

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

FORM 11-K

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

For the fiscal year ended December 31, 2024

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

For the transition period from to

Commission file number 0-3134
-

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

PARK-OHIO INDUSTRIES, INC. 401(K) RETIREMENT PLAN
- B. Name of issuer of the securities held pursuant to the plan and the address of its principal executive office:

PARK-OHIO HOLDINGS CORP.
6065 Parkland Boulevard
CLEVELAND, OHIO 44124
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EXHIBITS

Exhibit Number	Description
23.1	Consent of Independent Registered Public Accounting Firm, Bober, Markey, Fedorovich & Company

SIGNATURES

The Plan. Pursuant to the requirements of the Securities Exchange Act of 1934, the trustees (or other persons who administer the employee benefit plan) have duly caused this annual report to be signed on its behalf by the undersigned hereunto duly authorized.

Park-Ohio Industries, Inc. 401(K) Retirement Plan

Date: June 20, 2025

By	<u>/s/ Patrick W. Fogarty</u>
Name:	Patrick W. Fogarty
Title:	Vice President and Chief Financial Officer

AUDITED FINANCIAL STATEMENTS
AND SUPPLEMENTAL SCHEDULE

Park-Ohio Industries, Inc. 401(K) Retirement Plan
December 31, 2024 and 2023 and Year Ended December 31, 2024
With Report of Independent Registered Public Accounting Firm

Park-Ohio Industries, Inc. 401(K) Retirement Plan

Audited Financial Statements and Supplemental Schedules

December 31, 2024 and 2023

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* Other supplemental schedules required by Section 2520.103-10 of the Department of Labor Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974 have been omitted because they are not applicable

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Plan Administrative Committee
Park-Ohio Industries, Inc. 401(K) Retirement Plan
Cleveland, Ohio

Opinion on the Financial Statements

We have audited the accompanying Statements of Net Assets Available for Benefits of the Park-Ohio Industries, Inc. 401(K) Retirement Plan (the "Plan") as of December 31, 2024 and 2023 and the related Statement of Changes in Net Assets Available for Benefits for the year ended December 31, 2024 and the related notes (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 Plan as of December 31, 2024 and 2023, and the changes in net assets available for benefits for the year ended December 31, 2024, 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.

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 in the accompanying Schedule of Assets (Held at End of Year) as of December 31, 2024 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.

We have served as the Company's auditor since 2015.

/s/ BOBER, MARKEY,
FEDOROVICH &
COMPANY

Akron, Ohio

June 20, 2025

Park-Ohio Industries, Inc. 401(K) Retirement Plan

Statements of Net Assets Available for Benefits

	December 31,	
	2024	2023
Assets		
Participant-directed investments, at fair value	\$ 164,863,557	\$ 157,233,452
Receivables:		
Notes receivable from participants, net of allowance	1,936,555	2,339,522
Employer contributions	540,744	467,413
Employee contributions	606,140	829,830
Total receivables	3,083,439	3,636,765
Net assets available for benefits	\$ 167,946,996	\$ 160,870,217

See accompanying notes.

Park-Ohio Industries, Inc. 401(K) Retirement Plan

Statement of Changes in Net Assets Available for Benefits

Year Ended December 31, 2024

Additions

Investment income:

Net appreciation in fair value of instruments	\$	15,692,502
Dividends and interest		6,325,783
Interest income on notes receivable from participants		148,171
Total investment income		22,166,456

Contributions:

Participants		10,062,954
Rollovers		923,567
Employer		540,744
		11,527,265

Total additions

33,693,721

Deductions

Distributions to participants		26,504,737
Corrective distributions		61,226
Trustee fees and expenses		50,979
Total deductions		26,616,942
Net increase		7,076,779

Net assets available for benefits:

Beginning of year		160,870,217
End of year	\$	167,946,996

See accompanying notes.

Park-Ohio Industries, Inc. 401(K) Retirement Plan

Notes to Financial Statements

December 31, 2024 and 2023 and
Year Ended December 31, 2024

1. Significant Accounting Policies

Basis of Accounting

The accounting records of Park-Ohio Industries, Inc. 401(K) Retirement Plan (the "Plan") are maintained on the accrual basis in accordance with accounting principles generally accepted in the United States ("GAAP").

Investment Value and Income Recognition

All investments are under the control and management of The Charles Schwab Trust Company (the "Plan Trustee"). Purchases of investments are recorded at cost and revalued to market value at the close of each business day by the Plan Trustee. All investments of the Plan are participant directed.

Investment income and realized and unrealized gains and losses are reported as net income derived from investment activities and are allocated among the individual accounts in proportion to their respective balances immediately preceding the valuation date.

Realized gains and losses are calculated based upon historical cost of securities using the average cost method.

Purchases and sales of securities are recorded on a settlement-date basis. Interest income is recorded on the accrual basis. Dividends are recorded on the ex-dividend date.

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 and supplemental schedules. Actual results could differ from those estimates.

Park-Ohio Industries, Inc. 401(K) Retirement Plan

Notes to Financial Statements (continued)

2. Description of Plan

The Plan, adopted by Park-Ohio Industries, Inc. (the "Company"), a wholly-owned subsidiary of Park-Ohio Holdings Corp., was originally effective January 1, 1985 and last amended and restated on November 16, 2020 and is a defined contribution plan. The Plan generally provides that an employee who is in service of a division or group to which the Company has extended eligibility for membership in the Plan (other than a temporary employee or employees covered by a collective bargaining agreement that does not specify coverage under the Plan) will be eligible to participate after completion of the probationary period which generally occurs after 30 days of continuous employment. The Plan is subject to the provisions of the Employee Retirement Income Security Act of 1974, as amended ("ERISA").

Individual accounts are maintained for all participants. All amounts are credited or charged to an account in terms of full and fractional investment units at the investment unit values determined as of the transaction date. Each participant designates how his share of the contributions is to be allocated among the investment funds of the Plan. The benefit to which a participant is entitled is the benefit that can be provided from the participant's account.

The Plan provides for contributions to be made to the Plan pursuant to a qualified cash or deferred arrangement under Section 401(k) of the Internal Revenue Code (the "Code"). If a participant elects to have contributions made for the participant pursuant to such an arrangement, the participant's compensation is reduced by the amount of such contributions elected and the employer makes plan contributions equal to the amount of the reduction.

The Company may terminate the Plan at any time by resolution of its Board of Directors, subject to the provisions of ERISA. In the event of the termination of the Plan, the beneficial interests of all participants under the Plan shall become fully vested.

Information about the Plan is contained in the Plan document, which is available from the Company's Plan Administrative Committee.

3. Contributions

Contributions by employees to the Plan are made via payroll deductions. Employees may contribute up to 80% of their compensation on a pretax basis. Excluding catch-up contributions for eligible participants, contributions by employees may not exceed \$23,000, the Internal Revenue Service maximum contribution for 2024. Employee contributions are fully vested and nonforfeitable at all times.

The Plan provides for discretionary uniform rates of employer contributions for eligible employees, which generally include nonbargaining unit employees of the Company. Any such contribution is allocated among the investment options based on individual participant's investment allocation designation. During March 2009, the Company indefinitely suspended its contributions to the Plan for non-Fluid Routing Solutions ("FRS") employees.

For FRS employees, the Company may make matching contributions and discretionary contributions. As amended January 1, 2018, for non-union employees, the Company may match 37.5% of the first 12% of employee contributions. Effective January 1, 2011, the Company match was eliminated for union employees in accordance with the collective bargaining agreement. The matching contributions for non-union employees are subject to Company approval. Additional discretionary amounts may be contributed at the option of the Company's management. As of December 31, 2024, the Company has accrued \$540,744 of matching contributions for non-union employees.

Corrective distributions to participants represent current year contributions and earnings on such deposits that must be returned to employees to ensure Plan compliance with additional limitations in the Code on contributions by highly compensated individuals.

Participants of the Plan can make changes to their account through Schwab Retirement Plan Services, Inc. The current provision of the system permits a participant to change investment allocation percentages daily and change payroll deferral percentages on the first day of every month. The Plan froze future investments in the Park-Ohio Holdings Corp. common stock fund effective January 19, 2024.

4. Notes Receivable from Participants

A participant may borrow from contributions and earnings a minimum of \$1,000 and a maximum of the lesser of 50% of the participant's eligible account or \$50,000. Loan repayments are made via payroll deductions on after-tax dollars, which commence thirty to sixty days after receipt and acceptance of the loan check. Terms of the participant loans are five years for a

personal loan and fifteen years for a mortgage loan, with interest payable at SOFR plus 1%. Interest rates on participant loans at December 31, 2024 range from 4.25% to 9.50% with maturities of varying dates. These notes are reported at the unpaid principal balance plus accrued interest less an estimated provision for uncollectible loans. Notes are deemed distributions by the Plan when they are determined to be in default. An allowance for credit losses of \$109,441 and \$175,158 was recorded at December 31, 2024 and 2023, respectively, related to the loan balances of active participants that are in default and are believed to be uncollectable.

5. Fair Value Measurements

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (i.e., an exit price). The fair value hierarchy prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). The three levels of the fair value hierarchy are described below:

- Level 1 – Unadjusted quoted prices in active markets that are accessible to the Plan at the measurement date for identical assets and liabilities.
- Level 2 – Inputs other than quoted prices in active markets for identical assets and liabilities that are observable either directly or indirectly for substantially the full term of the asset or liability. Level 2 inputs include the following:
 - quoted prices for similar assets or liabilities in active markets;
 - quoted prices for identical or similar asset or liabilities in markets that are not active;
 - observable inputs other than quoted prices that are used in the valuation of the assets or liabilities (e.g., interest rate and yield curve quotes at commonly quoted intervals); and
 - inputs that are derived principally from or corroborated by observable market data by correlation or other means.
- Level 3 – Unobservable inputs for the asset or liability (i.e., supported by little or no market activity).

Level 3 inputs include management's own assumption about the assumptions that market participants would use in pricing the asset or liability (including assumptions about risk). The Plan had no Level 3 investments as of December 31, 2024 and 2023 or during the year ended December 31, 2024.

The level in the fair value hierarchy within which the fair value measurement is classified is determined based on the lowest level input that is significant to the fair value measurement in its entirety.

Following is a description of the valuation techniques and inputs used for each major class of assets measured at fair value.

Mutual funds and savings: Valued at the closing price reported on the active market on which the individual securities are traded.

Common/collective trusts: Valued at the Net Asset Value ("NAV") of shares held by the Plan at year end. Common/collective trusts are invested to earn returns that match or exceed U.S. or international equity indexes.

Common stock fund: Valued based on the underlying investments within the fund which comprise of Park-Ohio Holdings Corp. common stock and cash equivalents.

The methods described above may produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair values. Furthermore, while the Plan believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different fair value measurement at the reporting date. The Plan has not changed its valuation techniques for measuring fair value during the year ended December 31, 2024.

Park-Ohio Industries, Inc. 401(K) Retirement Plan

Notes to Financial Statements (continued)

The Plan's policy is to recognize significant transfers between levels at the actual date of the event or change in circumstances that caused the transfer. There were no transfers between levels during the years presented.

The following tables set forth by level, within the fair value hierarchy, the Plan's assets carried at fair value:

Assets at Fair Value as of December 31, 2024				
	Level 1	Level 2	Level 3	Total
Mutual funds	\$ 103,647,199	\$ —	\$ —	\$ 103,647,199
Schwab Bank Savings cash account	11,931,315	—	—	11,931,315
Common stock fund	—	1,473,066	—	1,473,066
Total assets in the fair value hierarchy	\$ 115,578,514	\$ 1,473,066	\$ —	117,051,580
Investments measured at NAV as practical expedient:				
Common/collective trusts				47,811,977
Total investments				\$ 164,863,557

Assets at Fair Value as of December 31, 2023				
	Level 1	Level 2	Level 3	Total
Mutual funds	\$ 94,909,798	\$ —	\$ —	\$ 94,909,798
Schwab Bank Savings cash account	14,298,358	—	—	14,298,358
Common stock fund	—	1,738,070	—	1,738,070
Total assets in the fair value hierarchy	\$ 109,208,156	\$ 1,738,070	\$ —	110,946,226
Investments measured at NAV as practical expedient:				
Common/collective trusts				46,287,226
Total investments				\$ 157,233,452

At December 31, 2024, the Plan had no unfunded commitments related to common/collective trust funds. The redemption of common/collective trust funds is subject to the preference of individual Plan participants and, with the exception of the American Funds Growth Fund of America R4 ("American Funds"), contains no restrictions on the timing of redemption; however, participant redemptions may be subject to certain redemption fees. The American Funds contain a restriction whereby, if a shareholder sells \$5,000 or more in shares, he or she is restricted from purchasing back into the investment for 30 days.

6. Benefits

A participant is entitled to receive the full value of his or her account upon (1) normal retirement at age 65; (2) attainment of at least age 55 and 10 years of service; (3) death, or total and permanent disability as determined by the plan administrator upon the basis of competent medical opinion, or (4) termination of employment after six years of credited service. Such benefits may be paid in a lump sum cash payment, an elective installment option or an elective annuity option. Distributions to participants are recognized when paid.

In the event of termination of employment, a participant has a vested right in the participant's share of the Company's contributions determined as follows:

Park-Ohio Industries, Inc. 401(K) Retirement Plan

Notes to Financial Statements (continued)

Credited Vesting Service (non-FRS employees)	Vested Percentage
Less than 2 years	0 %
At least 2 years but less than 3 years	20 %
At least 3 years but less than 4 years	40 %
At least 4 years but less than 5 years	60 %
At least 5 years but less than 6 years	80 %
6 years or more	100 %
Credited Vesting Service (FRS employees)	Vested Percentage
Employer matching contributions are subject to the following vesting schedule:	
Less than 2 years	—
2 years and after	100 %
Discretionary contributions are subject to the following vesting schedule:	
Less than 3 years	—
3 years and after	100 %

The portion of the Company's contributions that are not vested in such terminated participants will generally be forfeited and may be used to reduce the Company's obligations to the Plan. The total forfeited contributions by participants of the Plan was \$10,509 during 2024. Forfeited non-vested accounts to be used to reduce Company obligations to the Plan in future years as of December 31, 2024 and 2023, were \$39,185 and \$13,747, respectively.

A participant may withdraw a portion of the participant's contributions in cash subject to certain limitations and restrictions. The hardship withdrawal may be used to purchase a principal residence, avoid foreclosure on a mortgage or eviction, or pay bona fide medical, education, funeral or repair of residence expenditures.

7. Related-Party Transactions

Certain Plan investments are mutual funds, savings, or common collective trust funds managed by the Plan Trustee. Therefore, these transactions qualify as party in interest. The Plan pays for investment management, trustee and other plan administration fees which amounted to \$50,979 for the year ended December 31, 2024.

At December 31, 2024 and 2023, the Plan held 379,656 and 434,514 units of Park-Ohio Holdings Corp. common stock fund with a fair value of \$1,473,066 and \$1,738,070, respectively.

8. Income Tax Status

The Company received a determination letter from the Internal Revenue Service ("IRS") dated September 21, 2020 stating that the Plan is qualified under Section 401(a) of the Code. Subsequent to the Plan's September 21, 2020 execution, the Plan was amended and restated November 16, 2020. The Plan administrator believes the Plan is being operated in compliance with the applicable requirements of the Code and, therefore, believes the Plan is qualified and the related trust is tax exempt as of December 31, 2024.

GAAP requires plan management to evaluate uncertain tax positions taken by the Plan. The financial statement effects of a tax position are recognized when the position is more likely than not, based on the technical merits, to be sustained upon examination by the IRS. The Plan administrator has analyzed the tax positions taken by the Plan, and has concluded that as of December 31, 2024, there are no uncertain positions taken or expected to be taken. The Plan has recognized no interest or penalties related to uncertain tax positions. The Plan is subject to routine audits by taxing jurisdictions; however, there are currently no audits in progress for any tax periods.

9. Risks and Uncertainties

The Plan invests in various investment securities. Investment securities are exposed to various risks such as interest rate, market volatility 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.

Supplemental Schedule

Park-Ohio Industries, Inc. 401(K) Retirement Plan

EIN #34-6520107 Plan #011

Schedule H, Line 4i – Schedule of Assets
(Held at End of Year)

December 31, 2024

(a)	(b) Identity of Issuer, Borrower, Lessor, or Similar Party	(c) Description of Investment Including Maturity Date, Rate of Interest, Collateral, Par, or Maturity value	(d) Cost	(e) Current Value
	Common Stock Fund			
*	Park-Ohio Holdings Corp.	379,656 units of Park-Ohio Stock Fund	**	\$ 1,473,066
	Mutual Funds			
	American Funds	327,307 shares of Growth Fund of America R4	**	24,063,620
*	Schwab	232,009 shares of S&P 500 Index Fund	**	20,943,470
	American Funds	215,565 shares of Washington Mutual Investors Fund Class R-4	**	13,166,727
	Metropolitan West	864,223 shares of Metropolitan West Total Return BD	**	7,665,656
	Oakmark	242,170 Shares of Equity and Income Fund Class I	**	8,706,019
	MassMutual	239,857 shares of MassMutual Select Midcap GWTH EQ II R5	**	4,514,112
	Templeton	297,983 shares of World Fund Class A	**	4,949,505
	T Rowe Price	68,809 shares of T Rowe Price New Horizons Fund	**	3,840,238
	Vanguard	19,315 shares of Vanguard Mid Cap Index Fund Admiral	**	6,313,533
	Goldman Sachs	70,836 shares of Goldman Sachs Small-Cap Value Instruments	**	2,858,241
	Dodge & Cox	48,127 shares of Dodge & Cox International Stock Fund	**	2,401,549
	American Funds	47,055 shares of Europacific Growth Fund Class R-4	**	2,461,440
	T Rowe Price	30,691 shares of T Rowe Price Retirement 2030 Fund	**	786,923
	T Rowe Price	3,476 shares of T Rowe Price Retirement 2020 Fund	**	64,688
	T Rowe Price	10,856 shares of T Rowe Price Retirement 2025 Fund	**	179,660
	T Rowe Price	2,675 shares of T Rowe Price Retirement 2040 Fund	**	81,760
	T Rowe Price	818 shares of T Rowe Price Retirement 2010 Fund	**	12,397
	T Rowe Price	20,928 shares of T Rowe Price Retirement 2035 Fund	**	440,960
	T Rowe Price	2,408 shares of T Rowe Price Retirement 2015 Fund	**	30,295
	T Rowe Price	2,269 shares of T Rowe Price Retirement 2045 Fund	**	50,501
	T Rowe Price	4,100 shares of T Rowe Price Retirement 2050 Fund	**	77,652
	T Rowe Price	1,723 shares of T Rowe Price Retirement 2055 Fund	**	34,270
	T Rowe Price	301 shares of T Rowe Price Retirement Balance Fund	**	3,983

Common/Collective Trusts				
*	Schwab	303,555 units of Managed Retirement Trust Fund 2030 Class II	**	14,716,343
*	Schwab	168,634 units of Managed Retirement Trust Fund 2020 Class II	**	6,478,934
*	Schwab	222,874 units of Managed Retirement Trust Fund 2040 Class II	**	12,324,915
*	Schwab	144,250 units of Managed Retirement Trust Fund 2050 Class II	**	4,500,586
*	Schwab	21,065 units of Managed Retirement Trust Income Fund Class II	**	470,808
*	Schwab	85,843 units of Managed Retirement Trust Fund 2025 Class II	**	1,982,117
*	Schwab	27,850 units of Managed Retirement Trust Fund 2010 Class II	**	897,592
*	Schwab	64,670 units of Managed Retirement Trust Fund 2045 Class II	**	1,840,496
*	Schwab	31,411 units of Managed Retirement Trust Fund 2055 Class II	**	958,047
*	Schwab	64,387 units of Managed Retirement Trust Fund 2035 Class II	**	1,694,030
*	Schwab	3,582 units of Managed Retirement Trust Fund 2015 Class II	**	72,892
*	Schwab	81,178 units of Managed Retirement Trust Fund 2060 Class II	**	1,875,217
Cash				
*	Schwab Bank Savings Cash Account		**	11,931,315
Total investments				<u>\$ 164,863,557</u>
*	Participant loans	Varying maturity dates with interest rates ranging from 4.25% to 9.50%	\$	1,936,555
* Indicates party-in-interest to the Plan. ** Cost – not required.				

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statement (Form S-8 No. 333-01047) pertaining to the Park-Ohio Industries, Inc. 401(K) Retirement Plan of our report dated June 20, 2025, with respect to the financial statements and schedule of the Park-Ohio Industries, Inc. 401(K) Retirement Plan included in this Annual Report (Form 11-K) for the year ended December 31, 2024.

/s/ BOBER, MARKEY,
FEDOROVICH &
COMPANY

Akron, Ohio

June 20, 2025