity Management Trust Company	Fidelity Spartan 500 Index Fund	10,017,462	147,860	13,817,539
*	Fidelity Management Trust Company	Fidelity Blue Chip Growth K Fund	22,104,452	318,832	28,012,585
	Eaton Vance	Eaton Vance Parametric Structured Emerging Markets Fund	1,733,115	123,549	1,950,840
*	Fidelity Management Trust Company	Fidelity Stock Selector Small Cap Fund	7,993,777	361,084	9,554,284
*	Fidelity Management Trust Company	Fidelity Diversified International K Fund	9,940,474	287,882	11,495,117
*	Fidelity Management Trust Company	Fidelity Freedom Income K Fund	1,351,453	114,336	1,344,587
*	Fidelity Management Trust Company	Fidelity Freedom 2010 K Fund	3,853,489	239,561	3,842,564
*	Fidelity Management Trust Company	Fidelity Freedom 2020 K Fund	40,143,709	2,456,249	40,650,919
*	Fidelity Management Trust Company	Fidelity Freedom 2030 K Fund	28,625,483	1,628,062	29,353,962
*	Fidelity Management Trust Company	Fidelity Freedom 2040 K Fund	14,645,688	1,419,572	15,175,220
*	Fidelity Management Trust Company	Fidelity Freedom 2050 K Fund	8,952,681	764,258	9,301,022
*	Fidelity Management Trust Company	Fidelity Freedom 2060 K Fund	915,244	77,884	951,738
	Dreyfus	Dreyfus Bond Market Index Fund	6,956,349	661,769	6,829,456
	Victory Munder	Munder Mid Cap Core Growth R6 Fund	6,054,931	160,718	5,978,700
*	Fidelity Management Trust Company	Government Cash Reserve	11,887	11,887	11,887
*	Fidelity Management Trust Company	Fidelity Spartan Extended Market Index	5,262,033	102,458	6,357,511
	Total mutual funds				195,858,841
*	Fidelity Management Trust Company	Fidelity Managed Income Portfolio II	44,214,583	44,214,583	44,214,583
*	Barnes Group Inc.	Common stock	45,075,792	1,124,360	71,138,257
*	Fidelity Management Trust Company	Cash and cash equivalents	3,739,226	—	3,739,226
*	Notes receivable from participants	Interest rates ranging from 3.75% - 8.75%, with maturity dates ranging from December 2017 to December 2022	—	—	4,340,780
	Total assets (held at end of year)				<u>\$ 319,291,687</u>

\* *party-in-interest*

Barnes Group Inc. Retirement Savings Plan  
 EIN #06-0247840, Plan #012  
 Form 5500, Schedule H, Part IV, Line 4(j) - Schedule of Reportable Transactions  
 For year Ended December 30, 2017

(a)	(b)	(c)	(d)	(g)	(h)	(i)
Identity of Party Involved	Description of Assets	Purchase Price	Selling Price	Cost of Assets Sold	Current Value of Asset on Transaction Date	Net Gain/(Loss)
Category (i) - Single transaction in excess of 5% of Plan assets						
* Fidelity Management Trust Company	FID FREEDOM K 2030	—	\$ 11,216,688	\$ 9,779,434	\$ 11,216,688	\$ 1,437,254
* Fidelity Management Trust Company	FID FREEDOM 2030 K	\$ 11,208,039	—	—	\$ 11,208,039	—
* Fidelity Management Trust Company	FID FREEDOM 2020 K	\$ 18,064,522	—	—	\$ 18,064,522	—
* Fidelity Management Trust Company	FID FREEDOM K 2020	—	\$ 18,064,522	\$ 16,081,909	\$ 18,064,522	\$ 1,982,613
Category (iii) - Series of transactions in excess of 5% of Plan assets						
* Fidelity Management Trust Company	MIP II CL 1	\$ 16,672,103	—	—	\$ 16,672,103	—
* Fidelity Management Trust Company	MIP II CL 1	—	\$ 19,721,314	\$ 19,721,314	\$ 19,721,314	—
* Fidelity Management Trust Company	FID FREEDOM 2020 K	\$ 18,837,397	—	—	\$ 18,837,397	—
* Fidelity Management Trust Company	FID FREEDOM K 2020	—	\$ 20,483,998	\$ 18,291,129	\$ 20,483,998	\$ 2,192,869
* Fidelity Management Trust Company	FID FREEDOM K 2030	—	\$ 12,225,017	\$ 10,673,866	\$ 12,225,017	\$ 1,551,151
* Fidelity Management Trust Company	FID FREEDOM 2030 K	\$ 12,061,801	—	—	\$ 12,061,801	—

*\*Party-in-Interest*

*There were no category (ii) or (iv) reportable transactions*

*Columns for "Lease Rental" and "Expenses Incurred with Transactions" are not applicable*

## SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Benefits Committee of the Board of Directors of Barnes Group Inc. has duly caused this annual report to be signed on its behalf by the undersigned hereunto duly authorized.

Barnes Group Inc.  
Retirement Savings Plan  
(Registrant)

Date: June 18, 2018

By:

/s/ DAWN N. EDWARDS

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Dawn N. Edwards

Member of the Benefits Committee of Barnes Group Inc.

## EXHIBIT INDEX

<b><u>Exhibit No.</u></b>	<b><u>Description</u></b>	<b><u>Reference</u></b>
<a href="#"><u>23.1</u></a>	<a href="#"><u>Consent of Independent Registered Public Accounting Firm.</u></a>	Filed with this report.

**Exhibit 23.1**

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statement on Form S-8 (No. 333-179643 and 333-205952) of our report dated June 18, 2018, appearing in this Annual Report on Form 11-K of the Barnes Group Inc. Retirement Savings Plan for the years ended December 30, 2017 and 2016.

/s/ Fiondella, Milone & LaSaracina LLP

Fiondella, Milone & LaSaracina LLP  
Glastonbury, Connecticut  
June 18, 2018