

Form 5500

Department of the Treasury
Internal Revenue Service

Department of Labor
Employee Benefits Security
Administration

Pension Benefit Guaranty Corporation

Annual Return/Report of Employee Benefit Plan

This form is required to be filed for employee benefit plans under sections 104 and 4065 of the Employee Retirement Income Security Act of 1974 (ERISA) and sections 6057(b) and 6058(a) of the Internal Revenue Code (the Code).

▶ Complete all entries in accordance with the instructions to the Form 5500.

OMB Nos. 1210-0110
1210-0089

2024

This Form is Open to Public Inspection

Part I Annual Report Identification Information

For calendar plan year 2024 or fiscal plan year beginning 01/01/2024 and ending 12/31/2024

- A This return/report is for: [] a multiemployer plan [] a multiple-employer plan (Filers checking this box must provide participating employer information in accordance with the form instructions.) [X] a single-employer plan [] a DFE (specify) ____
B This return/report is: [] the first return/report [X] the final return/report [] an amended return/report [] a short plan year return/report (less than 12 months)
C If the plan is a collectively-bargained plan, check here. [X]
D Check box if filing under: [X] Form 5558 [] automatic extension [] the DFVC program [] special extension (enter description)
E If this is a retroactively adopted plan permitted by SECURE Act section 201, check here. []

Part II Basic Plan Information—enter all requested information

1a Name of plan: BARNES GROUP INC. PENSION PLAN FOR HOURLY RATE EMPLOYEES - MILWAUKEE DIVISION
1b Three-digit plan number (PN): 004
1c Effective date of plan: 07/01/1951
2a Plan sponsor's name (employer, if for a single-employer plan): BARNES GROUP INC.
2b Employer Identification Number (EIN): 06-0247840
2c Plan Sponsor's telephone number: 860-583-7070
2d Business code (see instructions): 332900

Caution: A penalty for the late or incomplete filing of this return/report will be assessed unless reasonable cause is established.

Under penalties of perjury and other penalties set forth in the instructions, I declare that I have examined this return/report, including accompanying schedules, statements and attachments, as well as the electronic version of this return/report, and to the best of my knowledge and belief, it is true, correct, and complete.

Table with 4 columns: SIGN HERE, Signature of plan administrator, Date, Enter name of individual signing as plan administrator. Includes rows for employer/plan sponsor and DFE.

For Paperwork Reduction Act Notice, see the Instructions for Form 5500.

Form 5500 (2024) v. 240311

3a Plan administrator's name and address <input type="checkbox"/> Same as Plan Sponsor BARNES GROUP INC. BENEFITS COMMITTEE 123 MAIN STREET BRISTOL, CT 06010-6307	3b Administrator's EIN 06-0247840 3c Administrator's telephone number 860-583-7070
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4 If the name and/or EIN of the plan sponsor or the plan name has changed since the last return/report filed for this plan, enter the plan sponsor's name, EIN, the plan name and the plan number from the last return/report: a Sponsor's name c Plan Name	4b EIN 4d PN
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5 Total number of participants at the beginning of the plan year	5	76
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6 Number of participants as of the end of the plan year unless otherwise stated (welfare plans complete only lines 6a(1) , 6a(2) , 6b , 6c , and 6d).		
a(1) Total number of active participants at the beginning of the plan year	6a(1)	23
a(2) Total number of active participants at the end of the plan year	6a(2)	0
b Retired or separated participants receiving benefits.....	6b	0
c Other retired or separated participants entitled to future benefits	6c	0
d Subtotal. Add lines 6a(2) , 6b , and 6c	6d	0
e Deceased participants whose beneficiaries are receiving or are entitled to receive benefits.	6e	0
f Total. Add lines 6d and 6e	6f	0
g(1) Number of participants with account balances as of the beginning of the plan year (only defined contribution plans complete this item)	6g(1)	
g(2) Number of participants with account balances as of the end of the plan year (only defined contribution plans complete this item)	6g(2)	
h Number of participants who terminated employment during the plan year with accrued benefits that were less than 100% vested.....	6h	0

7 Enter the total number of employers obligated to contribute to the plan (only multiemployer plans complete this item)	7	
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8a If the plan provides pension benefits, enter the applicable pension feature codes from the List of Plan Characteristics Codes in the instructions:
 1B

b If the plan provides welfare benefits, enter the applicable welfare feature codes from the List of Plan Characteristics Codes in the instructions:

9a Plan funding arrangement (check all that apply) (1) <input type="checkbox"/> Insurance (2) <input type="checkbox"/> Code section 412(e)(3) insurance contracts (3) <input checked="" type="checkbox"/> Trust (4) <input type="checkbox"/> General assets of the sponsor	9b Plan benefit arrangement (check all that apply) (1) <input type="checkbox"/> Insurance (2) <input type="checkbox"/> Code section 412(e)(3) insurance contracts (3) <input checked="" type="checkbox"/> Trust (4) <input type="checkbox"/> General assets of the sponsor
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10 Check all applicable boxes in 10a and 10b to indicate which schedules are attached, and, where indicated, enter the number attached. (See instructions)

a Pension Schedules

(1) **R** (Retirement Plan Information)

(2) **MB** (Multiemployer Defined Benefit Plan and Certain Money Purchase Plan Actuarial Information) - signed by the plan actuary

(3) **SB** (Single-Employer Defined Benefit Plan Actuarial Information) - signed by the plan actuary

(4) **DCG** (Individual Plan Information) – Number Attached _____

(5) **MEP** (Multiple-Employer Retirement Plan Information)

b General Schedules

(1) **H** (Financial Information)

(2) **I** (Financial Information – Small Plan)

(3) **A** (Insurance Information) – Number Attached 0

(4) **C** (Service Provider Information)

(5) **D** (DFE/Participating Plan Information)

(6) **G** (Financial Transaction Schedules)

Part III Form M-1 Compliance Information (to be completed by welfare benefit plans)

11a If the plan provides welfare benefits, was the plan subject to the Form M-1 filing requirements during the plan year? (See instructions and 29 CFR 2520.101-2.) Yes No

If "Yes" is checked, complete lines 11b and 11c.

11b Is the plan currently in compliance with the Form M-1 filing requirements? (See instructions and 29 CFR 2520.101-2.) Yes No

11c Enter the Receipt Confirmation Code for the 2024 Form M-1 annual report. If the plan was not required to file the 2024 Form M-1 annual report, enter the Receipt Confirmation Code for the most recent Form M-1 that was required to be filed under the Form M-1 filing requirements. (Failure to enter a valid Receipt Confirmation Code will subject the Form 5500 filing to rejection as incomplete.)

Receipt Confirmation Code _____

SCHEDULE SB (Form 5500) <small>Department of the Treasury Internal Revenue Service</small> <small>Department of Labor Employee Benefits Security Administration</small> <small>Pension Benefit Guaranty Corporation</small>	Single-Employer Defined Benefit Plan Actuarial Information This schedule is required to be filed under section 104 of the Employee Retirement Income Security Act of 1974 (ERISA) and section 6059 of the Internal Revenue Code (the Code). ▶ File as an attachment to Form 5500 or 5500-SF.	<small>OMB No. 1210-0110</small> 2024 This Form is Open to Public Inspection
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For calendar plan year 2024 or fiscal plan year beginning 01/01/2024 and ending 12/31/2024

▶ **Round off amounts to nearest dollar.**
 ▶ **Caution:** A penalty of \$1,000 will be assessed for late filing of this report unless reasonable cause is established.

A Name of plan <u>BARNES GROUP INC. PENSION PLAN FOR HOURLY RATE EMPLOYEES - MILWAUKEE DIVISION</u>	B Three-digit plan number (PN) ▶	<u>004</u>
C Plan sponsor's name as shown on line 2a of Form 5500 or 5500-SF <u>BARNES GROUP INC.</u>	D Employer Identification Number (EIN) <u>06-0247840</u>	
E Type of plan: <input checked="" type="checkbox"/> Single <input type="checkbox"/> Multiple-A <input type="checkbox"/> Multiple-B		
F Prior year plan size: <input type="checkbox"/> 100 or fewer <input type="checkbox"/> 101-500 <input checked="" type="checkbox"/> More than 500		

Part I Basic Information

1	Enter the valuation date: Month <u>01</u> Day <u>01</u> Year <u>2024</u>		
2	Assets:		
	a Market value	2a	4612989
	b Actuarial value	2b	4966042
3	Funding target/participant count breakdown	(1) Number of participants	(2) Vested Funding Target
	a For retired participants and beneficiaries receiving payment	37	2653004
	b For terminated vested participants	17	434259
	c For active participants	23	1534355
	d Total	77	4866824
4	If the plan is in at-risk status, check the box and complete lines (a) and (b)..... <input type="checkbox"/>		
	a Funding target disregarding prescribed at-risk assumptions	4a	
	b Funding target reflecting at-risk assumptions, but disregarding transition rule for plans that have been in at-risk status for fewer than five consecutive years and disregarding loading factor	4b	
5	Effective interest rate	5	5.22 %
6	Target normal cost		
	a Present value of current plan year accruals	6a	20799
	b Expected plan-related expenses	6b	53000
	c Target normal cost	6c	73799

Statement by Enrolled Actuary
 To the best of my knowledge, the information supplied in this schedule and accompanying schedules, statements and attachments, if any, is complete and accurate. Each prescribed assumption was applied in accordance with applicable law and regulations. In my opinion, each other assumption is reasonable (taking into account the experience of the plan and reasonable expectations) and such other assumptions, in combination, offer my best estimate of anticipated experience under the plan.

SIGN HERE		
	Signature of actuary	Date
	<u>TIMOTHY J. DIIULIO, F.S.A.</u>	<u>23-07805</u>
	Type or print name of actuary	Most recent enrollment number
	<u>MERCER</u>	<u>212-345-8680</u>
	Firm name	Telephone number (including area code)
	<u>99 HIGH STREET</u> <u>BOSTON, MA 02110-2320</u>	
	Address of the firm	

If the actuary has not fully reflected any regulation or ruling promulgated under the statute in completing this schedule, check the box and see instructions

Part II Beginning of Year Carryover and Prefunding Balances		(a) Carryover balance	(b) Prefunding balance
7	Balance at beginning of prior year after applicable adjustments (line 13 from prior year)	0	0
8	Portion elected for use to offset prior year's funding requirement (line 35 from prior year)	0	0
9	Amount remaining (line 7 minus line 8)	0	0
10	Interest on line 9 using prior year's actual return of <u>12.32</u> %	0	0
11	Prior year's excess contributions to be added to prefunding balance:		
a	Present value of excess contributions (line 38a from prior year)		135567
b(1)	Interest on the excess, if any, of line 38a over line 38b from prior year Schedule SB, using prior year's effective interest rate of <u>5.30</u> %		7185
b(2)	Interest on line 38b from prior year Schedule SB, using prior year's actual return		0
c	Total available at beginning of current plan year to add to prefunding balance		142752
d	Portion of (c) to be added to prefunding balance		142752
12	Other reductions in balances due to elections or deemed elections	0	0
13	Balance at beginning of current year (line 9 + line 10 + line 11d – line 12)	0	142752

Part III Funding Percentages			
14	Funding target attainment percentage	14	99.10 %
15	Adjusted funding target attainment percentage	15	102.03 %
16	Prior year's funding percentage for purposes of determining whether carryover/prefunding balances may be used to reduce current year's funding requirement	16	97.51 %
17	If the current value of the assets of the plan is less than 70 percent of the funding target, enter such percentage	17	%

Part IV Contributions and Liquidity Shortfalls							
18 Contributions made to the plan for the plan year by employer(s) and employees:							
(a) Date (MM-DD-YYYY)	(b) Amount paid by employer(s)	(c) Amount paid by employees	(a) Date (MM-DD-YYYY)	(b) Amount paid by employer(s)	(c) Amount paid by employees		
			Totals ▶	18(b)	0	18(c)	0

19	Discounted employer contributions – see instructions for small plan with a valuation date after the beginning of the year:		
a	Contributions allocated toward unpaid minimum required contributions from prior years	19a 0	
b	Contributions made to avoid restrictions adjusted to valuation date	19b 0	
c	Contributions allocated toward minimum required contribution for current year adjusted to valuation date	19c 0	
20	Quarterly contributions and liquidity shortfalls:		
a	Did the plan have a "funding shortfall" for the prior year?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
b	If line 20a is "Yes," were required quarterly installments for the current year made in a timely manner?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
c	If line 20a is "Yes," see instructions and complete the following table as applicable:		
Liquidity shortfall as of end of quarter of this plan year			
(1) 1st	(2) 2nd	(3) 3rd	(4) 4th
0	0	0	0

Part V Assumptions Used to Determine Funding Target and Target Normal Cost				
21 Discount rate:				
a Segment rates:	1st segment: 4.75 %	2nd segment: 4.96 %	3rd segment: 5.59 %	<input type="checkbox"/> N/A, full yield curve used
b Applicable month (enter code)				21b 0
22 Weighted average retirement age				22 63
23 Mortality table(s) (see instructions)	<input type="checkbox"/> Prescribed - combined	<input checked="" type="checkbox"/> Prescribed - separate	<input type="checkbox"/> Substitute	

Part VI Miscellaneous Items				
24 Has a change been made in the non-prescribed actuarial assumptions for the current plan year? If "Yes," see instructions regarding required attachment..... <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				
25 Has a method change been made for the current plan year? If "Yes," see instructions regarding required attachment..... <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				
26 Demographic and benefit information				
a Is the plan required to provide a Schedule of Active Participants? If "Yes," see instructions regarding required attachment. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				
b Is the plan required to provide a projection of expected benefit payments? If "Yes," see instructions regarding required attachment ... <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
27 If the plan is subject to alternative funding rules, enter applicable code and see instructions regarding attachment.....				27

Part VII Reconciliation of Unpaid Minimum Required Contributions For Prior Years				
28 Unpaid minimum required contributions for all prior years				28 0
29 Discounted employer contributions allocated toward unpaid minimum required contributions from prior years (line 19a).....				29 0
30 Remaining amount of unpaid minimum required contributions (line 28 minus line 29).....				30 0

Part VIII Minimum Required Contribution For Current Year				
31 Target normal cost and excess assets (see instructions):				
a Target normal cost (line 6c)				31a 73799
b Excess assets, if applicable, but not greater than line 31a				31b 0
32 Amortization installments:		Outstanding Balance		Installment
a Net shortfall amortization installment		43534	1155	
b Waiver amortization installment				
33 If a waiver has been approved for this plan year, enter the date of the ruling letter granting the approval (Month _____ Day _____ Year _____) and the waived amount				33
34 Total funding requirement before reflecting carryover/prefunding balances (lines 31a - 31b + 32a + 32b - 33).....				34 74954
		Carryover balance	Prefunding balance	Total balance
35 Balances elected for use to offset funding requirement		0	74954	74954
36 Additional cash requirement (line 34 minus line 35)				36 0
37 Contributions allocated toward minimum required contribution for current year adjusted to valuation date (line 19c)				37 0
38 Present value of excess contributions for current year (see instructions)				
a Total (excess, if any, of line 37 over line 36)				38a 0
b Portion included in line 38a attributable to use of prefunding and funding standard carryover balances				38b
39 Unpaid minimum required contribution for current year (excess, if any, of line 36 over line 37)				39 0
40 Unpaid minimum required contributions for all years				40 0

Part IX Pension Funding Relief Under the American Rescue Plan Act of 2021 (See Instructions)				
41 If an election was made to use the extended amortization rule for a plan year beginning on or before December 31, 2021, check the box to indicate the first plan year for which the rule applies. <input type="checkbox"/> 2019 <input type="checkbox"/> 2020 <input checked="" type="checkbox"/> 2021				

**SCHEDULE D
(Form 5500)**

Department of the Treasury
Internal Revenue Service

Department of Labor
Employee Benefits Security Administration

DFE/Participating Plan Information

This schedule is required to be filed under section 104 of the Employee Retirement Income Security Act of 1974 (ERISA).

▶ **File as an attachment to Form 5500.**

OMB No. 1210-0110

2024

This Form is Open to Public Inspection.

For calendar plan year 2024 or fiscal plan year beginning 01/01/2024 and ending 12/31/2024

A Name of plan <u>BARNES GROUP INC. PENSION PLAN FOR HOURLY RATE EMPLOYEES - MILWAUKEE DIVISION</u>	B Three-digit plan number (PN) ▶ <u>004</u>
C Plan or DFE sponsor's name as shown on line 2a of Form 5500 <u>BARNES GROUP INC.</u>	D Employer Identification Number (EIN) <u>06-0247840</u>

Part I Information on interests in MTIAs, CCTs, PSAs, and 103-12 IEs (to be completed by plans and DFEs)
(Complete as many entries as needed to report all interests in DFEs)

a Name of MTIA, CCT, PSA, or 103-12 IE: <u>BARNES GROUP INC. PENSION TRUST</u>	b Name of sponsor of entity listed in (a): <u>BARNES GROUP INC.</u>	
c EIN-PN <u>06-0247840-023</u>	d Entity code <u>M</u>	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions) <u>0</u>
a Name of MTIA, CCT, PSA, or 103-12 IE:	b Name of sponsor of entity listed in (a):	
c EIN-PN	d Entity code	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)
a Name of MTIA, CCT, PSA, or 103-12 IE:	b Name of sponsor of entity listed in (a):	
c EIN-PN	d Entity code	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)
a Name of MTIA, CCT, PSA, or 103-12 IE:	b Name of sponsor of entity listed in (a):	
c EIN-PN	d Entity code	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)
a Name of MTIA, CCT, PSA, or 103-12 IE:	b Name of sponsor of entity listed in (a):	
c EIN-PN	d Entity code	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)
a Name of MTIA, CCT, PSA, or 103-12 IE:	b Name of sponsor of entity listed in (a):	
c EIN-PN	d Entity code	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)
a Name of MTIA, CCT, PSA, or 103-12 IE:	b Name of sponsor of entity listed in (a):	
c EIN-PN	d Entity code	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)
a Name of MTIA, CCT, PSA, or 103-12 IE:	b Name of sponsor of entity listed in (a):	
c EIN-PN	d Entity code	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN

d Entity code

e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN

d Entity code

e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN

d Entity code

e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN

d Entity code

e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN

d Entity code

e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN

d Entity code

e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN

d Entity code

e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN

d Entity code

e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN

d Entity code

e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)

a Name of MTIA, CCT, PSA, or 103-12 IE:

b Name of sponsor of entity listed in (a):

c EIN-PN

d Entity code

e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)

SCHEDULE I (Form 5500) Department of the Treasury Internal Revenue Service Department of Labor Employee Benefits Security Administration Pension Benefit Guaranty Corporation	Financial Information—Small Plan This schedule is required to be filed under section 104 of the Employee Retirement Income Security Act of 1974 (ERISA), and section 6058(a) of the Internal Revenue Code (the Code). ▶ File as an attachment to Form 5500.	OMB No. 1210-0110 2024 This Form is Open to Public Inspection
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For calendar plan year 2024 or fiscal plan year beginning **01/01/2024** and ending **12/31/2024**

A Name of plan BARNES GROUP INC. PENSION PLAN FOR HOURLY RATE EMPLOYEES - MILWAUKEE DIVISION	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:60%;">B Three-digit plan number (PN) ▶</td> <td style="width:40%; text-align: center;">004</td> </tr> <tr> <td colspan="2" style="height: 20px;"> </td> </tr> </table>	B Three-digit plan number (PN) ▶	004		
B Three-digit plan number (PN) ▶	004				
C Plan sponsor's name as shown on line 2a of Form 5500 BARNES GROUP INC.	D Employer Identification Number (EIN) 06-0247840				

Complete Schedule I if the plan covered fewer than 100 participants as of the beginning of the plan year. You may also complete Schedule I if you are filing as a small plan under the 80-120 participant rule (see instructions). Complete Schedule H if reporting as a large plan or DFE.

Part I Small Plan Financial Information

Report below the current value of assets and liabilities, income, expenses, transfers and changes in net assets during the plan year. Combine the value of plan assets held in more than one trust. Do not enter the value of the portion of an insurance contract that guarantees during this plan year to pay a specific dollar benefit at a future date. Include all income and expenses of the plan including any trust(s) or separately maintained fund(s) and any payments/receipts to/from insurance carriers. **Round off amounts to the nearest dollar.**

		(a) Beginning of Year	(b) End of Year
1 Plan Assets and Liabilities:			
a Total plan assets	1a	4617004	0
b Total plan liabilities	1b	1627	0
c Net plan assets (subtract line 1b from line 1a)	1c	4615377	0
2 Income, Expenses, and Transfers for this Plan Year:		(a) Amount	(b) Total
a Contributions received or receivable:			
(1) Employers	2a(1)	0	
(2) Participants	2a(2)		
(3) Others (including rollovers)	2a(3)		
b Noncash contributions	2b		
c Other income	2c	214952	
d Total income (add lines 2a(1), 2a(2), 2a(3), 2b, and 2c)	2d		214952
e Benefits paid (including direct rollovers)	2e	248792	
f Corrective distributions (see instructions)	2f		
g Certain deemed distributions of participant loans (see instructions)	2g	0	
h Administrative service providers (salaries, fees, and commissions)	2h		
i Other expenses	2i	148797	
j Total expenses (add lines 2e, 2f, 2g, 2h, and 2i)	2j		397589
k Net income (loss) (subtract line 2j from line 2d)	2k		-182637
l Transfers to (from) the plan (see instructions)	2l		-4432740

3 Specific Assets: If the plan held assets at any time during the plan year in any of the following categories, check "Yes" and enter the current value of any assets remaining in the plan as of the end of the plan year. Allocate the value of the plan's interest in a commingled trust containing the assets of more than one plan on a line-by-line basis unless the trust meets one of the specific exceptions described in the instructions.

		Yes	No	Amount
a Partnership/joint venture interests	3a		X	
b Employer real property	3b		X	
c Real estate (other than employer real property)	3c		X	
d Employer securities	3d		X	
e Participant loans	3e		X	
f Loans (other than to participants)	3f		X	
g Tangible personal property	3g		X	

Part II Compliance Questions

		Yes	No	Amount
4 During the plan year:				
a Was there a failure to transmit to the plan any participant contributions within the time period described in 29 CFR 2510.3-102? Continue to answer "Yes" for any prior year failures until fully corrected. (See instructions and DOL's Voluntary Fiduciary Correction Program.)	4a		X	
b Were any loans by the plan or fixed income obligations due the plan in default as of the close of plan year or classified during the year as uncollectible? Disregard participant loans secured by the participant's account balance.	4b		X	
c Were any leases to which the plan was a party in default or classified during the year as uncollectible?	4c		X	
d Were there any nonexempt transactions with any party-in-interest? (Do not include transactions reported on line 4a.)	4d		X	
e Was the plan covered by a fidelity bond?	4e	X		10000000
f Did the plan have a loss, whether or not reimbursed by the plan's fidelity bond, that was caused by fraud or dishonesty?	4f		X	
g Did the plan hold any assets whose current value was neither readily determinable on an established market nor set by an independent third party appraiser?	4g		X	
h Did the plan receive any noncash contributions whose value was neither readily determinable on an established market nor set by an independent third party appraiser?	4h		X	
i Did the plan at any time hold 20% or more of its assets in any single security, debt, mortgage, parcel of real estate, or partnership/joint venture interest?	4i		X	
j Were all the plan assets either distributed to participants or beneficiaries, transferred to another plan, or brought under the control of the PBGC?	4j	X		
k Are you claiming a waiver of the annual examination and report of an independent qualified public accountant (IQPA) under 29 CFR 2520.104-46? If "No," attach an IQPA's report or 2520.104-50 statement. (See instructions on waiver eligibility and conditions.)	4k	X		
l Has the plan failed to provide any benefit when due under the plan?	4l		X	
m If this is an individual account plan, was there a blackout period? (See instructions and 29 CFR 2520.101-3.)	4m			
n If 4m was answered "Yes," check the "Yes" box if you either provided the required notice or one of the exceptions to providing the notice applied under 29 CFR 2520.101-3	4n			

5a Has a resolution to terminate the plan been adopted during the plan year or any prior plan year?..... Yes No
 If "Yes," enter the amount of any plan assets that reverted to the employer this year _____.

5b If, during this plan year, any assets or liabilities were transferred from this plan to another plan(s), identify the plan(s) to which assets or liabilities were transferred. (See instructions.)

5b(1) Name of plan(s)	5b(2) EIN(s)	5b(3) PN(s)
BARNES GROUP INC. CONSOLIDATED PENSION PLAN	06-0247840	002

5c Was the plan a defined benefit plan covered under the PBGC insurance program at any time during this plan year? (See ERISA section 4021 and instructions.) Yes No Not determined
 If "Yes" is checked, enter the My PAA confirmation number from the PBGC premium filing for this plan year 561625.

SCHEDULE R (Form 5500) <small>Department of the Treasury Internal Revenue Service</small> <small>Department of Labor Employee Benefits Security Administration</small> <small>Pension Benefit Guaranty Corporation</small>	Retirement Plan Information This schedule is required to be filed under sections 104 and 4065 of the Employee Retirement Income Security Act of 1974 (ERISA) and section 6058(a) of the Internal Revenue Code (the Code). ▶ File as an attachment to Form 5500.	<small>OMB No. 1210-0110</small> 2024 This Form is Open to Public Inspection.
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For calendar plan year 2024 or fiscal plan year beginning 01/01/2024 and ending 12/31/2024

A Name of plan <u>BARNES GROUP INC. PENSION PLAN FOR HOURLY RATE EMPLOYEES - MILWAUKEE DIVISION</u>	B Three-digit plan number (PN) ▶	<u>004</u>
C Plan sponsor's name as shown on line 2a of Form 5500 <u>BARNES GROUP INC.</u>	D Employer Identification Number (EIN) <u>06-0247840</u>	

Part I	Distributions
---------------	----------------------

All references to distributions relate only to payments of benefits during the plan year.

1 Total value of distributions paid in property other than in cash or the forms of property specified in the instructions.....

1		0
---	--	---

2 Enter the EIN(s) of payor(s) who paid benefits on behalf of the plan to participants or beneficiaries during the year (if more than two, enter EINs of the two payors who paid the greatest dollar amounts of benefits):
 EIN(s): 13-5160382

Profit-sharing plans, ESOPs, and stock bonus plans, skip line 3.

3 Number of participants (living or deceased) whose benefits were distributed in a single sum, during the plan year.....

3		0
---	--	---

Part II	Funding Information (If the plan is not subject to the minimum funding requirements of section 412 of the Internal Revenue Code or ERISA section 302, skip this Part.)
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4 Is the plan administrator making an election under Code section 412(d)(2) or ERISA section 302(d)(2)? Yes No N/A
If the plan is a defined benefit plan, go to line 8.

5 If a waiver of the minimum funding standard for a prior year is being amortized in this plan year, see instructions and enter the date of the ruling letter granting the waiver. **Date:** Month _____ Day _____ Year _____
If you completed line 5, complete lines 3, 9, and 10 of Schedule MB and do not complete the remainder of this schedule.

6 a Enter the minimum required contribution for this plan year (include any prior year accumulated funding deficiency not waived)	6a	
b Enter the amount contributed by the employer to the plan for this plan year	6b	
c Subtract the amount in line 6b from the amount in line 6a. Enter the result (enter a minus sign to the left of a negative amount).....	6c	

If you completed line 6c, skip lines 8 and 9.

7 Will the minimum funding amount reported on line 6c be met by the funding deadline?..... Yes No N/A

8 If a change in actuarial cost method was made for this plan year pursuant to a revenue procedure or other authority providing automatic approval for the change or a class ruling letter, does the plan sponsor or plan administrator agree with the change? Yes No N/A

Part III	Amendments
-----------------	-------------------

9 If this is a defined benefit pension plan, were any amendments adopted during this plan year that increased or decreased the value of benefits? If yes, check the appropriate box. If no, check the "No" box..... Increase Decrease Both No

Part IV	ESOPs (see instructions). If this is not a plan described under section 409(a) or 4975(e)(7) of the Internal Revenue Code, skip this Part.
----------------	---

10 Were unallocated employer securities or proceeds from the sale of unallocated securities used to repay any exempt loan? Yes No

11 a Does the ESOP hold any preferred stock? Yes No

b If the ESOP has an outstanding exempt loan with the employer as lender, is such loan part of a "back-to-back" loan? (See instructions for definition of "back-to-back" loan.) Yes No

12 Does the ESOP hold any stock that is not readily tradable on an established securities market? Yes No

Part V Additional Information for Multiemployer Defined Benefit Pension Plans

13 Enter the following information for each employer that (1) contributed more than 5% of total contributions to the plan during the plan year or (2) was one of the top-ten highest contributors (measured in dollars). See instructions. Complete as many entries as needed to report all applicable employers.

a Name of contributing employer _____

b EIN _____ **c** Dollar amount contributed by employer _____

d Date collective bargaining agreement expires (If employer contributes under more than one collective bargaining agreement, check box and see instructions regarding required attachment. Otherwise, enter the applicable date.) Month _____ Day _____ Year _____

e Contribution rate information (If more than one rate applies, check this box and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)

(1) Contribution rate (in dollars and cents) _____

(2) Base unit measure: Hourly Weekly Unit of production Other (specify): _____

a Name of contributing employer _____

b EIN _____ **c** Dollar amount contributed by employer _____

d Date collective bargaining agreement expires (If employer contributes under more than one collective bargaining agreement, check box and see instructions regarding required attachment. Otherwise, enter the applicable date.) Month _____ Day _____ Year _____

e Contribution rate information (If more than one rate applies, check this box and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)

(1) Contribution rate (in dollars and cents) _____

(2) Base unit measure: Hourly Weekly Unit of production Other (specify): _____

a Name of contributing employer _____

b EIN _____ **c** Dollar amount contributed by employer _____

d Date collective bargaining agreement expires (If employer contributes under more than one collective bargaining agreement, check box and see instructions regarding required attachment. Otherwise, enter the applicable date.) Month _____ Day _____ Year _____

e Contribution rate information (If more than one rate applies, check this box and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)

(1) Contribution rate (in dollars and cents) _____

(2) Base unit measure: Hourly Weekly Unit of production Other (specify): _____

a Name of contributing employer _____

b EIN _____ **c** Dollar amount contributed by employer _____

d Date collective bargaining agreement expires (If employer contributes under more than one collective bargaining agreement, check box and see instructions regarding required attachment. Otherwise, enter the applicable date.) Month _____ Day _____ Year _____

e Contribution rate information (If more than one rate applies, check this box and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)

(1) Contribution rate (in dollars and cents) _____

(2) Base unit measure: Hourly Weekly Unit of production Other (specify): _____

a Name of contributing employer _____

b EIN _____ **c** Dollar amount contributed by employer _____

d Date collective bargaining agreement expires (If employer contributes under more than one collective bargaining agreement, check box and see instructions regarding required attachment. Otherwise, enter the applicable date.) Month _____ Day _____ Year _____

e Contribution rate information (If more than one rate applies, check this box and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)

(1) Contribution rate (in dollars and cents) _____

(2) Base unit measure: Hourly Weekly Unit of production Other (specify): _____

a Name of contributing employer _____

b EIN _____ **c** Dollar amount contributed by employer _____

d Date collective bargaining agreement expires (If employer contributes under more than one collective bargaining agreement, check box and see instructions regarding required attachment. Otherwise, enter the applicable date.) Month _____ Day _____ Year _____

e Contribution rate information (If more than one rate applies, check this box and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)

(1) Contribution rate (in dollars and cents) _____

(2) Base unit measure: Hourly Weekly Unit of production Other (specify): _____

14 Enter the number of deferred vested and retired participants (inactive participants), as of the beginning of the plan year, whose contributing employer is no longer making contributions to the plan for:

a The current plan year. Check the box to indicate the counting method used to determine the number of inactive participants: <input type="checkbox"/> last contributing employer <input type="checkbox"/> alternative <input type="checkbox"/> reasonable approximation (see instructions for required attachment).....	14a	
b The plan year immediately preceding the current plan year. <input type="checkbox"/> Check the box if the number reported is a change from what was previously reported (see instructions for required attachment).....	14b	
c The second preceding plan year. <input type="checkbox"/> Check the box if the number reported is a change from what was previously reported (see instructions for required attachment).....	14c	

15 Enter the ratio of the number of participants under the plan on whose behalf no employer had an obligation to make an employer contribution during the current plan year to:

a The corresponding number for the plan year immediately preceding the current plan year	15a	
b The corresponding number for the second preceding plan year	15b	

16 Information with respect to any employers who withdrew from the plan during the preceding plan year:

a Enter the number of employers who withdrew during the preceding plan year	16a	
b If line 16a is greater than 0, enter the aggregate amount of withdrawal liability assessed or estimated to be assessed against such withdrawn employers.....	16b	

17 If assets and liabilities from another plan have been transferred to or merged with this plan during the plan year, check box and see instructions regarding supplemental information to be included as an attachment

Part VI Additional Information for Single-Employer and Multiemployer Defined Benefit Pension Plans

18 If any liabilities to participants or their beneficiaries under the plan as of the end of the plan year consist (in whole or in part) of liabilities to such participants and beneficiaries under two or more pension plans as of immediately before such plan year, check box and see instructions regarding supplemental information to be included as an attachment

19 If the total number of participants is 1,000 or more, complete lines (a) and (b):

a Enter the percentage of plan assets held as:
 Public Equity: _____% Private Equity: _____% Investment-Grade Debt and Interest Rate Hedging Assets: _____%
 High-Yield Debt: _____% Real Assets: _____% Cash or Cash Equivalents: _____% Other: _____%

b Provide the average duration of the Investment-Grade Debt and Interest Rate Hedging Assets:
 0-5 years 5-10 years 10-15 years 15 years or more

20 PBGC missed contribution reporting requirements. If this is a multiemployer plan or a single-employer plan that is not covered by PBGC, skip line 20.

a Is the amount of unpaid minimum required contributions for all years from Schedule SB (Form 5500) line 40 greater than zero? Yes No

b If line 20a is "Yes," has PBGC been notified as required by ERISA sections 4043(c)(5) and/or 303(k)(4)? Check the applicable box:
 Yes.
 No. Reporting was waived under 29 CFR 4043.25(c)(2) because contributions equal to or exceeding the unpaid minimum required contribution were made by the 30th day after the due date.
 No. The 30-day period referenced in 29 CFR 4043.25(c)(2) has not yet ended, and the sponsor intends to make a contribution equal to or exceeding the unpaid minimum required contribution by the 30th day after the due date.
 No. Other. Provide explanation: _____

Part VII IRS Compliance Questions

21a Does the plan satisfy the coverage and nondiscrimination tests of Code sections 410(b) and 401(a)(4) by combining this plan with any other plans under the permissive aggregation rules? Yes No

21b If this is a Code section 401(k) plan, check all boxes that apply to indicate how the plan is intended to satisfy the nondiscrimination requirements for employee deferrals and employer matching contributions (as applicable) under Code sections 401(k)(3) and 401(m)(2).
 Design-based safe harbor method
 "Prior year" ADP test
 "Current year" ADP test
 N/A

22 If the plan sponsor is an adopter of a pre-approved plan that received a favorable IRS Opinion Letter, enter the date of the Opinion Letter ___/___/____ (MM/DD/YYYY) and the Opinion Letter serial number _____.

Schedule SB, line 26 — Schedule of Active Participant Data

Attained age	Years of credited service										Total
	Under 1	1–4	5–9	10–14	15–19	20–24	25–29	30–34	35–39	40 & up	
Under 25											
25–29											
30–34											
35–39				1	2						3
40–44					1						1
45–49			1	1		2					4
50–54				1	1	2	1	2			7
55–59							1	2			3
60–64						3			1		4
65–69						1					1
70 & up											
Total			1	3	4	8	2	4	1		23

In each cell, the number is the count of active participants for each age/service combination.

Schedule SB, Part V — Statement of Actuarial Assumptions/Methods

Actuarial assumptions for January 1, 2024 funding valuation

Discount rate sponsor elections		
• Segment rates or full yield curve	Segment	
• Look-back months	0	
	Stabilized	Nonstabilized
• First 5 years	4.75%	4.37%
• Next 15 years	4.96%	4.96%
• Over 20 years	5.59%	4.95%
Mortality sponsor elections		
• Healthy participants	Section 430(h)(3) prescribed generational annuitant and nonannuitant mortality tables for 2024 plan year funding valuations, in accordance with IRS regulation 1.430(h)(3)-1.	
• Pre-1995 disabilities	Same as healthy	
• Post-1994 disabilities	Same as healthy	
Other economic assumptions		
• Salary increases	N/A	
• Flat-dollar benefit increases	N/A	
• Social Security wage base	N/A	
• Inflation	N/A	
• Expected investment return	6.60% for 2022, 7.75% for 2023 and 2024	
• Expenses	\$65,000 added to current year normal cost	
Demographic assumptions		
• Withdrawal	See table of sample rates.	
• Disability incidence	1985 Pension Disability Table for males and females – Class 3. See table for sample rates.	
• Supplementary medical insurance benefits (Part B Medicare)	All employees are enrolled and covered for Supplementary Medical Insurance Benefits.	
• Pre-retirement death benefit coverage	All participants are assume to waive pre-retirement death benefit coverage.	
• Retirement age	<u>Attained age</u>	<u>Rate</u>
	Under 55	0.0%
	55–61	5.0%
	62	10.0%
	63–64	20.0%
	65–69	40.0%
	70 and above	100.0%

Schedule SB, Part V — Statement of Actuarial Assumptions/Methods

• Benefit commencement age for		
– Future vested deferred	Earlier of age 63 with 10 years of credited service and age 65	
– Current vested deferred	Earlier of age 63 with 10 years of credited service and age 65	
• Spouse assumptions	Male participants	Female participants
– Percentage married	80%	60%
– Spouse age difference	3 years younger	3 years older
Form of payment	Single life	55% J&S
• Active retirements	50%	50%
• Future vested deferred	50%	50%
• Future disabilities	50%	50%
• Future deaths	0%	100%
• Current vested deferred	50%	50%
Unpredictable contingent event assumptions	Not applicable	

Schedule SB, Part V — Statement of Actuarial Assumptions/Methods

Table of sample rates

Attained age	Rate	
	Disability Incidence	
	Male	Female
20	0.151%	0.089%
25	0.219%	0.150%
30	0.309%	0.252%
35	0.431%	0.388%
40	0.597%	0.547%
45	0.829%	0.777%
50	1.224%	1.201%
55	2.118%	1.962%
60	3.240%	2.326%
65	4.369%	2.718%
69	5.452%	3.331%
70	0.000%	0.000%

Withdrawal			
Ultimate		Select	
Age	Rate	Service	Rate
20	8.9%	0	30.0%
25	6.6%	1	15.0%
30	4.6%	2	15.0%
35	3.9%	3	15.0%
40	3.6%	4	10.0%
45	3.3%		
50	2.9%		
55	2.6%		
60	2.3%		
65	2.0%		

Schedule SB, Part V — Statement of Actuarial Assumptions/Methods

Rationale for non-prescribed economic actuarial assumptions

- The **expected return assumption** for funding purposes was developed based on a combination of historical and forward looking assumptions reflecting the plan's current target investment portfolio and Mercer Investment LLC's Capital Market Outlook assumptions as of October 1, 2023, and reflecting +0.43% incremental return for active portfolio management.
- The **expense assumption** is based on recent historical experience, adjusted to reflect the current year's expected PBGC premiums.

Rationale for non-prescribed demographic actuarial assumptions having a significant effect on the measurement

- The **retirement** and **withdrawal** rates are based on an experience study completed in 2021 using data from 2016 through 2020 and the expectation that the future patterns and circumstances of the employer will not differ significantly from the period studied.
- Since Barnes Group Inc.'s active population was not large enough for a credible experience study of disability incidence, the **disability incidence** table is based on the Conference of Consulting Actuaries' 1985 Pension Disability Study Class 3 rates, consistent with the nature of the plan's workforce.
- The **benefit commencement age** for terminated vested participants is based on an experience study completed in 2021 using data from 2016 through 2020 and the expectation that the future patterns will not differ significantly from the period studied.
- Because the employer does not have enough credible experience to analyze spousal demographics, the assumptions regarding **percent married/spouse age difference** are based on the actuary's experience with many plans and discussions with the plan sponsor.
- The **form of payment** assumptions are based on an experience study completed in 2021 using data from 2016 through 2020 and the expectation that the future patterns will not differ significantly from the period studied.

Actuarial methods for funding

Asset methods – Effective January 1, 2009

The asset valuation method is an average of the adjusted market value over last 24 months preceding the valuation date using annual determination dates. The adjusted market value is the market value at each determination date adjusted to the valuation date based on actual cash flows and expected interest at the lesser of the expected rate of return and the third segment rate. This amount is adjusted to be no greater than 110% and no less than 90% of the fair market value, as required by IRC Section 430.

A characteristic of this asset method is that, over time, it is slightly more likely to produce an actuarial value of assets that is less than the market value of assets than an actuarial value that is greater than the market value.

Schedule SB, Part V — Statement of Actuarial Assumptions/Methods

Participant methods – Effective January 1, 2008

Participants or former participants are included or excluded from the valuation as described below:

- **Participants included:** The plan sponsor provides us with data on all employees as of the valuation date, but only those employees who have completed the plan's eligibility requirements are included in the valuation of liabilities.
- **Participants excluded:** No actuarial liability is included for nonvested participants who terminated prior to the valuation date. For this purpose, participants with a break in service on the valuation date are treated as terminated participants.
- **Insurance contracts:** The plan does not have any insurance contracts.

Minimum funding methods – Effective January 1, 2010

The funding target for minimum funding calculations is computed using the traditional unit credit method of funding. The objective under this method is to fund each participant's benefits under the plan as they accrue. Thus, the total pension to which each participant is expected to become entitled at retirement is broken down into units, each associated with a year of past or future credited service.

A detailed description of the calculation follows:

- The plan's valuation date is the beginning of the plan year.
- An individual's **funding target** is the present value of future benefits based on credited service and average pay as of the beginning of the plan year, and an individual's **target normal cost** is the present value of the benefit expected to accrue in the plan year. If multiple decrements are used, the funding target and the target normal cost for an individual are the sum of the component funding targets and target normal costs associated with the various anticipated separation dates.
- This plan provides benefits that are not a function of a participant's accrued benefit or years of service. This benefit is allocated to funding target based on the ratio of the participant's service at the beginning of the plan year to their service at each decrement age and is allocated to target normal cost based on the proportionate benefit attributable to the increase in the participant's service and compensation during the plan year.
- The plan's **target normal cost** is the sum of the individual target normal costs, and the plan's **funding target** is the sum of the individual funding targets for all participants under the plan.

Midyear Spinoff Funding Method Description

Pursuant to the Associated Spring sale and the applicable terms of the Sale and Purchase Agreement entered into by Barnes Group Inc. and One Equity Partners ("Buyer"), all active participants accruing benefits in the Barnes Group Inc. Pension Plan for Hourly Rate Employees - Milwaukee Division as of end of day April 3, 2024 ("Spinoff Date") were transferred to the Buyer.

In the Schedule SB for the 2024 plan year, the participant count, funding target, actuarial value of assets, market value of assets, carryover balance, and prefunding balance information is shown as of January 1, 2024 (i.e. ignoring the impact of the spinoff). The target normal cost and shortfall

Schedule SB, Part V — Statement of Actuarial Assumptions/Methods

amortization installment information shown reflects only the amounts allocated to Barnes Group Inc. for the 2024 plan year as outlined below.

Below is a summary of the calculations used to develop the allocation of the 2024 minimum required contribution between Barnes Group Inc. and the Buyer.

1/1/2024 Funding Valuation Components	Total	Buyer	Barnes
Liability and Normal Cost			
1. Stabilized funding target ¹⁸	\$ 4,886,824	\$ 1,760,091	\$ 3,106,733
2. Benefit accruals ¹⁹	63,171	42,372	20,799
3. Expected expenses ²⁰	65,000	12,000	53,000
4. Target normal cost (2. + 3.)	128,171	54,372	73,799
Assets			
5. Asset transfer amounts as of Spinoff Date ²¹	\$ 4,516,184	\$ 1,598,627	\$ 2,917,557
6. Actuarial value of assets (excluding receivable contributions after Spinoff Date) ²²	4,907,182	1,737,031	3,170,151
7. Receivable contributions after Spinoff Date ²³	58,860	0	58,860
8. Actuarial value of assets ("AVA") (6. + 7.)	4,966,042	1,737,031	3,229,011
9. Market value of assets ("MVA") ²⁴	4,612,989	1,612,059	3,000,930
Credit Balances ²⁵			
10. Carryover balance ("COB")	\$ 0	\$ 0	\$ 0
11. Prefunding balance ("PFB")	142,752	51,626	91,126
12. Total credit balances (10. + 11.)	142,752	51,626	91,126

¹⁸ Allocation reflects participants' status as of January 1, 2024, and actual participants transferred to the Buyer.

¹⁹ Benefit accrual is allocated assuming 0.3 years of credited service was earned prior to the Spinoff Date using expected hours based on 2,080 hours in a year. Participants assumed to work $3.1/12 \times 2,080 = 537.33$ hours prior to Spinoff Date. For purposes of credited service, 1,700 hours equals one year with pro-rata credit to nearest 1/10th of a year, so 537.33 hours would translate into 0.3 years of credited service. Participants moving to the Buyer are allocated 70% of the annual benefit accrual value. Barnes is allocated 100% of the benefit accrual for those remaining with Barnes and 30% for participants moving to the Buyer.

²⁰ Barnes is allocated expected PBGC expenses plus full 3.1/12 share of non-PBGC expenses. Remaining 8.9/12 share of non-PBGC expected expenses split between Buyer and Barnes based on headcount.

²¹ Based on 414(l) allocation agreed to by Barnes and Buyer.

²² Buyer figure is Total figure excluding receivable contributions after the Spinoff Date, multiplied by ratio of Buyer asset transfer over Total asset transfer (line 5.) as of Spinoff Date. See following page for development of Total actuarial value of assets figure.

²³ Receivable contributions after the Spinoff Date are fully allocated to Barnes.

²⁴ Buyer MVA is Total MVA excluding receivable contributions after the Spinoff Date, multiplied by ratio of Buyer asset transfer over Total asset transfer as of sale date. For display purposes only.

²⁵ Allocation of both COB and PFB is based on % share of stabilized funding target.

Schedule SB, Part V — Statement of Actuarial Assumptions/Methods

1/1/2024 Funding Valuation Components	Total	Buyer	Barnes
Funding Shortfall and Excess Assets			
13. AVA – COB – PFB (8. – 12.)	\$ 4,823,290	\$ 1,685,405	\$ 3,137,885
14. Funding shortfall/(surplus) (1. – 13.)	43,534	74,686	(31,152)
15. Funding shortfall/(surplus) adjusted ²⁶	43,534	43,534	0
16. Excess assets, not less than \$0 (13. – 1) ²⁷	0	0	0
Shortfall Amortization Charge ²⁸			
17. Prior year shortfall amortization installment	\$ 10,625	\$ 7,880	\$ 2,745
18. Current year shortfall amortization installment	(6,153)	(4,563)	(1,590)
19. Shortfall amortization charge (17. + 18.)	4,472	3,317	1,155
Minimum Required Contribution			
20. Target normal cost minus excess asset, not less than \$0 (4. – 16.)	\$ 128,171	\$ 54,372	\$ 73,799
21. Shortfall amortization charge (19.)	4,472	3,317	1,155
22. Minimum required contribution (before available credit balance) (20. + 21.)	132,643	57,689	74,954
23. Credit balance available to offset minimum (12.)	142,752	51,626	91,126
24. Minimum required contribution (after available credit balance), not less than \$0 (22. – 23)	0	6,063	0

²⁶ As Buyer plan has a funding shortfall, but Barnes plan does not, 100% of the Total funding shortfall is allocated to the Buyer.

²⁷ As Total plan does not have excess assets, neither Buyer nor Barnes are allocated excess assets.

²⁸ As Buyer is allocated 100% of the funding shortfall, Buyer is allocated 100% of the Shortfall Amortization Charge for the period after the Spinoff Date.

SCHEDULE SB (Form 5500) <small>Department of the Treasury Internal Revenue Service</small> <small>Department of Labor Employee Benefits Security Administration</small> <small>Pension Benefit Guaranty Corporation</small>	Single-Employer Defined Benefit Plan Actuarial Information This schedule is required to be filed under section 104 of the Employee Retirement Income Security Act of 1974 (ERISA) and section 6059 of the Internal Revenue Code (the Code). ▶ File as an attachment to Form 5500 or 5500-SF.	<small>OMB No. 1210-0110</small> 2024 This Form is Open to Public Inspection
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For calendar plan year 2024 or fiscal plan year beginning 01/01/2024 and ending 12/31/2024

▶ **Round off amounts to nearest dollar.**
 ▶ **Caution:** A penalty of \$1,000 will be assessed for late filing of this report unless reasonable cause is established.

A Name of plan BARNES GROUP INC. PENSION PLAN FOR HOURLY RATE EMPLOYEES - MILWAUKEE DIVISION	B Three-digit plan number (PN) ▶	004
C Plan sponsor's name as shown on line 2a of Form 5500 or 5500-SF BARNES GROUP INC.	D Employer Identification Number (EIN) 06-0247840	
E Type of plan: <input checked="" type="checkbox"/> Single <input type="checkbox"/> Multiple-A <input type="checkbox"/> Multiple-B	F Prior year plan size: <input type="checkbox"/> 100 or fewer <input type="checkbox"/> 101-500 <input checked="" type="checkbox"/> More than 500	

Part I	Basic Information		
1	Enter the valuation date: Month <u>01</u> Day <u>01</u> Year <u>2024</u>		
2	Assets:		
	a Market value	2a	4,612,989
	b Actuarial value	2b	4,966,042
3	Funding target/participant count breakdown	(1) Number of participants	(2) Vested Funding Target
	a For retired participants and beneficiaries receiving payment	37	2,653,004
	b For terminated vested participants	17	434,259
	c For active participants	23	1,534,355
	d Total	77	4,621,618
4	If the plan is in at-risk status, check the box and complete lines (a) and (b) <input type="checkbox"/>		
	a Funding target disregarding prescribed at-risk assumptions	4a	
	b Funding target reflecting at-risk assumptions, but disregarding transition rule for plans that have been in at-risk status for fewer than five consecutive years and disregarding loading factor	4b	
5	Effective interest rate	5	5.22%
6	Target normal cost		
	a Present value of current plan year accruals	6a	20,799
	b Expected plan-related expenses	6b	53,000
	c Target normal cost	6c	73,799

Statement by Enrolled Actuary
 To the best of my knowledge, the information supplied in this schedule and accompanying schedules, statements and attachments, if any, is complete and accurate. Each prescribed assumption was applied in accordance with applicable law and regulations. In my opinion, each other assumption is reasonable (taking into account the experience of the plan and reasonable expectations) and such other assumptions, in combination, offer my best estimate of anticipated experience under the plan.

SIGN HERE	Timothy J. DiIulio, FSA TJD Signature of actuary	10/1/2025 Date
	TIMOTHY J. DIIULIO, F.S.A. Type or print name of actuary	2307805 Most recent enrollment number
	MERCER Firm name	212-345-8680 Telephone number (including area code)
	99 HIGH STREET BOSTON MA 02110-2320 Address of the firm	

If the actuary has not fully reflected any regulation or ruling promulgated under the statute in completing this schedule, check the box and see instructions

For Paperwork Reduction Act Notice, see the Instructions for Form 5500 or 5500-SF. **Schedule SB (Form 5500) 2024 v. 240311**

Part V Assumptions Used to Determine Funding Target and Target Normal Cost

21 Discount rate:				
a Segment rates:	1st segment: 4.75 %	2nd segment: 4.96 %	3rd segment: 5.59 %	<input type="checkbox"/> N/A, full yield curve used
b Applicable month (enter code).....				21b 0
22 Weighted average retirement age				22 63
23 Mortality table(s) (see instructions)	<input type="checkbox"/> Prescribed - combined	<input checked="" type="checkbox"/> Prescribed - separate	<input type="checkbox"/> Substitute	

Part VI Miscellaneous Items

24 Has a change been made in the non-prescribed actuarial assumptions for the current plan year? If "Yes," see instructions regarding required attachment.....	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
25 Has a method change been made for the current plan year? If "Yes," see instructions regarding required attachment.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
26 Demographic and benefit information		
a Is the plan required to provide a Schedule of Active Participants? If "Yes," see instructions regarding required attachment.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
b Is the plan required to provide a projection of expected benefit payments? If "Yes," see instructions regarding required attachment ...	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
27 If the plan is subject to alternative funding rules, enter applicable code and see instructions regarding attachment.....	27	

Part VII Reconciliation of Unpaid Minimum Required Contributions For Prior Years

28 Unpaid minimum required contributions for all prior years	28	0
29 Discounted employer contributions allocated toward unpaid minimum required contributions from prior years (line 19a).....	29	0
30 Remaining amount of unpaid minimum required contributions (line 28 minus line 29)	30	0

Part VIII Minimum Required Contribution For Current Year

31 Target normal cost and excess assets (see instructions):			
a Target normal cost (line 6c).....	31a	73,799	
b Excess assets, if applicable, but not greater than line 31a	31b	0	
32 Amortization installments:	Outstanding Balance		Installment
a Net shortfall amortization installment	43,534		1,155
b Waiver amortization installment			
33 If a waiver has been approved for this plan year, enter the date of the ruling letter granting the approval (Month _____ Day _____ Year _____) and the waived amount	33		
34 Total funding requirement before reflecting carryover/prefunding balances (lines 31a - 31b + 32a + 32b - 33).....	34	74,954	
		Carryover balance	Prefunding balance
35 Balances elected for use to offset funding requirement		0	74,954
36 Additional cash requirement (line 34 minus line 35).....	36	0	
37 Contributions allocated toward minimum required contribution for current year adjusted to valuation date (line 19c).....	37	0	
38 Present value of excess contributions for current year (see instructions)			
a Total (excess, if any, of line 37 over line 36)	38a	0	
b Portion included in line 38a attributable to use of prefunding and funding standard carryover balances	38b		
39 Unpaid minimum required contribution for current year (excess, if any, of line 36 over line 37)	39	0	
40 Unpaid minimum required contributions for all years	40	0	

Part IX Pension Funding Relief Under the American Rescue Plan Act of 2021 (See Instructions)

41 If an election was made to use the extended amortization rule for a plan year beginning on or before December 31, 2021, check the box to indicate the first plan year for which the rule applies. <input type="checkbox"/> 2019 <input type="checkbox"/> 2020 <input checked="" type="checkbox"/> 2021
--

Schedule SB, line 22 — Description of Weighted Average Retirement Age

Each employee is assumed to retire in accordance with the table of retirement rates. The proportion of employees expected to retire at each potential retirement age is shown below. The average retirement age is 63.

(A) Retirement age	(B) Retirement percent	(C) Lx	(D) Number of employees expected to retire (B) x (C)	(E) (A) x (D)
55	5.0%	10,000	500	27,500
56	5.0%	9,500	475	26,600
57	5.0%	9,025	451	25,721
58	5.0%	8,574	428	24,864
59	5.0%	8,145	407	24,028
60	5.0%	7,738	387	23,213
61	5.0%	7,351	368	22,420
62	10.0%	6,983	698	43,297
63	20.0%	6,285	1,257	79,191
64	20.0%	5,028	1,006	64,359
65	40.0%	4,022	1,609	104,583
66	40.0%	2,413	965	63,715
67	40.0%	1,448	579	38,808
68	40.0%	869	348	23,633
69	40.0%	521	209	14,388
70	100.0%	313	313	21,895
Total			10,000	628,215
Average				62.82

Schedule SB, Part V — Summary of Plan Provisions

Summary of major plan provisions

Plan Name	Barnes Group Inc. Pension Plan For Hourly Rate Employees – Milwaukee Division
EIN / Plan number	06-0247840 / 004
Effective date and plan year	Original plan: December 1, 1950 Restated plan: January 1, 2016 Plan year: Calendar year
Status of the plan	The plan has ongoing benefit accruals, however, effective July 1, 2017, the plan has been closed to new participants. On April 4, 2024, all active and accruing participants were transferred to the Buyer pursuant to the sale of Associated Spring and the applicable terms in the corresponding Sale and Purchase Agreement.
Significant events that occurred during the year	None.

Schedule SB, Part V — Summary of Plan Provisions

Definitions

- Covered employees Employee means any person described in (a), (b) or (c) below who is a member of the bargaining unit represented by the (Union) United Steelworkers of America (A.F.L- C.I.O.):
 - (a) each person who was covered under the prior plan on June 30, 2000
 - (b) each person regularly employed by the corporation at its Milwaukee division on an hourly-rate basis (including hourly rate persons on an incentive pay plan), on or after January 1, 1988, and any person employed prior to January 1, 1988 who has an hour of service on or after January 1, 1988; and
 - (c) each part-time hourly rate person employed by the corporation at its Milwaukee division who, on a regular and continuous basis, performs jobs having definitely established working hours, the complete performance of which requires fewer hours of work than the regular work week.

Leased employees as defined under §414(n) of the Code are excluded from participating under this plan as they are not members of a bargaining unit represented by the Union.

Any person employed by the corporation who first completes an hour of service on or after July 1, 2017 is excluded from participating under this Plan.

- Participation Immediately.
- Vesting service All years of service with the employer from date of employment to termination, retirement or death.

<u>Hours of Service in Plan Year</u>	<u>Years of Vested Service Earned</u>
Fewer than 86 hours	0 Years
86-255 hours	1/10 Year
256-425 hours	1/5 Year
426-595 hours	3/10 Year
596-765 hours	2/5 Year
766-935 hours	1/2 Year
939-999 hours	3/5 Year
1,000 or more hours	1 Year

- Credited service All years of service with the employer from date of employment to termination, retirement or death. 1,700 hours equals one year with pro-rated credit to the nearest 1/10th of a year.
 If an employee has fewer than 170 hours of service in any plan year, no Service will be credited for such plan year.

Schedule SB, Part V — Summary of Plan Provisions

Normal retirement																																					
• Eligibility	The first day of the month coinciding with or next following the later of Participant’s 65th birthday or 5th anniversary of date of employment.																																				
• Benefit	Monthly basic retirement benefit for each year of Credited Service is calculated based on the following schedule:																																				
	<table border="1"> <thead> <tr> <th><u>Effective Dates</u></th> <th><u>Monthly Benefit</u></th> </tr> </thead> <tbody> <tr> <td>Retirement on or after July 1, 1995 and prior to July 1, 1996</td> <td>\$18.50</td> </tr> <tr> <td>Retirement on or after July 1, 1996 and prior to July 1, 1997</td> <td>\$19.00</td> </tr> <tr> <td>Retirement on or after July 1, 1997 and prior to July 1, 1998</td> <td>\$19.50</td> </tr> <tr> <td>Retirement on or after July 1, 1998 and prior to July 1, 1999</td> <td>\$20.00</td> </tr> <tr> <td>Retirement on or after July 1, 1999 and prior to July 1, 2000</td> <td>\$20.50</td> </tr> <tr> <td>Retirement on or after July 1, 2000 and prior to June 5, 2006</td> <td>\$23.00</td> </tr> <tr> <td>Retirement on or after June 5, 2006 and prior to July 12, 2012</td> <td>\$27.00</td> </tr> <tr> <td>Retirement on or after July 12, 2012 and prior to July 1, 2013</td> <td>\$28.00</td> </tr> <tr> <td>Retirement on or after July 1, 2013 and prior to July 1, 2014</td> <td>\$28.50</td> </tr> <tr> <td>Retirement on or after July 1, 2014 and prior to July 1, 2016</td> <td>\$29.00</td> </tr> <tr> <td>Retirement on or after July 1, 2016 and prior to July 10, 2017</td> <td>\$29.50</td> </tr> <tr> <td>Retirement on or after July 10, 2017 and prior to July 1, 2018</td> <td>\$30.00</td> </tr> <tr> <td>Retirement on or after July 1, 2018 and prior to July 1, 2019</td> <td>\$30.50</td> </tr> <tr> <td>Retirement on or after July 1, 2019 and prior to July 1, 2020</td> <td>\$31.00</td> </tr> <tr> <td>Retirement on or after July 1, 2020 and prior to July 1, 2021</td> <td>\$31.50</td> </tr> <tr> <td>Retirement on or after July 1, 2021 and prior to July 1, 2022</td> <td>\$32.00</td> </tr> <tr> <td>Retirement on or after July 1, 2022 and prior to July 1, 2023</td> <td>\$33.00</td> </tr> </tbody> </table>	<u>Effective Dates</u>	<u>Monthly Benefit</u>	Retirement on or after July 1, 1995 and prior to July 1, 1996	\$18.50	Retirement on or after July 1, 1996 and prior to July 1, 1997	\$19.00	Retirement on or after July 1, 1997 and prior to July 1, 1998	\$19.50	Retirement on or after July 1, 1998 and prior to July 1, 1999	\$20.00	Retirement on or after July 1, 1999 and prior to July 1, 2000	\$20.50	Retirement on or after July 1, 2000 and prior to June 5, 2006	\$23.00	Retirement on or after June 5, 2006 and prior to July 12, 2012	\$27.00	Retirement on or after July 12, 2012 and prior to July 1, 2013	\$28.00	Retirement on or after July 1, 2013 and prior to July 1, 2014	\$28.50	Retirement on or after July 1, 2014 and prior to July 1, 2016	\$29.00	Retirement on or after July 1, 2016 and prior to July 10, 2017	\$29.50	Retirement on or after July 10, 2017 and prior to July 1, 2018	\$30.00	Retirement on or after July 1, 2018 and prior to July 1, 2019	\$30.50	Retirement on or after July 1, 2019 and prior to July 1, 2020	\$31.00	Retirement on or after July 1, 2020 and prior to July 1, 2021	\$31.50	Retirement on or after July 1, 2021 and prior to July 1, 2022	\$32.00	Retirement on or after July 1, 2022 and prior to July 1, 2023	\$33.00
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Schedule SB, Part V — Summary of Plan Provisions

	Retirement on or after July 1, 2023 and prior to July 1, 2024	\$34.00
	Retirement on or after July 1, 2024	\$35.00
Early retirement		
• Eligibility	Age 55 with 10 years of Credited Service.	
• Benefit	Unreduced early retirement at age 62. Normal Retirement benefit accrued to early retirement, actuarially reduced by 0.5% for each month prior to 62nd birthday.	
• Supplement	Any employee who retires on or after July 1, 1980 and prior to their 62nd birthday will receive a monthly early retirement supplement provided the employee has 30 years or more of Credited Service. This supplement is \$500 if the retirement date is on or after July 1, 1995. In addition, this early retirement supplement shall commence on the first day of the month following the date on which the employee retires and shall be payable monthly thereafter until and including the first day of the month in which he/she dies, or he is reemployed by the corporation, or he/she attains age 62, or he/she becomes eligible for Social Security, whichever occurs first.	
Deferred vested		
• Eligibility	Termination of employment with at least 5 years of Service.	
• Benefit	The amount of benefit should be calculated as for Normal Retirement. An employee's deferred vested benefit shall commence in full on his or her normal retirement date, or at the Participant's option, reduced by 0.5% for each month by which benefit commencement precedes his/her normal retirement date, at any time after attaining age 55, provided the employee has 10 or more years of Credited Service.	
Disability		
• Eligibility	10 years of Credited Service for an employee who is deemed totally and permanently disabled prior to attaining his 65th birthday. The plan Administrator shall have the discretion to determine disability under the plan.	
• Benefit	Effective July 1, 1995, the disability benefit is equal to twice the Normal Retirement benefit for each year of Credited Service, if not eligible for Social Security old age or Social Security disability benefit. Once eligible for a Social Security benefit, the disability benefit equals the Normal Retirement benefit.	
Special Disability Benefit		
• Eligibility	Any employee who receives disability pension payments under the plan, who has received disability benefits under the Social Security Act for at least 24 consecutive months and who has provided satisfactory evidence that he/she is enrolled and covered for Supplementary Medical Insurance Benefits (Part B Medicare) under the federal Social Security Act.	

Schedule SB, Part V — Summary of Plan Provisions

- Benefit The amount of the flat monthly benefit is calculated based on the following schedule:

<u>Effective Dates</u>	<u>Monthly Benefit</u>
Retirement on or after July 1, 1995 and prior to July 1, 1998	\$17.00
Retirement on or after July 1, 1998 and prior to May 1, 2000	\$17.50
Retirement on or after May 1, 2000 and prior to July 1, 2001	\$18.00
Retirement on or after July 1, 2001 and prior to July 1, 2002	\$18.25
Retirement on or after July 1, 2002 and prior to July 1, 2003	\$18.50
Retirement on or after July 1, 2003 and prior to June 5, 2006	\$19.00
Retirement on or after June 5, 2006 and prior to July 8, 2012	\$54.00
Retirement on or after July 8, 2012 and prior to July 1, 2013	\$56.00
Retirement on or after July 1, 2013 and prior to July 1, 2014	\$57.00
Retirement on or after July 1, 2014 and prior to July 1, 2016	\$58.00
Retirement on or after July 1, 2016 and prior to July 10, 2017	\$59.00
Retirement on or after July 10, 2017 and prior to July 1, 2018	\$60.00
Retirement on or after July 1, 2018 and prior to July 1, 2019	\$61.00
Retirement on or after July 1, 2019 and prior to July 1, 2020	\$62.00
Retirement on or after July 1, 2020 and prior to July 1, 2021	\$63.00
Retirement on or after July 1, 2021 and prior to July 1, 2022	\$64.00
Retirement on or after July 1, 2022 and prior to July 1, 2023	\$66.00
Retirement on or after July 1, 2023 and prior to July 1, 2024	\$68.00
Retirement on or after July 1, 2024	\$70.00

Schedule SB, Part V — Summary of Plan Provisions

Pre-Retirement Death

<ul style="list-style-type: none"> • Eligibility 	Five years of Service and married one full year prior to death.
<ul style="list-style-type: none"> • Benefit 	<p>The amount of benefit shall equal the payment that would have been made to a spouse under the Joint & 55% Survivor option if:</p> <p>(a) in the case of an employee who dies after attaining the earliest retirement age under the plan, the employee has retired with an immediate Joint & 55% Survivor option on the day before his/her death, or</p> <p>(b) in the case of an employee who dies on or before the earliest retirement age under the plan, the employee had :</p> <ul style="list-style-type: none"> (i) separated from service on the date of death; (ii) survived to the earliest retirement age; (iii) retired with an immediate Joint & 55% Survivor Option at the earliest retirement age; and (iv) died on the day on which he/she would have attained the earliest retirement age
<ul style="list-style-type: none"> • Cost 	<p>For each month and part thereof that the pre-retirement survivor annuity coverage is in effect, a reduction will be made to the Participant's retirement income as follows:</p> <p>(i) 1/60 of 1% for each full or partial month of coverage for the months ending prior to the Participant's 45th birthday; and</p> <p>(ii) 1/24 of 1% for each full or partial month of coverage for the months ending after the Participant's 45th birthday.</p> <p>For active participants terminating from Barnes Group after January 1, 2019, the plan sponsor will cover the cost of pre-retirement survivor annuity coverage for the period of active employment. These participants will continue to be charged for coverage after they terminate from Barnes Group.</p>

Schedule SB, Part V — Summary of Plan Provisions

Special Age 65 Benefit

• **Eligibility** Any retiree, or surviving spouse of a retiree, or a surviving spouse of an employee who died before retirement who has provided satisfactory evidence that the participant is enrolled and covered for Supplementary Medical Insurance Benefits (Part B Medicare). This benefit, in addition to his/her basic pension, will be payable on the first day of each month after his/her 65th birthday on which a pension is payable under the plan.

• **Benefit** The amount of the flat monthly benefit is calculated based on the following schedule:

<u>Effective Dates</u>	<u>Monthly Benefit</u>
Retirement on or after July 1, 1995 and prior to July 1, 1998	\$17.00
Retirement on or after July 1, 1998 and prior to May 1, 2000	\$17.50
Retirement on or after May 1, 2000 and prior to July 1, 2001	\$18.00
Retirement on or after July 1, 2001 and prior to July 1, 2002	\$18.25
Retirement on or after July 1, 2002 and prior to July 1, 2003	\$18.50
Retirement on or after July 1, 2003 and prior to June 1, 2012	\$19.00
Retirement on or after June 5, 2012	\$25.00

Form of benefits

• **Automatic form for unmarried participants** If Participant either has no spouse as of his/her retirement date or elects to receive his/her income under the normal form, retirement income will be the amount determined under the benefit formula and paid as a single life annuity.

• **Automatic form for married participants** If Participant has a spouse as of his/her retirement date and does not elect otherwise, retirement income shall be paid on the basis of Joint and 55% Survivor form, as stipulated by ERISA, and will be the amount determined under the benefit formula multiplied by 95% plus ½% for each year in excess of five by which the spouse’s age exceeds the employee’s age, and minus ½% for each year in excess of five by which the spouse’s age is less than the employee’s age.

• **Optional forms** Life Annuity;
 55% Contingent Pensioner Option;
 75% Contingent Pensioner Option;
 Lump Sum.

Schedule SB, Part V — Summary of Plan Provisions

-
- **Optional form conversion factors** Amount of an alternative form of benefit (other than a lump sum) which has a value equivalent to the benefit or benefits otherwise payable under the plan, computed as follows.
 - a) 55% Contingent Pensioner Option: a 5% reduction plus/minus ½% for each year or part of the year where the spouse is more than 5 years younger/older than the participant.
 - b) 75% Contingent Pensioner Option, the more generous of the following:
 1. A 6% interest assumption and a mortality assumption according to the RP2000 Mortality Tables for Males and Females with a weighting of 50% males and 50% females projected to 2010
 2. The flat rate reductions in effect prior to October 1, 2011 applied to the frozen benefit accrued to September 30, 2011.
-

Miscellaneous

-
- **Maximum benefits** Annual benefits may not exceed the limits in IRC Section 415. This limit is indexed annually. For 2024, the limit is \$275,000.
-

Benefits included or excluded

Unless noted below, all benefits provided by the plan are included in this valuation.

- **Plan amendments excluded:** None.
- **Late retirement increases:**
 - *Active participants:* The plan provides benefit suspension notices to participants who work beyond normal retirement; therefore, late retirement actuarial increases only apply to participants who defer retirement beyond age 70½. This valuation includes increases for current participants over age 70.
 - *Deferred vested participants:* Current deferred vested participants over normal retirement age are valued including the late retirement actuarial increase.
- **Internal Revenue Code limitations:** The limitations of Internal Revenue Code Section 415(b) and 401(a)(17) have been incorporated into our calculations.
- **IRC Section 416 rules for top-heavy plans:** We did not test whether this plan is top-heavy (when the present value of benefits for key employees equals or exceeds 60% of the present value for all participants). However, we expect that the plan is not top-heavy due to the large number of rank-and-file participants; therefore, the funding target and target normal cost do not reflect any liability for top-heavy benefit accruals.
- **Benefit Restrictions:** Benefit restrictions (if applicable) are ignored in this valuation.

Schedule SB, Part V — Summary of Plan Provisions

Plan provisions specific to funding

Additional benefits included or excluded

- **IRC Section 436 benefit restrictions:**
 - *Unpredictable contingent event benefits:* This valuation excludes restricted contingent event benefits that occurred before the valuation date but includes contingent event benefits which are expected to occur on or after the valuation date regardless of anticipated funding-based limitations.
 - *Plan amendments:* See above.
 - *Prohibited payments:* Limitations on prohibited benefits (if any) are reflected for annuity starting dates before the valuation date but are ignored for annuity starting dates on or after the valuation date.
 - *Benefit accruals:* The plan's funding target does not reflect any limitation on benefit accruals. The target normal cost does not reflect any limitation on benefit accruals.
- **Scheduled benefit increases:** Scheduled benefit increases effective after the end of the current plan year are excluded from minimum funding requirements.
- **Unpredictable contingent event benefits:** The plan does not have any unpredictable contingent event benefits.

Plan provision changes since prior valuation

- Maximum benefit limits under IRS rules were updated from 2023 to 2024.

Schedule SB, line 32 — Schedule of Amortization Bases

The total shortfall amortization charge is the sum of the individual shortfall amortization installments for each plan year since the IRC Section 430 changes made by ARPA took effect for the plan. Although an individual shortfall amortization installment can be negative, the combined shortfall amortization charge cannot be less than \$0.

Shortfall bases (excluding midyear spinoff)				
Year established	Outstanding balance	Years remaining	Installment	
2023	\$ 110,857	14	\$	10,625
2024	(67,323)	15		(6,153)
Total	\$ 43,534		\$	4,472

Pursuant to the Associated Spring sale and the applicable terms of the Sale and Purchase Agreement entered into by Barnes Group Inc. and One Equity Partners (“Buyer”), all active participants accruing benefits in the Barnes Group Inc. Pension Plan for Hourly Rate Employees - Milwaukee Division as of end of day April 3, 2024 (“Spinoff Date”) were transferred to the Buyer. The shortfall amortization installments were allocated between Barnes and the Buyer as detailed below. Please see the attachment titled “Schedule SB, Part V — Statement of Actuarial Assumptions/Methods” for additional details.

1/1/2024 Funding Valuation Components	Total	Buyer	Barnes
Shortfall Amortization Charge			
17. Prior year shortfall amortization installment	\$ 10,625	\$ 7,880	\$ 2,745
18. Current year shortfall amortization installment	(6,153)	(4,563)	(1,590)
19. Shortfall amortization charge (17. + 18.)	4,472	3,317	1,155

Schedule SB, line 25 — Change in Method**Method changes since prior valuation**

- Pursuant to the Associated Spring sale and the applicable terms of the Sale and Purchase Agreement entered into by Barnes Group Inc. and One Equity Partners (“Buyer”), all active participants accruing benefits in the Barnes Group Inc. Pension Plan for Hourly Rate Employees - Milwaukee Division as of end of day April 3, 2024 (“Spinoff Date”) were transferred to the Buyer. A summary of the calculations used to develop the allocation of the 2024 minimum required contribution between Barnes Group Inc. and the Buyer is detailed in the attachment titled “Schedule SB, Part V — Statement of Actuarial Assumptions/Methods”.

Schedule SB, line 24 — Change in Actuarial Assumptions

- The expense component of normal cost decreased from \$90,000 to \$65,000 to reflect expectations for the current plan year.