Company Registration No. 02676033 (England and Wales)

AJAX TOCCO INTERNATIONAL LIMITED

REPORT AND FINANCIAL STATEMENTS
FOR THE YEAR ENDED
31 DECEMBER 2018

AJAX TOCCO INTERNATIONAL LIMITED

COMPANY INFORMATION

Directors	P E Hyland R Vilsack T M Illencik P W Fogarty
Secretary	R Vilsack
Company number	02676033
Registered office	Unit 2 Dorset Road Saltley Business Park Saltley Birmingham West Midlands B8 1BG
Auditor	RSM UK Audit LLP Chartered Accountants St Philips Point Temple Row Birmingham West Midlands B2 5AF

AJAX TOCCO INTERNATIONAL LIMITED

STRATEGIC REPORT

FOR THE YEAR ENDED 31 DECEMBER 2018

The directors present the strategic report for the year ended 31 December 2018.

Review of the Business

Turnover for the year was £4,710,355, an increase of £1,381,571 when compared to the previous year. Gross profit for the year was 33% compared to the previous year of 27%. The directors consider that the increase in turnover and gross profit is primarily attributable to a increase in volumes while maintaining a partly fixed cost base.

During the year, the carrying value of investments remained unchanged. The Directors are satisfied with the performance, position and future prospects for its subsidiaries, which are not consolidated in these financial statements, and have not identified any other indicators of impairment of its investments. There are no significant matters to report in respect of the company's financial position at the year end other than to note that the company has net current liabilities of £20,436,299 primarily due to amounts owed to fellow group companies in respect of past acquisitions.

Future developments and principal risks

As for many companies, the current business environment in which we operate continues to be challenging. With these risks and uncertainties in mind, we are aware that any plans for the future development of the business may be subject to unforeseen future events outside of our control. However, we are fortunate to have the support of our group company, Ajax Tocco Magnethermic Inc, and the loan provided by a company within the group and as such believe our business will remain secure, responding to issues and opportunities as they arise.

Foreign currency risk

The company buys and sells goods and services denominated in currencies other than sterling. The company's transactional currency exposure arises from sales and purchases in currencies other than sterling, principally in euros. The company invoices are in sterling or euros to suit the currency of payment. The company's euro account and sales ledger debtors are revalued to the current exchange rate as at the month end to reflect any currency fluctuations.

Credit risk

In the normal course of business, the company sells items on deferred terms to other parties. Any risk associated with these third parties failing to honour their obligations arising from these transactions is minimised through rigorous credit control procedures with deferred terms only being granted to customers who demonstrate an appropriate payment history and satisfy other financial requirements. Individual exposures are continuously monitored on a customer by customer basis to ensure that the exposure to bad debts is minimised. As a result of this, goods may sometimes only be supplied on a cash-with-order basis or supply declined entirely.

Liquidity risk

Liquidity risk is the risk that an entity will encounter difficulty in meeting obligations associated with financial liabilities. The company aims to mitigate liquidity risk by managing cash generation by its operations and places appropriate focus on credit control.

Price risk

Price risk arises on inventory purchases but the company aims to minimise risk through effective management of inventory levels, monitoring stock turnover and reviewing prices regularly.

Cash flow risk

The company actively maintains an appropriate level of cash reserves.

Key Performance Indicators ("KPIs")

Key performance indicators are used within the business to monitor elements such as margin and utilisation. These help us manage our proposals, employee skill level, machine flexibility and other associated elements of our business. In respect of the current year the margin in manufacturing was a little lower than the previous year due to an increase in our internal cost that the company is not always able to pass onto their customers. Utilisation was actually slightly higher than the previous year in manufacturing at 78.2% compared to 76.7% in the previous year after the company introduced a new product range/technology. Additionally, utilisation in service was again slightly higher than the previous year at 52.7% compared to 49.3%.

On behalf of the board

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P E Hyland

Director

18/9/19

AJAX TOCCO INTERNATIONAL LIMITED

DIRECTORS' REPORT

FOR THE YEAR ENDED 31 DECEMBER 2018

The directors present their annual report and financial statements for the year ended 31 December 2018.

Principal activities
The principal activity of the company continued to be that of manufacturing and servicing induction heat treating and melting equipment worldwide.

Directors
The directors who held office during the year and up to the date of signature of the financial statements were as follows:

P E Hyland
R Vilsack
T M Illencik
P W Fogarty

Results and dividends
The results for the year are set out on page 7.

No ordinary dividends were paid. The directors do not recommend payment of a final dividend.

Auditor
RSM UK Audit LLP have indicated their willingness to be reappointed for another term and appropriate arrangements have been put in place for them to be deemed reappointed as auditors in the absence of an Annual General Meeting.

Statement of disclosure to auditor
So far as each person who was a director at the date of approving this report is aware, there is no relevant audit information of which the company's auditor is unaware. Additionally, each director has taken all the necessary steps that they ought to have taken as a director in order to make themselves aware of all relevant audit information and to establish that the company's auditor is aware of that information.

On behalf of the board

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P E Hyland
Director

Date: 18\9\19

AJAX TOCCO INTERNATIONAL LIMITED

DIRECTORS' RESPONSIBILITIES STATEMENT

FOR THE YEAR ENDED 31 DECEMBER 2018

The directors are responsible for preparing the Strategic Report and the Directors' Report and the financial statements in accordance with applicable law and regulations.

Company law requires the directors to prepare financial statements for each financial year. Under that law the directors have elected to prepare the financial statements in accordance with United Kingdom Generally Accepted Accounting Practice (United Kingdom Accounting Standards and applicable law). Under company law the directors must not approve the financial statements unless they are satisfied that they give a true and fair view of the state of affairs of the company and of the profit or loss of the company for that period. In preparing these financial statements, the directors are required to:

- select suitable accounting policies and then apply them consistently;
- make judgements and accounting estimates that are reasonable and prudent;
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the company will continue in business.

The directors are responsible for keeping adequate accounting records that are sufficient to show and explain the company's transactions and disclose with reasonable accuracy at any time the financial position of the company and enable them to ensure that the financial statements comply with the Companies Act 2006. They are also responsible for safeguarding the assets of the company and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF AJAX TOCCO INTERNATIONAL LIMITED

Opinion

We have audited the financial statements of Ajax Tocco International Limited (the 'company') for the year ended 31 December 2018 which comprise the statement of comprehensive income, the statement of financial position, the statement of changes in equity and notes to the financial statements, including a summary of significant accounting policies. The financial reporting framework that has been applied in their preparation is applicable law and United Kingdom Accounting Standards, including FRS 102 "The Financial Reporting Standard applicable in the UK and Republic of Ireland" (United Kingdom Generally Accepted Accounting Practice).

In our opinion, the financial statements:

- give a true and fair view of the state of the company's affairs as at 31 December 2018 and of its profit for the year then ended;
- have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice;
- have been prepared in accordance with the requirements of the Companies Act 2006.

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs (UK)) and applicable law. Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the financial statements section of our report. We are independent of the company in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, including the FRC's Ethical Standard, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Conclusions relating to going concern

We have nothing to report in respect of the following matters in relation to which the ISAs (UK) require us to report to you where:

- the directors' use of the going concern basis of accounting in the preparation of the financial statements is not appropriate; or
- the directors have not disclosed in the financial statements any identified material uncertainties that may cast significant doubt about the company's ability to continue to adopt the going concern basis of accounting for a period of at least twelve months from the date when the financial statements are authorised for issue.

Other information

The other information comprises the information included in the annual report, other than the financial statements and our auditor's report thereon. The directors are responsible for the other information. Our opinion on the financial statements does not cover the other information and, except to the extent otherwise explicitly stated in our report, we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether there is a material misstatement in the financial statements or a material misstatement of the other information. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact.

We have nothing to report in this regard.

Opinions on other matters prescribed by the Companies Act 2006

In our opinion, based on the work undertaken in the course of the audit:

- the information given in the strategic report and the directors' report for the financial year for which the financial statements are prepared is consistent with the financial statements; and
- the strategic report and the directors' report have been prepared in accordance with applicable legal requirements.

Matters on which we are required to report by exception
In the light of the knowledge and understanding of the company and its environment obtained in the course of the audit, we have not identified material misstatements in the strategic report and the directors' report.

We have nothing to report in respect of the following matters where the Companies Act 2006 requires us to report to you if, in our opinion:

- adequate accounting records have not been kept, or returns adequate for our audit have not been received from branches not visited by us; or
- the financial statements are not in agreement with the accounting records and returns; or
- certain disclosures of directors' remuneration specified by law are not made; or
- we have not received all the information and explanations we require for our audit.

Responsibilities of directors
As explained more fully in the directors' responsibilities statement set out on page 4, the directors are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view, and for such internal control as the directors determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the directors are responsible for assessing the company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the company or to cease operations, or have no realistic alternative but to do so.

Auditor's responsibilities for the audit of the financial statements
Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

A further description of our responsibilities for the audit of the financial statements is located on the Financial Reporting Council's website at: http://www.frc.org.uk/auditorsresponsibilities. This description forms part of our auditor's report.

Use of our report
This report is made solely to the company's members, as a body, in accordance with Chapter 3 of Part 16 of the Companies Act 2006. Our audit work has been undertaken so that we might state to the company's members those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the company and the company's members as a body, for our audit work, for this report, or for the opinions we have formed.

RSM UK Audit LLP

Philip Coleman FCA (Senior Statutory Auditor)
For and on behalf of RSM UK Audit LLP, Statutory Auditor
Chartered Accountants
St Philips Point
Temple Row
Birmingham
West Midlands, B2 5AF
20 September 2019

AJAX TOCCO INTERNATIONAL LIMITED

STATEMENT OF COMPREHENSIVE INCOME
FOR THE YEAR ENDED 31 DECEMBER 2018

	Notes	2018 £	2017 £
Turnover	3	4,710,355	3,328,784
Cost of sales		(3,146,596)	(2,445,393)
Gross profit		1,563,759	883,391
Distribution costs		(3,286)	(3,324)
Administrative expenses		(868,729)	(658,035)
Operating profit	6	691,744	222,032
Interest receivable and similar income	7	-	299,003
Interest payable and similar expenses	8	(154,479)	(155,220)
Other gains and losses	9	-	(299,003)
Profit before taxation		537,265	66,812
Tax on profit	10	(34,605)	-
Profit for the financial year		502,660	66,812

The Statement of Comprehensive Income has been prepared on the basis that all operations are continuing operations.

Company Registration No. 02676033

AJAX TOCCO INTERNATIONAL LIMITED

STATEMENT OF FINANCIAL POSITION

AS AT 31 DECEMBER 2018

	Notes	2018 £	2018 £	2017 £	2017 £
Fixed assets					
Tangible assets	11		262,060		312,178
Investments	12		24,395,692		24,395,692
			24,657,752		24,707,870
Current assets					
Stocks	14	283,215		279,327	
Debtors	15	1,809,557		643,683	
Cash at bank and in hand		646,064		1,196,960	
		2,738,836		2,119,970	
Creditors: amounts falling due within one year	16	(23,175,135)		(23,126,725)	
Net current liabilities			(20,436,299)		(21,006,755)
Total assets less current liabilities			4,221,453		3,701,115
Provisions for liabilities	18		(17,678)		-
Net assets			4,203,775		3,701,115
Capital and reserves					
Called up share capital	20		2,653,930		2,653,930
Capital contribution reserve	21		1,527,261		1,527,261
Profit and loss reserves	21		22,584		(480,076)
Total equity			4,203,775		3,701,115

The financial statements were approved by the board of directors and authorised for issue on 18 September 2019 and are signed on its behalf by:

18/9/19

P E Hyland
Director

AJAX TOCCO INTERNATIONAL LIMITED

STATEMENT OF CHANGES IN EQUITY
FOR THE YEAR ENDED 31 DECEMBER 2018

	Notes	Share capital	Capital contribution reserve	Profit and loss reserves	Total
		£	£	£	£
Balance at 1 January 2017		2,653,930	1,527,261	(546,888)	3,634,303
Year ended 31 December 2017:					
Profit and total comprehensive income for the year		-	-	66,812	66,812
Balance at 31 December 2017		2,653,930	1,527,261	(480,076)	3,701,115
Year ended 31 December 2018:					
Profit and total comprehensive income for the year		-	-	502,660	502,660
Balance at 31 December 2018		2,653,930	1,527,261	22,584	4,203,775

1 Accounting policies

Company information
Ajax Tocco International Limited is a private company limited by shares and is registered and incorporated in England and Wales. The registered office is Unit 2 Dorset Road, Saltley Business Park, Saltley, Birmingham, West Midlands, B8 1BG.

The company's principal activities and nature of its operations are disclosed in the Directors' Report.

Accounting convention
These financial statements have been prepared in accordance with FRS 102 "The Financial Reporting Standard applicable in the UK and Republic of Ireland" ("FRS 102") and the requirements of the Companies Act 2006.

The financial statements are prepared in sterling, which is the functional currency of the company. Monetary amounts in these financial statements are rounded to the nearest £.

The financial statements have been prepared under the historical cost convention. The principal accounting policies adopted are set out below.

In accordance with FRS 102, the Company has taken advantage of the exemptions from the following disclosure requirements;

- Section 4 'Statement of Financial Position' – Reconciliation of the opening and closing number of shares
- Section 7 'Statement of Cash Flows' – Presentation of a Statement of Cash Flow and related notes and disclosures
- Section 11 'Basic Financial Instruments' & Section 12 'Other Financial Instrument Issues' – Carrying amounts, interest income/expense and net gains/losses for each category of financial instrument; basis of determining fair values, details of collateral, loan defaults or breaches, details of hedges, hedging fair value changes recognised in profit or loss and in other comprehensive income.

The Company has taken advantage of the exemption in Section 401 of the Companies Act 2006 from the requirement to prepare consolidated financial statements. Consequently, these financial statements present the financial position and financial performance of Ajax Tocco International Limited as a single entity. The financial statements of Ajax Tocco International Limited are consolidated in the financial statements of Park-Ohio Industries Treasury Company Inc. which are available from 6065 Parkland Boulevard, Cleveland, United States of America, OH 44124.

Going concern
Due to the balance sheet position of this company, it is dependent on the support of its group company, Ajax Tocco Magnethermic Inc. The directors have no reason to believe that this support will not continue for at least 12 months from the date of this report. The company has a letter of support to this effect and as such these financial statements have been prepared on a going concern basis.

Turnover
The turnover shown in the profit and loss account represents the value of all goods sold and services provided during the period, less returns received, at selling price exclusive of Value Added Tax. Sales are recognised at the point at which the company has fulfilled its contractual obligations and the risks and rewards attaching to the product, such as obsolescence, have been transferred to the customer.

1 Accounting policies (Continued)

Revenue from the sale of goods is recognised when the significant risks and rewards of ownership of the goods have passed to the buyer (usually on dispatch of the goods), the amount of revenue can be measured reliably, it is probable that the economic benefits associated with the transaction will flow to the entity and the costs incurred or to be incurred in respect of the transaction can be measured reliably.

Revenue from contracts for the provision of professional services is recognised by reference to the stage of completion when the stage of completion, costs incurred and costs to complete can be estimated reliably. The stage of completion is calculated by comparing costs incurred, mainly in relation to contractual hourly staff rates and materials, as a proportion of total costs. Where the outcome cannot be estimated reliably, revenue is recognised only to the extent of the expenses recognised that it is probable will be recovered.

Tangible fixed assets
Tangible fixed assets are initially measured at cost and subsequently measured at cost or valuation, net of depreciation and any impairment losses.

Depreciation is recognised so as to write off the cost or valuation of assets less their residual values over their useful lives on the following bases:

Plant and machinery	15% on reducing balance
Fixtures, fittings and equipment	15% on reducing balance

The gain or loss arising on the disposal of an asset is determined as the difference between the sale proceeds and the carrying value of the asset, and is credited or charged to profit or loss.

Fixed asset investments
Interests in subsidiaries, associates and jointly controlled entities are initially measured at cost and subsequently measured at cost less any accumulated impairment losses. The investments are assessed for impairment at each reporting date and any impairment losses or reversals of impairment losses are recognised immediately in profit or loss.

A subsidiary is an entity controlled by the company. Control is the power to govern the financial and operating policies of the entity so as to obtain benefits from its activities.

Impairment of fixed assets
At each reporting period end date, the company reviews the carrying amounts of its tangible assets to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss (if any). Where it is not possible to estimate the recoverable amount of an individual asset, the company estimates the recoverable amount of the cash-generating unit to which the asset belongs.

1 Accounting policies (Continued)

Recoverable amount is the higher of fair value less costs to sell and value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset for which the estimates of future cash flows have not been adjusted.

If the recoverable amount of an asset (or cash-generating unit) is estimated to be less than its carrying amount, the carrying amount of the asset (or cash-generating unit) is reduced to its recoverable amount. An impairment loss is recognised immediately in profit or loss, unless the relevant asset is carried at a revalued amount, in which case the impairment loss is treated as a revaluation decrease.

Recognised impairment losses are reversed if, and only if, the reasons for the impairment loss have ceased to apply. Where an impairment loss subsequently reverses, the carrying amount of the asset (or cash-generating unit) is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognised for the asset (or cash-generating unit) in prior years. A reversal of an impairment loss is recognised immediately in profit or loss, unless the relevant asset is carried at a revalued amount, in which case the reversal of the impairment loss is treated as a revaluation increase.

Stocks

Stocks are stated at the lower of cost and estimated selling price less costs to complete and sell. Cost comprises direct materials and, where applicable, direct labour costs and those overheads that have been incurred in bringing the stocks to their present location and condition.

Stocks held for distribution at no or nominal consideration are measured at the lower of replacement cost and cost, adjusted where applicable for any loss of service potential.

At each reporting date, an assessment is made for impairment. Any excess of the carrying amount of stocks over its estimated selling price less costs to complete and sell is recognised as an impairment loss in profit or loss. Reversals of impairment losses are also recognised in profit or loss.

Cash and cash equivalents

Cash and cash equivalents are basic financial instruments and include cash in hand, deposits held at call with banks, other short-term liquid investments with original maturities of three months or less, and bank overdrafts. Bank overdrafts are shown within borrowings in current liabilities.

Financial instruments

The company has elected to apply the provisions of Section 11 'Basic Financial Instruments' and Section 12 'Other Financial Instruments Issues' of FRS 102 to all of its financial instruments.

Financial instruments are recognised when the company becomes party to the contractual provisions of the instrument.

Financial assets and liabilities are offset, with the net amounts presented in the financial statements, when there is a legally enforceable right to set off the recognised amounts and there is an intention to settle on a net basis or to realise the asset and settle the liability simultaneously.

Basic financial assets

Basic financial assets, which include trade and other debtors and cash and bank balances, are initially measured at transaction price including transaction costs and are subsequently carried at amortised cost using the effective interest method unless the arrangement constitutes a financing transaction, where the financial asset is measured at the present value of the future receipts discounted at a market rate of interest.

1 Accounting policies (Continued)

Other financial assets

Other financial assets, including trade investments, are initially measured at fair value, which is normally the transaction price. Such assets are subsequently carried at fair value and the changes in fair value are recognised in profit or loss, except that investments in equity instruments that are not publicly traded and whose fair values cannot be measured reliably are measured at cost less impairment.

Trade debtors, loans and other receivables that have fixed or determinable payments that are not quoted in an active market are classified as 'loans and receivables'. Loans and receivables are measured at amortised cost using the effective interest method, less any impairment.

Interest is recognised by applying the effective interest rate, except for short-term receivables when the recognition of interest would be immaterial. The effective interest method is a method of calculating the amortised cost of a debt instrument and of allocating the interest income over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash receipts through the expected life of the debt instrument to the net carrying amount on initial recognition.

Impairment of financial assets

Financial assets, other than those held at fair value through profit and loss, are assessed for indicators of impairment at each reporting end date.

Financial assets are impaired where there is objective evidence that, as a result of one or more events that occurred after the initial recognition of the financial asset, the estimated future cash flows have been affected. If an asset is impaired, the impairment loss is the difference between the carrying amount and the present value of the estimated cash flows discounted at the asset's original effective interest rate. The impairment loss is recognised in profit or loss.

If there is a decrease in the impairment loss arising from an event occurring after the impairment was recognised, the impairment is reversed. The reversal is such that the current carrying amount does not exceed what the carrying amount would have been, had the impairment not previously been recognised. The impairment reversal is recognised in profit or loss.

Derecognition of financial assets

Financial assets are derecognised only when the contractual rights to the cash flows from the asset expire or are settled, or when it transfers the financial asset and substantially all the risks and rewards of ownership to another entity, or if some significant risks and rewards of ownership are retained but control of the asset has transferred to another party that is able to sell the asset in its entirety to an unrelated third party.

Equity instruments issued by the company are recorded at the proceeds received, net of direct issue costs. Dividends payable on equity instruments are recognised as liabilities once they are no longer at the discretion of the company.

Classification of financial liabilities

Financial liabilities and equity instruments are classified according to the substance of the contractual arrangements entered into. An equity instrument is any contract that evidences a residual interest in the assets of the company after deducting all of its liabilities.

Basic financial liabilities

Basic financial liabilities, including trade and other creditors, bank loans and loans from fellow group companies, are initially recognised at transaction price unless the arrangement constitutes a financing transaction, where the debt instrument is measured at the present value of the future payments discounted at a market rate of interest.

Debt instruments are subsequently carried at amortised cost, using the effective interest rate method.

1 Accounting policies (Continued)

Other financial liabilities
Derivatives, including interest rate swaps and forward foreign exchange contracts, are not basic financial instruments. Derivatives are initially recognised at fair value on the date a derivative contract is entered into and are subsequently re-measured at their fair value. Changes in the fair value of derivatives are recognised in profit or loss in finance costs or finance income as appropriate, unless hedge accounting is applied and the hedge is a cash flow hedge.

Debt instruments where the contractual returns, repayment of the principal, or other terms (such as prepayment provisions or term extensions) do not meet the conditions to be measured at amortised cost, are subsequently measured at fair value through profit or loss. Debt instruments may be designated as being measured at fair value though profit or loss to eliminate or reduce an accounting mismatch or if the instruments are measured and their performance evaluated on a fair value basis in accordance with a documented risk management or investment strategy.

Financial liabilities and equity instruments are classified according to the substance of the contractual arrangements entered into. An equity instrument is any contract that evidences a residual interest in the assets of the company after deducting all of its liabilities.

Derecognition of financial liabilities
Financial liabilities are derecognised when, and only when, the company's contractual obligations are discharged, cancelled, or they expire. Equity instruments issued by the company are recorded at the proceeds received, net of direct issue costs. Dividends payable on equity instruments are recognised as liabilities once they are no longer at the discretion of the company.

Taxation
The tax expense represents the sum of the current tax expense and deferred tax expense. Current tax assets are recognised when tax paid exceeds the tax payable.

Current and deferred tax is charged or credited to profit or loss, except when it relates to items charged or credited to other comprehensive income or equity, when the tax follows the transaction or event it relates to and is also charged or credited to other comprehensive income, or equity.

Current tax assets and current tax liabilities and deferred tax assets and deferred tax liabilities are offset, if and only if, there is a legally enforceable right to set off the amounts and the entity intends either to settle on the net basis or to realise the asset and settle the liability simultaneously.

Current tax
Current tax is based on taxable profit for the year. Current tax assets and liabilities are measured using tax rates that have been enacted or substantively enacted by the reporting period.

Deferred tax
Deferred tax is recognised in respect of all timing differences that have originated but not reversed at the balance sheet date where transactions or events that result in an obligation to pay more tax in the future or a right to pay less tax in the future have occurred at the balance sheet date. Timing differences are differences between the company's taxable profits and its results as stated in the financial statements that arise from the inclusion of gains and losses in tax assessments in periods different from those in which they are recognised in the financial statements.

Deferred tax is measured at the average tax rates that are expected to apply in the periods in which timing differences are expected to reverse, based on tax rates and laws that have been enacted or substantively enacted by the balance sheet date. Deferred tax is measured on a non-discounted basis.

1 Accounting policies (Continued)

Employee benefits
The costs of short-term employee benefits are recognised as a liability and an expense, unless those costs are required to be recognised as part of the cost of stock or fixed assets.

The cost of any unused holiday entitlement is recognised in the period in which the employee's services are received.

Termination benefits are recognised immediately as an expense when the company is demonstrably committed to terminate the employment of an employee or to provide termination benefits.

Retirement benefits
The company operates a defined contribution pension scheme and the pension charge represents the amounts payable by the company to the fund in respect of the year. The assets of the scheme are held separately from those of the company in an independently administered fund.

Leases
Rentals payable under operating leases, including any lease incentives received, are charged to income on a straight line basis over the term of the relevant lease except where another more systematic basis is more representative of the time pattern in which economic benefits from the leased asset are consumed.

Foreign exchange
Transactions in currencies other than the functional currency (foreign currency) are initially recorded at the exchange rate prevailing on the date of the transaction.

Monetary assets and liabilities denominated in foreign currencies are translated at the rate of exchange ruling at the reporting date. Non-monetary assets and liabilities denominated in foreign currencies are translated at the rate ruling at the date of the transaction, or, if the asset or liability is measured at fair value, the rate when that fair value was determined.

All translation differences are taken to profit or loss, except to the extent that they relate to gains or losses on non-monetary items recognised in other comprehensive income, when the related translation gain or loss is also recognised in other comprehensive income.

2 Judgements and key sources of estimation uncertainty

In the application of the company's accounting policies, the directors are required to make judgements, estimates and assumptions about the carrying amount of assets and liabilities that are not readily apparent from other sources. The estimates and associated assumptions are based on historical experience and other factors that are considered to be relevant. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised, if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

A key area of judgement is in relation to whether there are any indicators of impairment of the cost of investments in subsidiaries.

Other than this, there are no estimates and assumptions which have a significant risk of causing a material adjustment to the carrying amount of assets and liabilities.

3 Turnover and other revenue

An analysis of the company's turnover is as follows:

	2018	2017
	£	£
Turnover analysed by class of business		
Manufacturing and servicing	4,710,355	3,328,784

	2018	2017
	£	£
Other revenue		
Dividends received	-	299,003

	2018	2017
	£	£
Turnover analysed by geographical market		
UK sales	2,094,511	1,307,503
European sales	1,445,460	1,007,133
United States of America sales	272,843	420,091
Rest of the World sales	897,541	594,057
	4,710,355	3,328,784

4 Employees

The average monthly number of persons (including directors) employed by the company during the year was:

	2018	2017
	Number	Number
Production staff	21	19
Distribution staff	3	3
Administrative staff	10	10
Management staff	1	1
Apprentice staff	1	1
	36	34

4 Employees (Continued)

Their aggregate remuneration comprised:

	2018	2017
	£	£
Wages and salaries	861,220	812,680
Social security costs	87,550	88,808
Pension costs	23,520	21,892
	972,290	923,380

5 Directors' remuneration

	2018	2017
	£	£
Remuneration for qualifying services	67,190	60,154
Company pension contributions to defined contribution schemes	1,592	1,450
	68,782	61,604

The remuneration of key management personnel (including pension contributions and national insurance contributions) amounted to £76,901 (2017 - £69,443).

6 Operating profit

	2018	2017
Operating profit for the year is stated after charging/(crediting):	£	£
Exchange losses/(gains)	26,213	(975)
Fees payable to the company's auditor for the audit of the company's financial statements	17,100	17,000
Depreciation of owned tangible fixed assets	47,200	48,470
Loss on disposal of tangible fixed assets	2,118	1,540
Cost of stocks recognised as an expense	1,900,451	1,298,615
Operating lease charges	106,127	100,889

Exchange differences recognised in profit or loss during the year, except for those arising on financial instruments measured at fair value through profit or loss, amounted to a loss of £26,213 (2017 - a gain of £975).

7 Interest receivable and similar income

	2018	2017
	£	£
Income from fixed asset investments		
Income from shares in group undertakings	-	299,003

8 Interest payable and similar expenses

	2018	2017
	£	£
Interest on bank overdrafts and loans	2,004	1,138
Interest payable to group undertakings	152,475	154,082
	154,479	155,220

9 Other gains and losses fixed asset investments

	2018	2017
	£	£
Loss on impairment of fixed asset investment (see note 13)	-	(299,003)

10 Taxation

	2018	2017
	£	£
Current tax		
UK corporation tax on profits for the current period	16,927	-
Deferred tax		
Origination and reversal of timing differences	17,678	-
Total tax charge	34,605	-

The total tax charge for the year included in the income statement can be reconciled to the profit before tax multiplied by the standard rate of tax as follows:

	2018	2017
	£	£
Profit before taxation	537,265	66,812
Expected tax charge based on the standard rate of corporation tax in the UK of 19.00% (2017: 19.25%)	102,080	12,859
Unutilised tax losses carried forward	-	(16,217)
Permanent capital allowances in excess of depreciation	-	2,611
Other tax adjustments	-	747
Deferred tax rate change	(8,963)	-
Use of tax losses	(58,512)	-
Tax expense for the year	34,605	-

10 Taxation (Continued)

The company has non-trade losses of £344,188 as at the year end. No provision for a deferred tax asset of £58,512 on these losses has been included in the financial statements due to the uncertainty as to its realisation as they can only be set-off against non trade profits.

11 Tangible fixed assets

	Plant and machinery	Fixtures, fittings and equipment	Total
	£	£	£
Cost			
At 1 January 2018	1,983,385	508,522	2,491,907
Disposals	(13,425)	-	(13,425)
At 31 December 2018	1,969,960	508,522	2,478,482
Depreciation and impairment			
At 1 January 2018	1,695,692	484,037	2,179,729
Depreciation charged in the year	42,813	4,387	47,200
Eliminated in respect of disposals	(10,507)	-	(10,507)
At 31 December 2018	1,727,998	488,424	2,216,422
Carrying amount			
At 31 December 2018	241,962	20,098	262,060
At 31 December 2017	287,693	24,485	312,178

12 Fixed asset investments

	Notes	2018 £	2017 £
Investments in subsidiaries	13	24,395,692	24,395,692

Movements in fixed asset investments

	Shares in group undertakings £
Cost or valuation	
At 1 January 2018 & 31 December 2018	24,395,692
Carrying amount	
At 31 December 2018	24,395,692
At 31 December 2017	24,395,692

13 Subsidiaries

Details of the company's subsidiaries at 31 December 2018 are as follows:

Name of undertaking	Registered office	Nature of business	Class of shares held	% Held Direct	Indirect
Apollo Aerospace Components India Private Limited	Prestige Center Point, 507, Edward Road (Cunningham Road) Bangalore, 560 052, Karnataka India	Distribution centre management	Ordinary shares		100.00
Apollo Aerospace Components Limited	Suite 1, 3rd floor, 11-12 St James' Square, London, UK, SW1Y 4LB	Industrial fastener supplies	Ordinary shares		100.00
Apollo Aerospace Components sp.zo.o	Wojska Polskiego 9, 39-300 Mielec, Poland	Distribution centre management	Ordinary shares		100.00
Apollo Group Limited	Suite 1, 3rd floor, 11-12 St James' Square, London, UK, SW1Y 4LB	Management services	Ordinary shares	100.00	
Heads & Allthreads Cz s.r.o	Karlovarska ulice 5926, Chomutov,43001 , Czech Republic	Wholesale, specialised retail, production of metal commodities	Ordinary shares		100.00
Heads & Allthreads Private Limited	Gat no 144/1/2/3 Kurali Tal Khed, 410501, Pune, India	Trading, import and export of automobiles, auto parts and other merchandised goods	Ordinary shares		100.00
Heads & Allthreads Sp z.o.o.	Ul. Hutnicza 53/ C2, Gdynia 81-061, Poland	Wholesale trade and distribution of, industrial fasteners and other similar products	Ordinary shares		100.00
Langstone Supplies Limited	Suite 1 3rd floor, 11-12 St. James's Square, London, United Kingdom, SW1Y 4LB	Wholesale clothing and footwear	Ordinary sares		100.00
QEF Global (Ireland) Limited	8th Floor Block E, Iveagh Court, Harcourt Road, Dublin 2, Ireland	Holding company	Ordinary shares		100.00
QEF Global Holdings Limited	8th Floor Block E, Iveagh Court, Harcourt Road, Dublin 2, Ireland	Holding company	Ordinary shares	100.00	

13 Subsidiaries (Continued)

Supply Technologies (IRLG) Limited	8th Floor, Block E, Iveagh Court, *Harcourt Road,* Dublin 2 Ireland	Supply of bolts, nuts, rivets and other industrial fasteners	Ordinary shares		100.00
Supply Technologies (UKGRP) Limited	Suite 1, 3rd floor, 11-12 St James' Square, London, UK, SW1Y 4LB	Supply of management systems	Ordinary shares	100.00	
Supply Technologies Limited (formerly Heads & Allthreads Limited)	Unit 10 Kettles Wood Drive, Woodgate Business Park, Birmingham, West Midlands, B32 3DB	Supply of bolts, nuts, rivets and other industrial fasteners	Ordinary shares		100.00
Dax International Limited	Suite 1 3rd floor, 11-12 St. James's Square, London, United Kingdom, SW1Y 4LB	Other transportation support activities	Ordinary		100.00
Hydrapower Dynamics Limited	Suite 1 3rd floor, 11-12 St. James's Square, London, United Kingdom, SW1Y 4LB	Wholesale of hardware, plumbing and heating equipment and supplies	Ordinary		100.00

14 Stocks

	2018 £	2017 £
Raw materials and consumables	194,252	198,600
Work in progress	88,963	80,727
	283,215	279,327

15 Debtors

Amounts falling due within one year:	2018 £	2017 £
Trade debtors	772,574	398,598
Amounts owed by group undertakings	924,866	48,050
Other debtors	5,937	90,986
Prepayments and accrued income	106,180	106,049
	1,809,557	643,683

16 Creditors: amounts falling due within one year

	2018 £	2017 £
Trade creditors	197,984	52,303
Amounts due to group undertakings	22,397,825	22,095,466
Corporation tax	16,927	-
Other taxation and social security	159,375	26,868
Other creditors	276,276	871,492
Accruals and deferred income	126,748	80,596
	23,175,135	23,126,725

At the year end outstanding pension contributions included within accruals amounted to £5,483 (2017. £4,589).

17 Provisions for liabilities

	Notes	2018 £	2017 £
Deferred tax liabilities	18	17,678	-

18 Deferred taxation

Deferred tax assets and liabilities are offset where the company has a legally enforceable right to do so. The following is the analysis of the deferred tax balances (after offset) for financial reporting purposes:

Balances:	Liabilities 2018 £	Liabilities 2017 £
Accelerated Capital Allowances	17,678	-

Movements in the year:	2018 £
Liability at 1 January 2018	-
Charge to profit or loss	17,678
Liability at 31 December 2018	17,678

The deferred tax liability set out above is expected to reverse within 12 months and relates to accelerated capital allowances that are expected to mature within the same period.

19 Retirement benefit schemes

Defined contribution schemes	2018 £	2017 £
Charge to profit or loss in respect of defined contribution schemes	23,520	21,892

The company operates a defined contribution pension scheme for all qualifying employees. The assets of the scheme are held separately from those of the company in an independently administered fund.

20 Share capital

	2018 £	2017 £
Ordinary share capital		
Issued and fully paid		
2,653,930 Ordinary shares of £1 each	2,653,930	2,653,930
	2,653,930	2,653,930

The company has one class of ordinary shares which carry no right to fixed income, each carry the right to vote at general meetings of the company.

21 Reserves

Capital contribution reserve
This represents capital contributions made to the company by another member of the group between 2003 and 2008.

Profit and loss reserves
This represents cumulative profit and loss net of distributions to owners.

22 Operating lease commitments

Lessee
At the reporting end date the company had outstanding commitments for future minimum lease payments under non-cancellable operating leases, which fall due as follows:

	2018	2017
	£	£
Within one year	13,968	96,903
Between two and five years	37,027	31,221
	50,995	128,124

23 Controlling party

The company's immediate parent company is IEGE Industrial Equipment Group European Holding Company Limited, a company incorporated in the Republic of Ireland.

The ultimate parent company which heads the largest group in which the results are consolidated is that headed by Park-Ohio Holdings Corp, a company incorporated in the United States of America. The address from which these financial statements can be obtained is 6065 Parkland Boulevard, Cleveland, United States of America, OH 44124.

The directors consider there to be no ultimate controlling party.

ParkOhio

2018 Annual Report

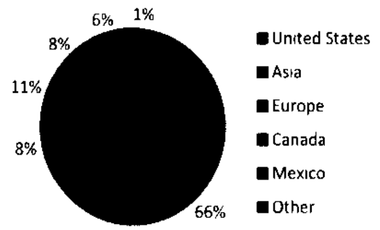
To Our Fellow Shareholders:

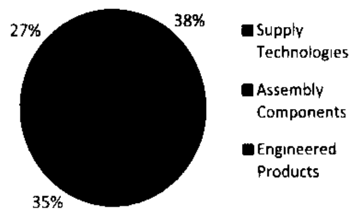
The ParkOhio family should be proud of our record achievements during 2018 Most importantly, we were able to achieve these accomplishments while investing aggressively in our future

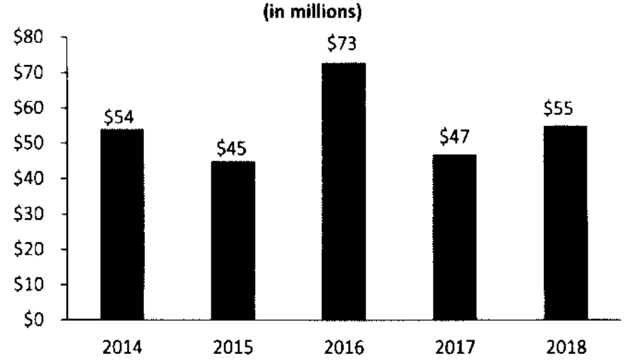
In 2019, we will focus on maximizing the returns on these investments and increasing profitability and cash flow

Thank you for your support.

Matthew V. Crawford
Chairman and Chief Executive Officer







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

FORM 10-K

(Mark One)

☑ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the fiscal year ended December 31, 2018

or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the transition period from ___ to ___
Commission file number: 000-03134

PARK-OHIO HOLDINGS CORP.

(Exact name of registrant as specified in its charter)

Ohio	**34-1867219**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
6065 Parkland Boulevard, Cleveland, Ohio	**44124**
(Address of principal executive offices)	**(Zip Code)**

Registrant's telephone number, including area code (440) 947-2000
Securities registered pursuant to Section 12(b) of the Act:

Title of each class	**Name of each exchange on which registered**
Common Stock, Par Value $1.00 Per Share	The NASDAQ Stock Market LLC

Securities registered pursuant to Section 12(g) of the Act.
None

Park-Ohio Holdings Corp. is a successor issuer to Park-Ohio Industries, Inc.

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☑

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☑

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☑ No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☑ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

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

Large accelerated filer	☐	Accelerated filer	☑
Non-accelerated filer		Smaller reporting company	☐
		Emerging growth company	☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). ☐ Yes ☑ No

Aggregate market value of the registrant's Common Stock held by non-affiliates of the registrant: Approximately $328,048,000 based on the closing price of $37.30 per share of the registrant's Common Stock on June 29, 2018.

Number of shares outstanding of registrant's Common Stock, par value $1.00 per share, as of February 28, 2019: 12,660,922.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive proxy statement for the Annual Meeting of Shareholders to be held on or about May 9, 2019 are incorporated by reference into Part III of this Form 10-K.

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PARK-OHIO HOLDINGS CORP.
FORM 10-K ANNUAL REPORT
FOR THE FISCAL YEAR ENDED DECEMBER 31, 2018

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Part I

Item 1. *Business*

Overview

Park-Ohio Holdings Corp. ("Holdings" or "ParkOhio"), incorporated in Ohio since 1998, is a diversified international company providing world-class customers with a supply chain management outsourcing service, capital equipment used on their production lines, and manufactured components used to assemble their products.

References herein to "we" or "the Company" include, where applicable, Holdings and Park-Ohio Industries, Inc. and Holdings' other direct and indirect subsidiaries.

The Company operates through three reportable segments: Supply Technologies, Assembly Components and *Engineered Products*. As of December 31, 2018, we employed approximately 7,300 people.

The following table summarizes the key attributes of each of our business segments

	Supply Technologies	Assembly Components	Engineered Products
NET SALES FOR 2018	$636.8 million	$578.3 million	$443.0 million
SELECTED PRODUCTS	Sourcing, planning and procurement of over 245,000 production components, including • Fasteners • Pins • Valves • Hoses • Wire harnesses • Clamps and fittings • Rubber and plastic components • Other Class C and MRO products	• Fuel filler assemblies • Gasoline direct injection systems • Extruded and molded rubber and thermoplastic products • Control arms • Knuckles • Engine cradles and brackets • Oil pans	• Induction heating and melting systems • Pipe threading systems • Industrial oven systems • Forging presses • Forged steel and machined products
SELECTED INDUSTRIES SERVED	• Heavy-duty truck • Power sports and recreational equipment • Aerospace and defense • Semiconductor equipment • Electrical distribution and controls • Consumer electronics • Bus and coaches • Automotive • Agricultural and construction equipment • HVAC • Lawn and garden • Plumbing • Medical	• Automotive and light vehicle • Agricultural equipment • Construction equipment • Heavy-duty truck • Marine equipment • Bus	• Ferrous and non-ferrous metals • Coatings • Forging • Foundry • Heavy-duty truck • Construction equipment • Automotive • Oil and gas • Rail • Aerospace and defense • Power generation

The Company consists of the following segments

Supply Technologies

Our Supply Technologies business provides our customers with Total Supply Management™, a proactive solutions approach that manages the efficiencies of every aspect of supplying production parts and materials to our customers' manufacturing floor, from strategic planning to program implementation. Total Supply Management™ includes engineering and design support, part usage and cost analysis, supplier selection, quality assurance, bar coding, product packaging and tracking, just-in-time and point-of-use delivery, electronic billing services and ongoing technical support. We operate more than 60 logistics service centers in the United States, Mexico, Canada, Czech Republic, Puerto Rico, Scotland, Hungary, China, Taiwan, Singapore, India, England, France, Spain, Poland, Malaysia, Northern Ireland and Ireland, as well as production sourcing and support centers in the United States and Asia. Through our supply chain management programs, we supply more than

245,000 globally-sourced production components, many of which are specialized and customized to meet individual customers' needs.

Total Supply Management™ provides our customers with an expert partner in strategic planning, global sourcing, technical services, parts and materials, logistics, distribution and inventory management of production components. Some production components are characterized by low per unit supplier prices relative to the indirect costs of supplier management, quality assurance, inventory management and delivery to the production line. In addition, Supply Technologies delivers an increasingly broad range of higher-value production components including valves, fuel hose assemblies, electro-mechanical hardware, labels, fittings, steering components and many others. Applications engineering specialists and the direct sales force work closely with the engineering staff of OEM customers to recommend the appropriate production components for a new product or to suggest alternative components that reduce overall production costs, streamline assembly or enhance the appearance or performance of the end product. Supply Technologies also provides spare parts and aftermarket products to end users of its customers' products.

Total Supply Management™ is typically provided to customers pursuant to sole-source arrangements. We believe our approach distinguishes us from traditional buy/sell distributors, as well as manufacturers who supply products directly to customers, because we provide the supply chain management of our customers' high-volume production components. We administer the processes customized to each customer's needs by replacing numerous current suppliers with a sole-source relationship with Supply Technologies. Our highly-developed, customized information systems provide global transparency and flexibility through the complete supply chain. This enables our customers to: (1) significantly reduce the direct and indirect cost of production component processes by outsourcing internal purchasing, quality assurance and inventory fulfillment responsibilities, (2) reduce the amount of working capital invested in inventory and floor space, (3) reduce component costs through purchasing efficiencies, including bulk buying and supplier consolidation, and (4) receive technical expertise in production component selection, design and engineering. Our sole-source arrangements foster long-term, entrenched supply relationships with our customers and, as a result, the average tenure of service for our top 50 Supply Technologies clients exceeds ten years. Supply Technologies also supplies wholesale industrial products to other manufacturers and distributors pursuant to master or authorized distributor relationships.

The Supply Technologies segment also engineers and manufactures precision cold-formed and cold-extruded fasteners and other products, including locknuts, SPAC® nuts, SPAC® bolts and wheel hardware, which are principally used in applications where controlled tightening is required due to high vibration. Supply Technologies produces both standard items and specialty products to customer specifications, which are used in large volumes by customers in the automotive, heavy-duty truck and rail industries.

In 2018, the Company made two acquisitions in this segment totaling a cash purchase price of $3.5 million. Both acquired companies distribute products into the aerospace and defense end markets.

Markets and Customers. For the year ended December 31, 2018, approximately 66% of Supply Technologies' net sales were to domestic customers. Remaining sales were primarily to manufacturing facilities of large, multinational customers located in Europe, Mexico, Asia and Canada. Total Supply Management™ is used extensively in a variety of industries, and demand is generally related to the state of the economy and to the overall level of manufacturing activity.

Supply Technologies markets and sells its approach to over 8,700 customers domestically and internationally. The five largest customers, to which Supply Technologies sells through sole-source contracts to multiple operating divisions or locations, accounted for approximately 30% of the sales of Supply Technologies in 2018 and 2017. The loss of any two or more of its top five customers could have a material adverse effect on the results of operations and financial condition of this segment.

Competition. A limited number of companies compete with Supply Technologies to provide supply management services for production parts and materials. Supply Technologies competes primarily on the basis of its Total Supply Management™ approach, including engineering and design support, part usage and cost analysis, supplier selection, quality assurance, bar coding, product packaging and tracking, just-in-time and point-of-use delivery, electronic billing services and ongoing technical support, and its geographic reach, extensive product selection, price and reputation for high service levels. Numerous U.S. and foreign companies compete with Supply Technologies in manufacturing cold-formed and cold-extruded products.

Assembly Components

Assembly Components manufactures products oriented towards fuel efficiency and reduced emission standards. Assembly Components designs, develops and manufactures aluminum products, highly efficient, high pressure direct fuel injection fuel rails and pipes, fuel filler pipes that route fuel from the gas cap to the gas tank, and flexible multi-layer plastic and rubber assemblies used to transport fuel from the vehicle's gas tank and then at extreme high pressure, to the engine's fuel injector nozzles. These advanced products, coupled with Turbo Enabled engines, make up large and growing engine architecture for all worldwide car manufacturers. Assembly Components also designs and manufactures Turbo Charging hoses along with Turbo Coolant hoses that will be required as engines get downsized to 3 or 4 cylinders from 6 or 8 cylinders. This engine downsizing increases efficiency while dramatically decreasing pollution levels. In addition, our Assembly Components segment operates what we believe is one of the few aluminum component suppliers that have the capability to provide a wide range of high-volume, high-quality products utilizing a broad range of processes including gravity and low pressure permanent mold, die-cast and lost-foam, as well as emerging alternative casting technologies. We also provide machining to our aluminum products customers.

In October 2018, the Company acquired Hydrapower Dynamics Limited ("Hydrapower") for $7.8 million in cash. Headquartered in Birmingham, England, Hydrapower is a manufacturer of fluid handling systems incorporating hoses, manipulated tubes and fabricated assemblies for the bus and truck, automotive, agricultural and construction end markets. Hydrapower is included in our Assembly Components segment results from the date of acquisition.

Assembly Components operates more than 25 manufacturing facilities and two technical offices in the United States, Mexico, China, England and the Czech Republic. In addition, we also provide value-added services such as design engineering, machining and parts assembly.

Markets and Customers. For the year ended December 31, 2018, approximately 71% of Assembly Components' net sales were to domestic customers. The five largest customers of Assembly Components accounted for approximately 51% of segment sales for 2018 and 2017. These sales, across multiple operating divisions, are through sole-source contracts. The loss of any one of these customers could have a material adverse effect on the results of operations and financial condition of this segment.

Competition. Assembly Components competes principally on the basis of its ability to: (1) engineer and manufacture high-quality, cost-effective assemblies utilizing multiple technologies in large volumes; (2) provide timely delivery; and (3) retain the manufacturing flexibility necessary to quickly adjust to the needs of its customers. There are few domestic companies with the capabilities to meet customers' stringent quality and service standards and lean manufacturing techniques. As one of these suppliers, Assembly Components is well-positioned to benefit as customers continue to consolidate their supplier base.

Engineered Products

Our Engineered Products segment operates a diverse group of niche manufacturing businesses that design and manufacture a broad range of highly-engineered products, including induction heating and melting systems, pipe threading systems and forged and machined products. We manufacture these products in more than 10 domestic facilities throughout the United States and more than 20 international facilities in Canada, Mexico, the United Kingdom, Belgium, Germany, China, Italy, India, Japan, Spain and Brazil.

Our induction heating and melting business utilizes proprietary technology and specializes in the engineering, construction, service and repair of induction heating and melting systems, primarily for the ferrous and non-ferrous metals, silicon, coatings, forging, foundry, automotive and construction equipment industries. Our induction heating and melting systems are engineered and built to customer specifications and are used primarily for melting, heating, and surface hardening of metals and curing of coatings. Approximately 43% of our induction heating and melting systems' revenues are derived from the sale of replacement parts and provision of field service, primarily for the installed base of our own products. Our pipe threading business serves the oil and gas industry. We also engineer and install mechanical forging presses, sell spare parts and provide field service for the large existing base of mechanical forging presses and hammers in North America. We machine, induction harden and surface finish crankshafts and camshafts, used primarily in locomotives. We forge aerospace and defense structural components such as landing gears and struts, as well as rail products such as railcar center plates and draft lugs.

In February 2018, the Company completed the acquisition of Canton Drop Forge, Inc. ("CDF") for $35.6 million in cash. CDF manufactures forgings for high-performance applications in the global aerospace, oil and gas, and other markets. CDF is included in our Engineered Products segment results from the date of acquisition.

Markets and Customers. For the year ended December 31, 2018, approximately 57% of Engineered Products' net sales were to domestic customers. We sell induction heating and other capital equipment to component manufacturers and OEMs in the ferrous and non-ferrous metals, silicon, coatings, forging, foundry, automotive, truck, construction equipment and oil and gas industries. We sell forged and machined products to locomotive manufacturers, machining companies and sub-assemblers who finish aerospace and defense products for OEMs, and railcar builders and maintenance providers.

Competition. We compete with small-to medium-sized domestic and international equipment manufacturers on the basis of service capability, ability to meet customer specifications, delivery performance and engineering expertise. We compete domestically and internationally with small-to medium-sized forging and machining businesses on the basis of product quality and precision.

Sales and Marketing

Supply Technologies markets its products and services in the United States, Mexico, Canada, Europe and Asia primarily through its direct sales force, which is assisted by applications engineers who provide the technical expertise necessary to assist the engineering staff of OEM customers in designing new products and improving existing products. Assembly Components primarily markets and sells its products in North America through internal sales personnel and independent sales representatives. Engineered Products primarily markets and sells its products in North America through both internal sales personnel and independent sales representatives. Induction heating and pipe threading equipment is also marketed and sold in Europe, Asia, Latin America and Africa through both internal sales personnel and independent sales representatives. In some instances, the internal engineering staff assists in the sales and marketing effort through joint design and applications-engineering efforts with major customers.

Raw Materials and Suppliers

Supply Technologies purchases substantially all of its production components from third-party suppliers. Supply Technologies has multiple sources of supply for its components. An increasing portion of Supply Technologies' production components are purchased from suppliers in foreign countries, primarily Canada, Taiwan, China, South Korea, Singapore, India and multiple European countries. Supply Technologies is dependent upon the ability of such suppliers to meet stringent quality and performance standards and to conform to delivery schedules. Assembly Components and Engineered Products purchase substantially all of their raw materials, principally metals and certain component parts incorporated into their products, from third-party suppliers and manufacturers. Most raw materials required by Assembly Components and Engineered Products are commodity products available from several domestic suppliers. Management believes that raw materials and component parts other than certain specialty products are available from alternative sources.

Our suppliers of raw materials and component parts may significantly and quickly increase their prices in response to increases in costs of the raw materials, such as steel, that they use to manufacture our raw materials and component parts. While we generally attempt to pass along increased raw material prices to our customers in the form of price increases, there may be a time delay between the increased raw material prices and our ability to increase the price of our products, or we may be unable to increase the prices of our products due to various factors. See the discussion of risks associated with raw material supply and costs in Item 1A. "Risk Factors".

Backlog

Management believes that backlog is not a meaningful measure for Supply Technologies, as a majority of Supply Technologies' customers require just-in-time delivery of production components. Management believes that Assembly Components' backlog is not a meaningful measure, as a significant portion of sales are on a release or firm order basis. The backlog of Engineered Products' orders believed to be firm as of December 31, 2018 was $226.1 million, compared with $173.2 million as of December 31, 2017. Nearly all of Engineered Products' backlog as of December 31, 2018 is scheduled to be shipped in 2019.

Environmental, Health and Safety Regulations

We are subject to numerous federal, state and local laws and regulations designed to protect public health and the environment, particularly with regard to discharges and emissions, as well as handling, storage, treatment and disposal of various substances and wastes. Failure to comply with applicable environmental laws and regulations and permit requirements could result in civil and criminal fines or penalties or enforcement actions, including regulatory or judicial orders enjoining or curtailing operations or requiring corrective measures. Pursuant to certain environmental laws, owners or operators of facilities may be liable for the costs of response or other corrective actions for contamination identified at or emanating from current or former locations, without regard to whether the owner or operator knew of, or was responsible for, the presence of any such contamination and for related damages to natural resources. Additionally, persons who arrange for the disposal or treatment of hazardous substances or materials may be liable for costs of response at sites where they are located, whether or not the site is owned or operated by such person.

From time to time, we have incurred, and are presently incurring, costs and obligations for correcting environmental noncompliance and remediating environmental conditions at certain of our properties. In general, we have not experienced difficulty in complying with environmental laws in the past, and compliance with environmental laws has not had a material adverse effect on our financial condition, liquidity and results of operations. Our capital expenditures on environmental control facilities were not material during the past five years and such expenditures are not expected to be material to us in the foreseeable future.

We are currently, and may in the future be, required to incur costs relating to the investigation or remediation of property, including property where we have disposed of our waste, and for addressing environmental conditions. For instance, we have been identified as a potentially responsible party at third-party sites under the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, or comparable state laws, which provide for strict and, under certain circumstances, joint and several liability. We are participating in the cost of certain clean-up efforts at several of these sites. The availability of third-party payments or insurance for environmental remediation activities is subject to risks associated with the willingness and ability of the third party to make payments. However, our share of such costs has not been material and, based on available information, we do not expect our exposure at any of these locations to have a material adverse effect on our results of operations, liquidity or financial condition.

Available Information

We file Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, Proxy Statements and other information with the Securities and Exchange Commission ("SEC"). The public can obtain copies of these materials by visiting the SEC's Public Reference Room at 100 F Street, NE, Washington, D.C. 20549, by calling the SEC at 1-800-SEC-0330, or by accessing the SEC's website at http://www.sec.gov. In addition, as soon as reasonably practicable after such materials are filed with or furnished to the SEC, we make such materials available on our website free of charge at http://www.pkoh.com. The information on our website is not a part of this Annual Report on Form 10-K.

Executive Officers of the Registrant

Information with respect to our executive officers as of March 5, 2019, is as follows:

Name	Age	Position
Matthew V. Crawford	49	Chairman of the Board, Chief Executive Officer and Director
Edward F. Crawford	80	President and Director
Patrick W. Fogarty	57	Vice President and Chief Financial Officer
Robert D. Vilsack	58	Secretary and Chief Legal Officer

Mr. M. Crawford was elected Chairman of the Board and Chief Executive Officer in 2018. Prior to that, he served as President and Chief Operating Officer since 2003. Mr. M. Crawford became one of our directors in August 1997 and has served as President of Crawford Group, Inc. since 1995. Mr. M. Crawford is the son of Mr. E. Crawford.

Mr. E. Crawford was named President and Director in 2018. Prior to that, he served as a director and Chairman of the Board and Chief Executive Officer since 1992. He has also served as the Chairman of Crawford Group, Inc., a management company for a group of manufacturing companies, since 1964.

Mr. Fogarty has been Vice President and Chief Financial Officer since 2015. Prior to that, Mr. Fogarty was Director of Corporate Development since 1997 and served as Director of Finance from 1995 to 1997.

Mr. Vilsack has been Secretary and Chief Legal Officer since joining us in 2002.

Item 1A. Risk Factors

The following are certain risk factors that could affect our business, results of operations and financial condition. These risks are not the only ones we face. If any of the following risks occur, our business, results of operations or financial condition could be adversely affected.

The industries in which we operate are cyclical and are affected by the economy in general

We sell products to customers in industries that experience cyclicality (expectancy of recurring periods of economic growth and slowdown) in demand for products and may experience substantial increases and decreases in business volume throughout economic cycles. Industries we serve, including the automotive and vehicle parts, heavy-duty truck, industrial equipment, steel, rail, oil and gas, electrical distribution and controls, aerospace and defense, recreational equipment, HVAC, electrical components, appliance and semiconductor equipment industries, are affected by consumer spending, general economic conditions and the impact of international trade. A downturn in any of the industries we serve could have a material adverse effect on our financial condition, liquidity and results of operations.

Adverse credit market conditions may significantly affect our access to capital, cost of capital and ability to meet liquidity needs

Disruptions, uncertainty or volatility in the credit markets may adversely impact our ability to access credit already arranged and the availability and cost of credit to us in the future. These market conditions may limit our ability to replace, in a timely manner, maturing liabilities and access the capital necessary to grow and maintain our business. Accordingly, we may be forced to delay raising capital or pay unattractive interest rates, which could increase our interest expense, decrease our profitability and significantly reduce our financial flexibility. Longer-term disruptions in the capital and credit markets as a result of uncertainty, changing or increased regulation, reduced alternatives or failures of significant financial institutions could adversely affect our access to liquidity needed for our business. Any disruption could require us to take measures to conserve cash until the markets stabilize or until alternative credit arrangements or other funding for our business needs can be arranged. Such measures could include deferring capital expenditures and reducing or eliminating future share repurchases or other discretionary uses of cash. Overall, our results of operations, financial condition and cash flows could be materially adversely affected by disruptions in the credit markets.

Adverse global economic conditions may have significant effects on our customers and suppliers that could result in material adverse effects on our business and operating results.

Significant reductions in available capital and liquidity from banks and other providers of credit, substantial reductions and fluctuations in equity and currency values worldwide, volatility in commodity prices for such items as crude oil, and concerns that the worldwide economy may enter into a prolonged recessionary period may materially adversely affect our customers' access to capital or willingness to spend capital on our products or their ability to pay for products that they will order or have already ordered from us. In addition, unfavorable global economic conditions may materially adversely affect our suppliers' access to capital and liquidity with which they maintain their inventories, production levels and product quality, which could cause them to raise prices or lower production levels.

These potential effects of adverse global economic conditions are difficult to forecast and mitigate. As a consequence, our operating results for a particular period are difficult to predict, and, therefore, prior results are not necessarily indicative of results to be expected in future periods. Any of the foregoing effects could have a material adverse effect on our business, results of operations and financial condition.

Adverse global economic conditions may have significant effects on our customers that would result in our inability to borrow or to meet our debt service coverage ratio in our revolving credit facility.

As of December 31, 2018, we were in compliance with our debt service coverage ratio covenant and other covenants contained in our revolving credit facility. While we expect to remain in compliance throughout 2019, declines in demand in the automotive industry and in sales volumes could adversely impact our ability to remain in compliance with certain of these financial covenants. Additionally, to the extent our customers are adversely affected by a decline in the economy in general, they may not be able to pay their accounts payable to us on a timely basis or at all, which would make the accounts receivable ineligible for purposes of the revolving credit facility and could reduce our borrowing base and our ability to borrow.

Because a significant portion of our sales is to the automotive and heavy-duty truck industries, a decrease in the demand of these industries or the loss of any of our major customers in these industries could adversely affect our financial health.

Demand for certain of our products is affected by, among other things, the relative strength or weakness of the automotive and heavy-duty truck industries. The domestic automotive and heavy-duty truck industries are highly cyclical and may be adversely affected by international competition. In addition, the automotive and heavy-duty truck industries are significantly unionized and subject to work slowdowns and stoppages resulting from labor disputes. We derived 37% and 8% of our net sales during the year ended December 31, 2018 from the automotive and heavy-duty truck industries, respectively.

The loss of a portion of business to any of our major automotive or heavy-duty truck customers could have a material adverse effect on our financial condition, cash flow and results of operations. We cannot assure you that we will maintain or improve our relationships in these industries or that we will continue to supply these customers at current levels.

Our Supply Technologies customers are generally not contractually obligated to purchase products and services from us

We supply products and services to our Supply Technologies customers generally under purchase orders as opposed to long-term contracts. When we do enter into long-term contracts with our Supply Technologies customers, many of them only establish pricing terms and do not obligate our customers to buy required minimum amounts from us or to buy from us exclusively. Accordingly, many of our Supply Technologies customers may decrease the amount of products and services that they purchase from us or even stop purchasing from us altogether, either of which could have a material adverse effect on our net sales and profitability.

We are dependent on key customers.

We rely on several key customers. For the year ended December 31, 2018, our ten largest customers accounted for approximately 32% of our net sales. Many of our customers place orders for products on an as-needed basis and operate in cyclical industries and, as a result, their order levels have varied from period to period in the past and may vary significantly in the future. Due to competitive issues, we have lost key customers in the past and may again in the future. Customer orders are dependent upon their markets and may be subject to delays or cancellations. As a result of dependence on our key customers, we could experience a material adverse effect on our business and results of operations if any of the following were to occur:

- the loss of any key customer, in whole or in part,
- the insolvency or bankruptcy of any key customer,
- a declining market in which customers reduce orders or demand reduced prices, or
- a strike or work stoppage at a key customer facility, which could affect both their suppliers and customers.

If any of our key customers become insolvent or file for bankruptcy, our ability to recover accounts receivable from that customer would be adversely affected and any payments we received in the preference period prior to a bankruptcy filing may be potentially forfeitable, which could adversely impact our results of operations.

We operate in highly competitive industries.

The markets in which all three of our segments sell their products are highly competitive. Some of our competitors are large companies that have greater financial resources than we have. We believe that the principal competitive factors for our Supply Technologies segment are an approach reflecting long-term business partnership and reliability, sourced product quality and conformity to customer specifications, timeliness of delivery, price and design and engineering capabilities. We believe that the principal competitive factors for our Assembly Components and Engineered Products segments are product quality and conformity to customer specifications, design and engineering capabilities, product development, timeliness of delivery and price. The rapidly evolving nature of the markets in which we compete may attract new entrants as they perceive opportunities, and our competitors may foresee the course of market development more accurately than we do. In addition, our competitors may develop products that are superior to our products or may adapt more quickly than we do to new technologies or evolving customer requirements.

We expect competitive pressures in our markets to remain strong. These pressures arise from existing competitors, other companies that may enter our existing or future markets and, in some cases, our customers, which may decide to internally produce items we sell. We cannot assure you that we will be able to compete successfully with our competitors. Failure to compete successfully could have a material adverse effect on our financial condition, liquidity and results of operations.

The loss of key executives could adversely impact us.

Our success depends upon the efforts, abilities and expertise of our executive officers and other senior managers, including Matthew Crawford, our Chairman and Chief Executive Officer, and Edward Crawford, our President, as well as the president of each of our operating units. An event of default occurs under our revolving credit facility if Messrs. M. Crawford and E. Crawford or certain of their related parties own in the aggregate less than 15% of Holdings' outstanding common stock and, if at such time, neither Mr. M. Crawford nor Mr. E. Crawford holds the office of chairman, chief executive officer or president. The loss of the services of Messrs. M. Crawford and E. Crawford, senior and executive officers, and/or other key individuals could have a material adverse effect on our financial condition, liquidity and results of operations.

We may encounter difficulty in expanding our business through targeted acquisitions.

We have pursued, and may continue to pursue, targeted acquisition opportunities that we believe would complement our business. We cannot assure you that we will be successful in consummating any acquisitions.

Any targeted acquisitions will be accompanied by the risks commonly encountered in acquisitions of businesses. We may not successfully overcome these risks or any other problems encountered in connection with any of our acquisitions, including the possible inability to integrate an acquired business' operations, information technology, services and products into our business, diversion of management's attention, the assumption of unknown liabilities, increases in our indebtedness, the failure to achieve the strategic objectives of those acquisitions and other unanticipated problems, some or all of which could materially and adversely affect us. The process of integrating operations could cause an interruption of, or loss of momentum in, our activities. Any delays or difficulties encountered in connection with any acquisition and the integration of our operations could have a material adverse effect on our business, results of operations, financial condition or prospects of our business.

Our Supply Technologies business depends upon third parties for substantially all of our component parts.

Our Supply Technologies business purchases substantially all of its component parts from third-party suppliers and manufacturers. As such, it is subject to the risk of price fluctuations and periodic delays in the delivery of component parts. Failure by suppliers to continue to supply us with these component parts on commercially reasonable terms, or at all, could have a material adverse effect on us. We depend upon the ability of these suppliers, among other things, to meet stringent performance and quality specifications and to conform to delivery schedules. Failure by third-party suppliers to comply with these and other requirements could have a material adverse effect on our financial condition, liquidity and results of operations.

The raw materials used in our production processes and by our suppliers of component parts are subject to price and supply fluctuations that could increase our costs of production and adversely affect our results of operations.

Our supply of raw materials for our Assembly Components and Engineered Products businesses could be interrupted for a variety of reasons, including availability and pricing. Prices for raw materials necessary for production have fluctuated significantly in the past and significant increases could adversely affect our results of operations and profit margins. While we generally attempt to pass along increased raw materials prices to our customers in the form of price increases, there may be a time delay between the increased raw materials prices and our ability to increase the price of our products, or we may be unable to increase the prices of our products due various factors.

Our suppliers of component parts, particularly in our Supply Technologies business, may significantly and quickly increase their prices in response to increases in costs of the raw materials, such as steel, that they use to manufacture our component parts. We may not be able to increase our prices commensurate with our increased costs. Consequently, our results of operations and financial condition may be materially adversely affected.

The energy costs involved in our production processes and transportation are subject to fluctuations that are beyond our control and could significantly increase our costs of production.

Our manufacturing process and the transportation of raw materials, components and finished goods are energy intensive. Our manufacturing processes are dependent on adequate supplies of electricity and natural gas. A substantial increase in the cost of transportation fuel, natural gas or electricity could have a material adverse effect on our margins. We may experience higher than anticipated gas costs in the future, which could adversely affect our results of operations. In addition, a disruption or curtailment in supply could have a material adverse effect on our production and sales levels.

Potential product liability risks exist from the products that we sell.

Our businesses expose us to potential product liability risks that are inherent in the design, manufacture and sale of our products and products of third-party vendors that we use or resell. While we currently maintain what we believe to be suitable and adequate product liability insurance, we cannot assure you that we will be able to maintain our insurance on acceptable terms or that our insurance will provide adequate protection against potential liabilities. In the event of a claim against us, a lack of sufficient insurance coverage could have a material adverse effect on our financial condition, liquidity and results of operations. Moreover, even if we maintain adequate insurance, any successful claim could have a material adverse effect on our financial condition, liquidity and results of operations.

Some of our employees belong to labor unions, and strikes or work stoppages could adversely affect our operations.

As of December 31, 2018, we were a party to seven collective bargaining agreements with various labor unions that covered approximately 510 full-time employees. Our inability to negotiate acceptable contracts with these unions could result in, among other things, strikes, work stoppages or other slowdowns by the affected workers and increased operating costs as a result of higher wages or benefits paid to union members. If the unionized workers were to engage in a strike, work stoppage or other slowdown, or other employees were to become unionized, we could experience a significant disruption of our operations and higher ongoing labor costs, which could have a material adverse effect on our business, financial condition and results of operations.

We operate and source internationally, which exposes us to the risks of doing business abroad.

Our operations are subject to the risks of doing business abroad, including the following:

- fluctuations in currency exchange rates;
- limitations on ownership and on repatriation of earnings;
- transportation delays and interruptions;
- political, social and economic instability and disruptions;
- potential disruption that could be caused by the partial or complete reconfiguration of the European Union;
- government embargoes or foreign trade restrictions;
- the imposition of duties and tariffs and other trade barriers;
- import and export controls;
- labor unrest and current and changing regulatory environments;
- the potential for nationalization of enterprises;
- disadvantages of competing against companies from countries that are not subject to U.S. laws and regulations, including the U.S. Foreign Corrupt Practices Act ("FCPA");

- increasingly complex laws and regulations concerning privacy and data security, including the European Union's General Data Protection Regulation,
- difficulties in staffing and managing multinational operations
- limitations on our ability to enforce legal rights and remedies and
- potentially adverse tax consequences

On June 23 2016 the United Kingdom ("UK") held a referendum in which UK voters approved an exit from the European Union ("EU") The June 2016 referendum result, and the subsequent commencement of the official withdrawal process by the UK government in March 2017, has created uncertainties affecting business operations in the UK and the EU The long-term nature of the UK's relationship with the EU is unclear and there is considerable uncertainty when any relationship will be agreed and implemented The long term effects of Brexit will depend on any agreements the UK makes to retain access to EU markets, either during a transitional period or more permanently Given the lack of comparable precedent it is unclear what financial, trade and legal implications the withdrawal of the UK from the EU would have and how such withdrawal would affect us It is possible that the withdrawal could, among other things, affect the legal and regulatory environments to which our businesses are subject, impact trade between the UK and the EU through potential restrictions on the free movement of goods and labor between the UK and the EU, create economic and political uncertainty in the region, and create other impediments to our ability to transact within and between the UK and EU

We are also exposed to risks relating to U S policy with respect to companies doing business in foreign jurisdictions Changes in tax policy, trade regulations or trade agreements such as the disallowance of tax deductions on imported merchandise or the imposition of new tariffs on imported products, could have a material adverse effect on our business and results of operations

In addition, we could be adversely affected by violations of the FCPA and similar worldwide anti-bribery laws The FCPA and similar anti-bribery laws in other jurisdictions generally prohibit companies and their intermediaries from making improper payments to non-U S officials for the purpose of obtaining or retaining business Our policies mandate compliance with these anti-bribery laws We operate in many parts of the world that have experienced governmental corruption to some degree and, in certain circumstances, strict compliance with anti-bribery laws may conflict with local customs and practices We cannot assure you that our internal controls and procedures always will protect us from the reckless or criminal acts committed by our employees or agents For example, in connection with responding to a subpoena from the staff of the SEC, regarding a third party, we disclosed to the staff that the third party participated in a payment on our behalf to a foreign tax official that implicates the FCPA If we are found to be liable for FCPA violations (either due to our own acts or our inadvertence or due to the acts or inadvertence of others), we could suffer from criminal or civil penalties or other sanctions, which could have a material adverse effect on our business

Any of the events enumerated above could have an adverse effect on our operations in the future by reducing the demand for our products and services, decreasing the prices at which we can sell our products or otherwise having an adverse effect on our business, financial condition or results of operations We cannot assure you that we will continue to operate in compliance with applicable customs, currency exchange control regulations, transfer pricing regulations or any other laws or regulations to which we may be subject We also cannot assure you that these laws will not be modified

U.S. federal income tax reform could adversely affect us

On December 22, 2017 U S federal tax legislation commonly referred to as the Tax Cuts and Jobs Act (the TCJA"), was signed into law significantly reforming the U S Internal Revenue Code The TCJA among other things includes changes to U S federal tax rates, imposes significant additional limitations on the deductibility of interest, allows for the expensing of capital expenditures, creates a new minimum tax on certain foreign-sourced earnings and modifies or repeals many business deductions and credits The TCJA contains many provisions which continue to be clarified through new regulations and we continue to examine the impact the TCJA may have on our business

We are subject to significant environmental, health and safety laws and regulations and related compliance expenditures and liabilities.

Our businesses are subject to many foreign federal, state and local environmental, health and safety laws and regulations particularly with respect to the use, handling, treatment, storage, discharge and disposal of substances and hazardous wastes used or generated in our manufacturing processes Compliance with these laws and regulations is a significant factor in our business We have incurred and expect to continue to incur significant expenditures to comply with applicable environmental laws and regulations Our failure to comply with applicable environmental laws and regulations and permit requirements could result in civil or criminal fines or penalties or enforcement actions, including regulatory or judicial orders enjoining or curtailing operations or requiring corrective measures, installation of pollution control equipment or remedial actions

We are currently, and may in the future be, required to incur costs relating to the investigation or remediation of property including property where we have disposed of our waste, and for addressing environmental conditions Some environmental laws and regulations impose liability and responsibility on present and former owners operators or users of facilities and sites for contamination at such facilities and sites without regard to causation or knowledge of contamination In addition we occasionally evaluate various alternatives with respect to our facilities, including possible dispositions or closures Investigations undertaken in connection with these activities may lead to discoveries of contamination that must be remediated, and closures of facilities may trigger compliance requirements that are not applicable to operating facilities Consequently we cannot assure you that existing or future circumstances, the development of new facts or the failure of third parties to address contamination at current or former facilities or properties will not require significant expenditures by us

We expect to continue to be subject to increasingly stringent environmental and health and safety laws and regulations It is difficult to predict the future interpretation and development of environmental and health and safety laws and regulations or their impact on our future earnings and operations We anticipate that compliance will continue to require increased capital expenditures and operating costs Any increase in these costs, or unanticipated liabilities arising from among other things discovery of previously unknown conditions or more aggressive enforcement actions, could adversely affect our results of operations, and there is no assurance that they will not exceed our reserves or have a material adverse effect on our financial condition

We may experience breaches of, or disruptions to, our information technology systems, or other compromises of our data, including the improper disclosure of personal or confidential data, which may adversely affect our operations and reputation

We utilize information technology systems in connection with our business operations, including processing orders, managing inventory and accounts receivable collections, purchasing products, maintaining cost-effective operations routing and re-routing orders We also depend on our information technology systems to maintain confidential, proprietary and personal information relating to our current, former and prospective employees, customers and other third parties in these systems and in systems of third-party providers who we engage in connection with the processing and storage of certain information Our information technology systems and those of our third-party providers are subject to disruptions or damage, which may be caused by a wide array of causes, including telecommunications failures, computer failures, power outages, computer viruses, cybersecurity breaches and other intrusions, which could result in the disruption of our operations, or information misappropriation, such as theft of intellectual property or inappropriate disclosure of personal and confidential information In addition we could also experience data or cybersecurity breaches stemming from the intentional or negligent acts of our employees or other third parties To the extent our information technology systems are disabled for a long period of time key business processes could be interrupted Any such operational disruptions and/or misappropriation of information, whether in systems we maintain or are maintained by others, could have a material adverse effect on our business In addition any such damage compromise or breach to our systems or those of our vendors could result in a violation of privacy and other laws, and expose us to significant legal and financial liability

Operating problems in our business may materially adversely affect our financial condition and results of operations

We are subject to the usual hazards associated with manufacturing and the related storage and transportation of raw materials, products and waste, including explosions, fires, leaks, discharges, inclement weather, natural disasters, mechanical failure, unscheduled downtime and transportation interruption or calamities. The occurrence of material operating problems at our facilities may have a material adverse effect on our operations as a whole, both during and after the period of operational difficulties.

We have a significant amount of goodwill, and any future goodwill impairment charges could adversely impact our results of operations.

As of December 31, 2018, we had goodwill of $103.4 million. The future occurrence of a potential indicator of impairment, such as a significant adverse change in legal factors or business climate, unanticipated competition, a material negative change in relationships with significant customers, strategic decisions made in response to economic or competitive conditions, loss of key personnel or a more-likely-than-not expectation that a reporting unit or a significant portion of a reporting unit will be sold or disposed of, could result in goodwill impairment charges, which could adversely impact our results of operations. We have recorded goodwill impairment charges in the past, and such charges materially impacted our historical results of operations. For additional information, see Note 5, Goodwill, to the consolidated financial statements included elsewhere herein.

Our Chairman of the Board and Chief Executive Officer and our President collectively beneficially own a significant portion of Holdings' outstanding common stock and their interests may conflict with yours

As of December 31, 2018, Matthew Crawford, our Chairman of the Board and Chief Executive Officer, and Edward Crawford, our President, collectively beneficially owned approximately 29% of Holdings' common stock. Mr. M. Crawford is Mr. E. Crawford's son. Their interests could conflict with your interests.

Our business and operating results may be adversely affected by natural disasters or other catastrophic events beyond our control

While we have taken precautions to prevent production and service interruptions at our global facilities, severe weather conditions such as hurricanes or tornadoes, as well as major earthquakes and other natural disasters, in areas in which we have manufacturing facilities or from which we obtain products may cause physical damage to our properties, closure of one or more of our business facilities, lack of adequate work force in a market, temporary disruption in the supply of inventory, disruption in the transport of products and utilities, or delays in the delivery of products to our customers. Any of these factors may disrupt our operations and adversely affect our financial condition and results of operations.

The insurance that we maintain may not fully cover all potential expenses

We maintain property, business interruption and casualty insurance, but such insurance may not cover all risks associated with the hazards of our business and is subject to limitation, including deductible and maximum liabilities covered. We are potentially at risk if one or more of our insurance carriers fail. Additionally, severe disruptions in the domestic and global financial markets could adversely impact the ratings and survival of some insurers. In the future, we may not be able to obtain coverage at current levels, and our premiums may increase significantly on coverage that we maintain.

Item 1B. Unresolved Staff Comments

None

Item 2. Properties

As of December 31, 2018, our operations included numerous manufacturing and supply chain logistics services facilities located in 25 states in the United States and in Puerto Rico, as well as in Asia, Canada, Europe, Mexico and Brazil. We lease our world headquarters located in Cleveland, Ohio, which also includes the world headquarters for certain of our businesses. We believe our manufacturing, logistics and corporate office facilities are well-maintained and are suitable and adequate, and have sufficient productive capacity to meet our current needs.

The following table provides information relative to our principal facilities as of December 31 2018

Related Industry Segment (1)	Location	Owned or Leased	Use
SUPPLY TECHNOLOGIES	Brampton Ontario Canada	Leased	Manufacturing
	Minneapolis MN	Leased	Logistics
	Carnegie, PA	Leased	Manufacturing
	Cleveland OH	Leased	Supply Technologies Corporate Office
	Dayton, OH	Leased	Logistics
	Carol Stream IL	Leased	Logistics
	Memphis TN	Leased	Logistics
	Solon OH	Leased	Logistics
	Streetsboro, OH	Leased	Manufacturing
	Allentown PA	Leased	Logistics
	Suwanee, GA	Leased	Logistics
	Dublin VA	Leased	Logistics
	Tulsa, OK	Leased	Logistics
ASSEMBLY COMPONENTS	Ocala Fl	Owned	Manufacturing
	Conneaut OH	Leased/Owned	Manufacturing
	Lexington TN	Owned	Manufacturing
	Lobelville, TN	Owned	Manufacturing
	Rootstown OH	Owned	Manufacturing
	Cleveland, OH	Leased/Owned	Manufacturing
	Wapakoneta OH	Owned	Manufacturing
	Angola IN	Owned	Manufacturing
	Huntington IN	Leased	Manufacturing
	Fremont IN	Owned	Manufacturing
	Big Rapids MI	Owned	Manufacturing
	Acuna, Mexico	Owned	Manufacturing
ENGINEERED PRODUCTS	Cicero IL	Owned	Manufacturing
	Cuyahoga Heights, OH	Owned	Manufacturing
	Pune India	Owned	Manufacturing
	Canton OH	Owned	Manufacturing
	Newport AR	Owned	Manufacturing
	Warren OH	Owned	Manufacturing
	Lemi, Italy	Owned	Manufacturing
	Madison Heights MI	Leased	Manufacturing
	Canton, OH	Leased	Manufacturing
	La Roeulx Belgium	Owned	Manufacturing
	Brookfield WI	Leased	Manufacturing
	Wickliffe, OH	Owned	Manufacturing
	Valencia Spain	Owned	Manufacturing
	Euclid OH	Owned	Manufacturing
	Albertville AI	Leased	Office
	Chennai India	Owned	Manufacturing
	Lemi, Italy	Leased	Manufacturing

(1) Each segment has other facilities none of which is deemed to be a principal facility

Item 3. Legal Proceedings

We are subject to various pending and threatened lawsuits in which claims for monetary damages are asserted in the ordinary course of business While any litigation involves an element of uncertainty in the opinion of management, liabilities if any, arising from currently pending or threatened litigation are not expected to have a material adverse effect on our financial condition, liquidity or results of operations

In addition to the routine lawsuits and asserted claims noted above we were a party to the lawsuits and legal proceedings described below as of December 31, 2018

We were a co-defendant in approximately 86 cases asserting claims on behalf of approximately 188 plaintiffs alleging personal injury as a result of exposure to asbestos These asbestos cases generally relate to production and sale of asbestos-containing products and allege various theories of liability, including negligence, gross negligence and strict liability, and seek compensatory and in some cases, punitive damages

In every asbestos case in which we are named as a party, the complaints are filed against multiple named defendants In substantially all of the asbestos cases, the plaintiffs either claim damages in excess of a specified amount typically a minimum amount sufficient to establish jurisdiction of the court in which the case was filed (jurisdictional minimums generally range from $25,000 to $75,000), or do not specify the monetary damages sought To the extent that any specific amount of damages is sought, the amount applies to claims against all named defendants

There are three asbestos cases, involving 19 plaintiffs, that plead specified damages against named defendants In each of the three cases, the plaintiff is seeking compensatory and punitive damages based on a variety of potentially alternative causes of action In two cases, the plaintiff has alleged three counts at $3 0 million compensatory and punitive damages each one count at $3 0 million compensatory and $1 0 million punitive damages, one count at $1.0 million In the third case, the plaintiff has alleged compensatory and punitive damages each in the amount of $20 0 million, for three separate causes of action, and $5 0 million compensatory damages for the fifth cause of action

Historically, we have been dismissed from asbestos cases on the basis that the plaintiff incorrectly sued one of our subsidiaries or because the plaintiff failed to identify any asbestos-containing product manufactured or sold by us or our subsidiaries We intend to vigorously defend these asbestos cases, and believe we will continue to be successful in being dismissed from such cases However it is not possible to predict the ultimate outcome of asbestos-related lawsuits, claims and proceedings due to the unpredictable nature of personal injury litigation Despite this uncertainty and although our results of operations and cash flows for a particular period could be adversely affected by asbestos-related lawsuits claims and proceedings management believes that the ultimate resolution of these matters will not have a material adverse effect on our financial condition, liquidity or results of operations Among the factors management considered in reaching this conclusion were (a) our historical success in being dismissed from these types of lawsuits on the bases mentioned above, (b) many cases have been improperly filed against one of our subsidiaries, (c) in many cases the plaintiffs have been unable to establish any causal relationship to us or our products or premises, (d) in many cases, the plaintiffs have been unable to demonstrate that they have suffered any identifiable injury or compensable loss at all or that any injuries that they have incurred did in fact result from alleged exposure to asbestos, and (e) the complaints assert claims against multiple defendants and, in most cases, the damages alleged are not attributed to individual defendants *Additionally, we do not believe that the amounts claimed in any of the asbestos cases are meaningful indicators* of our potential exposure because the amounts claimed typically bear no relation to the extent of the plaintiff's injury, if any

Our cost of defending these lawsuits has not been material to date and, based upon available information, our management does not expect its future costs for asbestos-related lawsuits to have a material adverse effect on our results of operations liquidity or financial position

In August 2013 we received a subpoena from the staff of the SEC in connection with the staff's investigation of a third party. At that time we also learned that the Department of Justice ("DOJ") is conducting a criminal investigation of the third party. In connection with its initial response to the staff's subpoena, we disclosed to the staff of the SEC that, in November 2007, the third party participated in a payment on behalf of us to a foreign tax official that implicates the Foreign Corrupt Practices Act. The Board of Directors formed a special committee to review our transactions with the third party and to make any recommendations to the Board of Directors with respect thereto. The Company intends to cooperate fully with the SEC and the DOJ in connection with their investigations of the third party and with the SEC in light of the Company's disclosure. The Company is unable to predict the outcome or impact of the special committee's investigation or the length, scope or results of the SEC's review or the impact on its results of operations. With respect to our disclosure, we have not heard anything from the SEC since 2014 and we do not expect to hear anything further from it, but we will cooperate with the SEC to the extent that it requests any additional information. Accordingly, we do not plan on providing any future disclosure regarding this matter unless circumstances change.

Item 4. Mine Safety Disclosures

Not applicable

Part II

Item 5. Market for the Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Our common stock, par value $1.00 per share, trades on the Nasdaq Global Select Market under the symbol PKOH.

The number of shareholders of record of our common stock as of February 28, 2019 was 369.

Issuer Purchases of Equity Securities

Set forth below is information regarding repurchases of our common stock during the fourth quarter of the year ended December 31, 2018.

Period	Total Number of Shares Purchased (1)	Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans (1)	Maximum Number of Shares That May Yet Be Purchased Under the Plans or Program (2)
October 1 — October 31, 2018	467	$ 38.31	—	457,685
November 1 — November 30, 2018	75,000	37.46	75,000	382,685
December 1 — December 31, 2018	250	33.13	—	382,685
Total	75,717	$ 37.45	75,000	382,685

(1) Consists of an aggregate total of 717 shares of common stock we acquired from recipients of restricted stock awards at the time of vesting of such awards in order to settle recipient minimum withholding tax liabilities.

(2) On March 4, 2013, we announced a share repurchase program whereby we may repurchase up to 1.0 million shares of our outstanding common stock.

Item 6. Selected Financial Data

	Year Ended December 31, 2018	2017	2016	2015	2014
	(In millions, except per share data)				
Income Statement Data:					
Net sales	$ 1,658 1	$ 1,412 9	$ 1,276 9	$ 1,463 8	$ 1,378 7
Operating income	97 3	83 8	63 0	91 3	91 1
Net income attributable to ParkOhio common shareholders	53 6	28 6	31 7	48 1	45 6
Earnings per common share attributable to ParkOhio shareholders					
Basic	$ 4 37	$ 2 34	$ 2 62	$ 3 94	$ 3 77
Diluted	$ 4 28	$ 2 30	$ 2 58	$ 3 88	$ 3 68
Cash dividend per common share	$ 0 50	$ 0 50	$ 0 50	$ 0 50	0 375

Results for 2018 include a gain on the sale of assets of $1 9 million

Results for 2017 include income of $3 3 million from the reversal of a litigation reserve, a loss on extinguishment of debt of $11 0 million and a one-time net tax expense of $4 2 million related to the U S Tax Cuts and Jobs Act (the "TCJA")

Results for 2016 include an asset impairment charge of $4 0 million

Results for 2015 include litigation judgment costs of $2 2 million

	Year Ended December 31, 2018	2017	2016	2015	2014
	(In millions)				
Other Financial Data:					
Net cash flows provided by operating activities	$ 54 8	$ 46 7	$ 72 9	$ 44 7	$ 53 6
Capital expenditures net	(45 1)	(27 9)	(28 5)	(36 5)	(25 8)
Selected Balance Sheet Data (as of period end):					
Cash and cash equivalents	55 7	82 8	64 3	62 0	58 0
Total assets	1 208 5	1,132 5	971 3	942 1	969 1
Long term debt (1)	547 5	515 5	439 0	445 8	429 3

(1) Excluding current portion

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

Our consolidated financial statements include the accounts of Park-Ohio Holdings Corp and its subsidiaries All significant intercompany transactions have been eliminated in consolidation

EXECUTIVE OVERVIEW

General

We are a diversified international company providing world-class customers with a supply chain management outsourcing service capital equipment used on their production lines, and manufactured components used to assemble their products We operate through three reportable segments Supply Technologies, Assembly Components and Engineered Products Refer to Part I, Item 1 Business for descriptions of our business segments

2018 Acquisitions

On February 1, 2018, the Company acquired Canton Drop Forge, Inc ("CDF") for $35 6 million in cash CDF manufactures forgings for high-performance applications in the global aerospace, oil and gas, and other markets Headquartered in Canton, Ohio, CDF is included in our Engineered Products segment

On October 1, 2018, the Company acquired Hydrapower Dynamics Limited ("Hydrapower") for $7 8 million in cash acquired Headquartered in Birmingham, England, Hydrapower is a manufacturer of fluid handling systems incorporating hoses, manipulated tubes and fabricated assemblies for the bus and truck, automotive, agricultural and construction end markets Hydrapower is included in our Assembly Components segment

During 2018, the Company made two acquisitions, both in its Supply Technologies segment, totaling a cash purchase price of $3 5 million Both acquired companies distribute products into the aerospace and defense end markets

The results of operations of the 2018 acquisitions are included in our consolidated results from their respective acquisition dates Collectively, the 2018 acquisitions contributed $72 3 million of sales for the year ended December 31, 2018

Subsequent Event

On January 31, 2019, the Company's Board of Directors declared a quarterly dividend of $0 125 per common share The dividend was paid on March 1, 2019, to shareholders of record as of the close of business on February 15 2019, and resulted in a cash outlay of $1 6 million

RESULTS OF OPERATIONS

2018 Compared with 2017 and 2017 Compared with 2016

	2018	2017	2016	2018 vs. 2017 $ Change	2018 vs. 2017 % Change	2017 vs. 2016 $ Change	2017 vs. 2016 % Change
	(Dollars in millions, except per share data)						
Net sales	$1,658.1	$1,412.9	$1,276.9	$245.2	17%	$136.0	11%
Cost of sales ("COS")	1,386.6	1,180.1	1,075.7	206.5	17%	104.4	10%
Gross profit	271.5	232.8	201.2	38.7	17%	31.6	16%
Gross profit as a percentage of net sales	16.4%	16.5%	15.8%				
Selling, general and administrative ("SG&A") expenses	176.1	152.3	134.2	23.8	16%	18.1	13%
SG&A expenses as a percentage of net sales	10.6%	10.8%	10.5%				
Gain on sale of assets	(1.9)	—	—	(1.9)		—	
Litigation settlement gain		(3.3)		3.3	*	(3.3)	*
Asset impairment charge	—	—	4.0	—	*	(4.0)	*
Operating income	97.3	83.8	63.0	13.5	16%	20.8	33%
Other components of pension income and other postretirement benefits expense, net	8.8	6.4	6.2	2.4	38%	0.2	3%
Interest expense, net	(34.3)	(31.5)	(28.2)	(2.8)	9%	(3.3)	12%
Loss on extinguishment of debt	—	(11.0)	—	11.0	*	(11.0)	*
Income before income taxes	71.8	47.7	41.0	24.1	51%	6.7	16%
Income tax expense	(16.6)	(18.2)	(8.8)	1.6	(9)%	(9.4)	107%
Net income	55.2	29.5	32.2	25.7	87%	(2.7)	(8)%
Net income attributable to noncontrolling interest	(1.6)	(0.9)	(0.5)	(0.7)	*	(0.4)	*
Net income attributable to ParkOhio common shareholders	$53.6	$28.6	$31.7	$25.0	87%	$(3.1)	(10)%
Earnings per common share attributable to ParkOhio common shareholders							
Basic	$4.37	$2.34	$2.62	$2.03	87%	$(0.28)	(11)%
Diluted	$4.28	$2.30	$2.58	$1.98	86%	$(0.28)	(11)%

* Calculation not meaningful

2018 Compared with 2017

Net Sales

Net sales increased 17% to $1,658.1 million in 2018 compared to $1,412.9 million in 2017. The increase in net sales was driven by organic growth of 8%, primarily due to higher end-market demand for products in all three of our business segments, and the sales from our acquisitions in 2018 and 2017, which contributed 9% of the increase.

Cost of Sales & Gross Profit

Cost of sales increased 17% to $1,386.6 million in 2018 compared to $1,180.1 million in 2017. The increase in cost of sales was primarily due to the increase in net sales of 17%, described above. Our gross margin percentage was comparable year-over-year at 16.4% in 2018 compared to 16.5% in 2017, as the profit flow-through from higher sales in 2018 was offset by lower margins in our Assembly Components segment, which is explained more fully in the "Segment Results" section below.

SG&A Expenses

SG&A expenses increased to $176.1 million in 2018 from $152.3 million in 2017, driven by SG&A expenses from our acquisitions, as well as higher sales and profit in 2018. SG&A expenses as a percentage of net sales decreased to 10.6% in 2018 compared to 10.8% in 2017.

Gain on Sale of Assets

During 2018, the Company sold land to a third party, resulting in cash proceeds of $2.8 million and a pre-tax gain on sale of $1.9 million.

Litigation Settlement Gain

During 2017, the Company paid $4.0 million to settle the IPSCO litigation. In connection with the settlement, the Company recognized $3.3 million of income related to the reversal of its excess litigation liability.

Other Components of Pension Income and Other Postretirement Benefits ("OPEB") Expense, Net

In accordance with the adoption of Accounting Standards Codification 2017-07, as of January 1, 2018, the Company revised its presentation of total pension income and OPEB expense. Amounts recorded in the consolidated statements of income were as follows:

	Year Ended December 31, 2018	Year Ended December 31, 2017
	(Dollars in millions)	
Pension and OPEB service cost recorded in COS and SG&A expenses	$3.7	$2.4
Other components of pension income and OPEB expense, net	(8.8)	(6.4)
Total income, net	$(5.1)	$(4.0)

The service costs are recorded in operating income, and Other components of pension income and OPEB expenses are recorded on a separate line in the consolidated statements of income. Prior year amounts have been reclassified to conform to the 2018 presentation.

Interest Expense, Net

Interest expense increased to $34.3 million in 2018 from $31.5 million in 2017, due primarily to higher average outstanding borrowings in 2018 compared to 2017. The higher borrowings were primarily under the Company's revolving credit facilities to fund the acquisitions in 2018, and to fund higher working capital due to higher sales levels in 2018 compared to 2017. The impact of the higher outstanding borrowings in 2018 on our interest expense was partially offset by lower effective borrowing rates in 2018 compared to 2017, due primarily to the Company's debt refinancing in April 2017. Our average effective borrowing rates were 5.8% in 2018 compared to 6.1% in 2017.

Loss on Extinguishment of Debt

During 2017, we incurred $11.0 million of expenses related to our debt refinancing activities. Such expenses included tender premiums, bank and other fees and accelerated amortization of certain debt issuance costs previously capitalized related to our former borrowings.

Income Tax Expense

The provision for income taxes was $16.6 million in 2018 (an effective rate of 23.2%) compared to a provision of $18.2 million in 2017 (an effective rate of 38.0%). The lower rate in 2018 is due primarily to: (1) the favorable impact of the lower statutory income tax rate in the U.S. in 2018, which decreased from 35% to 21% effective January 1, 2018 as a result of the Tax Cuts and Jobs Act (the "TCJA"), (2) a benefit of approximately $3.0 million related to reversals of previously-recorded valuation allowances in certain foreign tax jurisdictions, and (3) net tax expense of $4.2 million in 2017 related to adoption of the TCJA that did not repeat in 2018. The $4.2 million of net expense related to adoption of the TCJA in 2017 included expense of $14.2 million for the transition tax and a tax benefit of $10.0 million from the adjustment of deferred tax assets and liabilities to reflect the decrease in the corporate income tax rate.

2017 Compared with 2016

Net Sales

Net sales increased 11% to $1,412.9 million in 2017 compared to $1,276.9 million in 2016. The increase in net sales was primarily due to higher end market demand for products in our Supply Technologies and Engineered Products segments, and the 2017 sales contributions from both our GH Electrotermia S.A. ("GH") acquisition completed at the end of 2016 and the 2017 acquisitions of Aero-Missile Components Inc. ("AMC") and Heads & All Threads Ltd. ("HAT"). Excluding the impact of the acquisitions, net sales grew by 5% in 2017 compared to 2016.

Cost of Sales & Gross Profit

Cost of sales increased 10% to $1,180.1 million in 2017 compared to $1,075.7 million in 2016. The increase in cost of sales was primarily due to the increase in net sales of 11% described above. Our gross margin percentage was 16.5% in 2017 compared to 15.8% in 2016. This 70 basis point improvement was primarily due to the profit flow-through from higher sales in 2017, the benefit of cost reduction actions taken in 2016, and favorable product mix.

SG&A Expenses

SG&A expenses increased to $152.3 million in 2017 from $134.2 million in 2016, driven by SG&A expenses from the acquisitions, as well as the higher sales levels in 2017. SG&A expenses as a percentage of sales were relatively consistent year-over-year, at 10.8% in 2017 compared to 10.5% in 2016.

Litigation Settlement Gain

During 2017, the Company paid $4.0 million to settle the IPSCO litigation. In connection with the settlement, the Company recognized $3.3 million of income related to the reversal of its excess litigation liability.

Asset Impairment Charge

An asset impairment charge of $1.0 million was recorded in 2016 due to the accelerated end of production in certain programs with an automotive customer in our aluminum products business.

Other Components of Pension Income and OPEB Expense, Net

In accordance with the adoption of Accounting Standards Codification 2017-07, as of January 1, 2018, the Company revised its presentation of total pension income and OPEB expense. Amounts recorded in the consolidated statements of income were as follows:

	Year Ended December 31, 2017	2016
	(Dollars in millions)	
Pension and OPEB service cost recorded in COS and SG&A expenses	$ 2.4	$ 2.4
Other components of pension income and OPEB expense, net	(6.4)	(6.2)
Total income, net	$ (4.0)	$ (3.8)

The service costs are recorded in operating income, and Other components of pension income and OPEB expenses are recorded on a separate line in the consolidated statements of income. 2017 and 2016 amounts have been reclassified to conform to the 2018 presentation.

Interest Expense, Net

Interest expense increased to $31.5 million in 2017 from $28.2 million in 2016, due primarily to higher outstanding borrowings. Our average borrowing rate was consistent year-over-year at 6.1%.

As described more fully below, in April 2017, we refinanced our outstanding senior notes, increasing the principal amount from $250 million to $350 million and reducing the interest rate from 8.125% to 6.625%. The net impact of the higher senior notes balance at a lower rate was an increase in interest expense of approximately $2.1 million in 2017.

Loss on Extinguishment of Debt

During 2017, we incurred $11.0 million of expenses related to our debt refinancing activities. Such expenses included tender premiums, bank and other fees and accelerated amortization of certain debt issuance costs related to our former borrowings that were previously capitalized.

Income Tax Expense

The provision for income taxes was $18.2 million in 2017 (an effective rate of 38.0%) and $8.8 million in 2016 (an effective rate of 21.5%). Income taxes in 2017 include a net $4.2 million of expense related to the TCJA, as discussed more fully above. The TCJA decreased the effective tax rate by approximately 880 basis points in 2017. In 2017 and 2016, the Company reversed various income tax accruals totaling $1.6 million and $4.0 million, respectively, relating to previous uncertain tax positions for which the statutes of limitations expired.

Excluding the one-time impact of the TCJA, the effective rates in both years are lower than the U.S. statutory rate of 35% due primarily to the income tax accrual reversals mentioned above, as well as earnings in jurisdictions in which the income tax rates are lower than the U.S. statutory income tax rate.

SEGMENT RESULTS

For purposes of measuring business segment performance, the Company utilizes segment operating income which is defined as revenues less expenses identifiable to the product lines within each segment. The Company does not allocate items that are non-operating or unusual in nature or are corporate costs, which include but are not limited to executive and share-based compensation and corporate office costs. Segment operating income reconciles to consolidated income before income taxes by deducting corporate costs, certain non-cash and/or non-operating items, Other components of pension income and OPEB expense, net, and interest expense.

Supply Technologies Segment

	Year Ended December 31,		
	2018	2017	2016
	(Dollars in millions)		
Net sales	$ 636.8	$ 561.8	$ 502.1
Segment operating income	$ 49.0	$ 43.3	$ 37.5
Segment operating income margin	7.7%	7.7%	7.5%

2018 Compared to 2017

Net sales were up 13% in 2018 compared to 2017, due primarily to organic growth of 7% and sales from the 2018 and 2017 acquisitions. The organic growth was due primarily to higher customer demand in the Company's truck and truck-related market, which was up 33%, the Company's aerospace market, which was up 37%, the Company's automotive and vehicle parts market, which was up 23%, and the Company's industrial equipment market, which was up 11%.

Segment operating income increased by $5.7 million in 2018 compared to 2017 due primarily to the higher sales volumes. Segment operating income margin was comparable year-over-year at 7.7%, as the profit flow-through from higher sales in 2018 was offset by costs to launch new sales initiatives and changes in sales mix.

2017 Compared to 2016

Net Sales were up 12% in 2017 compared to 2016, due primarily to organic growth of 8% and the sales from the 2017 acquisitions. The organic growth was due primarily to higher customer demand in the Company's power sport and recreational equipment market, which was up 16%, the Company's truck and truck-related market, which was up 5%, the Company's semiconductor market, which was up 37%, and the Company's commercial aerospace market, which was up 25%.

Segment operating income increased by $5.8 million in 2017 compared to 2016, and segment operating income margin increased by 20 basis points, due primarily to the higher sales volumes noted above.

Assembly Components Segment

	Year Ended December 31,		
	2018	2017	2016
	(Dollars in millions)		
Net sales	$ 578.3	$ 524.5	$ 529.4
Segment operating income	$ 42.9	$ 47.8	$ 48.0
Segment operating income margin	7.4%	9.1%	9.1%

2018 Compared to 2017

Net sales were up 10% in 2018 compared to 2017 due primarily to organic growth of 5% and sales from the 2018 acquisition of Hydrapower and the December 2017 acquisition of an injection molding business. The organic growth was driven by higher sales volumes in our aluminum products business due to new programs, more than offsetting lower sales volumes in our fuel products line caused by end-of-life programs.

Segment operating income and operating income margin were down $4.9 million and 170 basis points, respectively, in 2018 compared to 2017. These decreases were driven by start-up and product launch costs in 2018 related to new facilities in China and Mexico, excess operational costs at certain facilities, and changes in sales mix.

2017 Compared to 2016

Net sales were down 1% in 2017 compared to 2016 due primarily to lower sales volumes in our extruded rubber and plastic product lines and our aluminum product line, which more than offset higher sales in our fuel filler pipe and fuel rail product lines. The lower sales volumes in rubber and plastic were due primarily to the end of life in certain programs, and the lower sales volumes in aluminum were due to the end of production in certain programs during 2016. The higher sales volumes in our fuel products businesses were driven by new product launches and higher foreign sales, particularly in China and Mexico.

Segment operating income and operating income margin was relatively consistent year over year. The favorable impact of higher sales in our fuel products businesses offset the impact of lower sales in rubber, plastics and aluminum, as well as start-up costs of approximately $1.4 million incurred by the segment during 2017 related to our new facilities in China.

Engineered Products Segment

	Year Ended December 31,		
	2018	2017	2016
	(Dollars in millions)		
Net sales	$ 443.0	$ 326.6	$ 245.4
Segment operating income	$ 38.4	$ 19.5	$ 9.4
Segment operating income margin	8.7%	6.0%	3.8%

2018 Compared to 2017

Net sales were up 36% in 2018 compared to 2017 due primarily to sales at CDF, which was acquired in February 2018, and organic growth of 14%. The organic growth was driven by increased customer demand for our induction heating and pipe threading products, as well as our forged steel and machined products.

Segment operating income increased by $18.9 million, and segment operating income margin increased by 270 basis points, due primarily to the income from CDF and the profit flow-through from higher sales in our capital equipment and forged and machined products businesses.

2017 Compared to 2016

Net sales were up 33% in 2017 compared to 2016 due primarily to $55 million of sales at GH, which was acquired at the end of 2016, and increased customer demand for our induction heating and pipe threading products in our legacy businesses.

Segment operating income increased by $10.1 million, and segment operating income margin increased by 220 basis points, due primarily to the higher sales in 2017 and the benefit of cost reduction actions taken in 2016 in response to lower sales levels a year ago.

Liquidity and Capital Resources

The following table summarizes the major components of cash flows.

	2018	2017	2016
	(In millions)		
Cash provided (used) by			
Operating activities	$ 54.8	$ 46.7	$ 72.9
Investing activities	(89.2)	(67.6)	(51.9)
Financing activities	9.4	33.7	(17.2)
Effect of exchange rate on cash	(2.1)	5.7	(1.5)
(Decrease) increase in cash and cash equivalents	$(27.1)	$ 18.5	$ 2.3

Operating Activities

Cash provided by operating activities increased by $8.1 million in 2018 compared to 2017, driven by higher profitability in 2018 partially offset by higher working capital to support higher sales levels in 2018 compared to 2017.

Cash provided by operating activities decreased by $26.2 million in 2017 compared to 2016, driven by higher sales levels in 2017, which resulted in higher accounts receivable balances in 2017 compared to 2016.

Investing Activities

Capital expenditures (net of proceeds from asset sales) were $42.3 million in 2018, $27.9 million in 2017 and $28.5 million in 2016. These capital expenditures were primarily for growth initiatives, with the majority in our Assembly Components and Engineered Products segments. In the Assembly Components segment, we continued to launch newly awarded products in our fuel product and aluminum businesses and completed construction of our new factories in China and Mexico. In the Engineered Products segment, we continued to invest in a new forging line at the Company's facility in Arkansas.

In 2018, we spent $46.9 million on acquisitions of businesses, primarily CDF and Hydrapower. See Note 3 to the consolidated financial statements included elsewhere herein for additional information.

In 2017, we spent a combined $39.7 million on acquisitions of businesses. See Note 3 to the consolidated financial statements included elsewhere herein for additional information.

In 2016, we spent $23.4 million on the acquisition of GH. See Note 3 to the consolidated financial statements included elsewhere herein for additional information.

Financing Activities

Cash provided by financing activities in 2018 included net borrowings of $40.3 million on our revolving credit facility to fund the 2018 acquisitions, and repayments of other debt of $12.4 million. During 2018, we also paid dividends of $6.4 million, repurchased treasury shares for $9.0 million, and made payments of withholding taxes on share awards of $3.1 million.

During September 2018, we repatriated cash of $24.4 million from a foreign subsidiary to the U.S. and utilized the cash to pay down a portion of the amount outstanding under our revolving credit facility in the U.S.

Cash provided by financing activities in 2017 reflected the proceeds from our issuance of senior notes in April 2017, net of the premium on the early extinguishment of our former senior notes and bank financing fees, repayments under our revolving credit facility and the payoff of our previously-outstanding term loan and senior notes. During 2017, we also paid dividends of $6.9 million and repurchased treasury shares for $4.2 million.

Cash used by financing activities in 2016 consisted primarily of the net payments of debt instruments of $7.0 million, payment of cash dividends of $6.2 million and payment of an acquisition earn-out of $2.0 million. During the year, we reduced outstanding indebtedness by $33.4 million using cash flow from operating activities, before borrowing $26.4 million to fund the GH acquisition.

Liquidity

Overall, our net borrowings and cash provided by operating activities in 2018 were used to make acquisitions and to fund higher working capital needs, our quarterly cash dividend payments and share repurchases. Overall, our cash balances of $55.7 million decreased by $27.1 million during 2018 due to the factors described above. See Note 7 to the consolidated financial statements included elsewhere herein for further discussion of our financing arrangements.

The following table summarizes our indicators of liquidity:

	2018	2017
	(Dollars in millions)	
Cash and cash equivalents	$ 55.7	$ 82.8
Gross debt (excluding unamortized debt issuance costs)	$ 573.1	$ 541.9
Working capital (excluding cash)	$ 366.0	$ 310.7
Net debt as a % of capitalization	59%	55%

Our liquidity needs are primarily for working capital and capital expenditures. Our primary sources of liquidity have been funds provided by operations, funds available from existing bank credit arrangements and the sale of our debt securities. Our existing financial resources (working capital and available bank borrowing arrangements) and anticipated funds from operations are expected to be adequate to meet anticipated cash requirements for at least the next twelve months, including but not limited to our ability to maintain current operations and fund capital expenditure requirements, service our debt and pay dividends.

As of December 31, 2018, we had $165.1 million outstanding under the revolving credit facility, approximately $203.3 million of unused borrowing availability and cash and cash equivalents of $55.7 million.

The Company had cash and cash equivalents held by foreign subsidiaries of $46.2 million at December 31, 2018 and $76.0 million at December 31, 2017. We do not expect restrictions on repatriation of cash held outside the U.S. to have a material effect on our overall liquidity, financial condition or results of operations for the foreseeable future.

Senior Notes

In April 2017, Park-Ohio Industries, Inc. ("Park-Ohio"), the operating subsidiary of Park-Ohio Holdings Corp., completed the sale, in a private placement, of $350.0 million aggregate principal amount of 6.625% Senior Notes due 2027 (the "Notes"). The net proceeds from the issuance of the Notes were used to repay in full our previously outstanding 8.125% Senior Notes due 2021 and our outstanding term loan, and to repay a portion of the borrowings then outstanding under our revolving credit facility.

Credit Agreement

In June 2018, Park-Ohio entered into Amendment No. 1 to its Seventh Amended and Restated Credit Agreement (the "Credit Agreement"). The Amendment to the Credit Agreement, among other things, provided increases in the revolving credit facility from $350.0 million to $375.0 million, the Canadian revolving subcommitment from $35.0 million to $40.0 million, and the European revolving subcommitment from $25.0 million to $30.0 million. Furthermore, the Company has the option, pursuant to the Credit Agreement, to increase the availability under the revolving credit facility by an aggregate incremental amount up to $100.0 million.

Capital Leases

On August 13, 2015, the Company entered into a Capital Lease Agreement (the "Lease Agreement"). The Lease Agreement provides the Company up to $50.0 million for capital leases. Capital lease obligations of $20.7 million were borrowed under the Lease Agreement to acquire machinery and equipment as of December 31, 2018.

Covenants

The future availability of bank borrowings under the revolving credit facility provided by the Credit Agreement is based on our ability to meet a debt service ratio covenant, which could be materially impacted by negative economic trends. Failure to meet the debt service ratio covenant could materially impact the availability and interest rate of future borrowings.

At December 31, 2018, our debt service coverage ratio was 1.9, and, therefore, we were in compliance with the debt service coverage ratio covenant in the revolving credit facility provided by the Credit Agreement. The debt service coverage ratio is calculated at the end of each fiscal quarter based on the following ratio: (1) the most recently ended four fiscal quarters of consolidated EBITDA, as defined in the Credit Agreement, minus cash taxes paid, minus unfunded capital expenditures, plus cash tax refunds, to (2) consolidated debt charges which are consolidated cash interest expense, plus scheduled principal payments on indebtedness, plus scheduled reductions in our term debt as defined in the Credit Agreement. The debt service coverage ratio must be greater than 1.0 and not less than 1.15 for any two consecutive fiscal quarters. We were also in compliance with the other covenants contained in the revolving credit facility as of December 31, 2018. While we expect to remain in compliance throughout 2019, declines in sales volumes in 2019 could adversely impact our ability to remain in compliance with certain of these financial covenants. Additionally, to the extent our customers are adversely affected by declines in the economy in general, they may be unable to pay their accounts payable to us on a timely basis or at all, which could make our accounts receivable ineligible for purposes of the revolving credit facility and could reduce our borrowing base and our ability to borrow under such facility.

Dividends

The company paid dividends of $6.4 million during 2018. In January 2019, our Board of Directors declared a quarterly dividend of $0.125 per common share. The dividend was paid on March 1, 2019 to shareholders of record as of the close of business on February 15, 2019 and resulted in a cash outlay of $1.6 million. Although we currently intend to pay a quarterly dividend on an ongoing basis, all future dividend declarations will be at the discretion of our Board of Directors and dependent upon then-existing conditions, including our operating results and financial condition, capital requirements, contractual restrictions, business prospects and other factors that our Board of Directors may deem relevant.

Contractual Obligations

The following table summarizes our principal contractual obligations and other commercial commitments over various future periods as of December 31, 2018:

(In millions)	Total	Less Than 1 Year	1-3 Years	3-5 Years	More than 5 Years
		Payments Due or Commitment Expiration Per Period			
Short-term and long-term debt obligations	$ 552.4	$ 11.3	$ 14.4	$ 170.3	$ 356.4
Interest obligations (1)	192.2	23.2	46.4	46.4	76.2
Operating lease obligations	82.5	18.5	24.5	16.3	23.2
Capital lease obligations	20.7	6.6	9.1	3.4	1.6
Purchase obligations (2)	184.2	184.1	0.1	—	—
Pension obligations (3)	58.1	5.4	11.3	11.7	29.7
Postretirement obligations (3)	8.1	1.0	1.9	1.8	3.4
Transition tax	8.8	—	1.1	4.5	3.2
Standby letters of credit and bank guarantees	27.5	23.0	3.5	1.0	—
Total	$ 1,134.5	$ 273.1	$ 112.3	$ 255.4	$ 493.7

(1) Interest obligations are included on the Notes only and assume the Notes are paid at maturity. The calculation of interest on debt outstanding under our revolving credit facility and other variable rate debt ($5.7 million based on 3.48% average interest rate and outstanding borrowings of $165.1 million at December 31, 2018, respectively) is not included above due to the estimation required.

(2) Purchase obligations include contractual obligations for raw materials and services.

(3) Pension and postretirement obligations include projected benefit payments to participants only through 2027.

The table above excludes the liability for unrecognized income tax benefits disclosed in Note 8 to the consolidated financial statements included elsewhere herein since we cannot predict, with reasonable reliability, the timing of potential cash settlements with the respective taxing authorities.

Off-Balance Sheet Arrangements

We do not have off-balance sheet arrangements, financing or other relationships with unconsolidated entities or other persons or derivative instruments.

Critical Accounting Policies and Estimates

Preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make certain estimates and assumptions which affect amounts reported in our consolidated financial statements. On an ongoing basis, we evaluate the accounting policies and estimates that are used to prepare financial statements. Management has made their best estimates and judgments of certain amounts included in the financial statements, giving due consideration to materiality. We do not believe that there is great likelihood that materially different amounts would be reported under different conditions or using different assumptions related to the accounting policies described below. However, application of these accounting policies involves the exercise of judgment and use of assumptions as to future uncertainties and, as a result, actual results could differ from these estimates.

Certain accounting policies that require significant management estimates and are deemed critical to our results of operations or financial position are discussed below. On a regular basis, critical accounting policies are reviewed with the Audit Committee of the Board of Directors.

Revenue Recognition. We recognize revenue, other than from long-term contracts, when our obligations under the contract terms are satisfied and control transfers to the customer, typically upon shipment. Revenue from certain long-term contracts is accounted for over time, when products are manufactured or services are performed, as control transfers under these arrangements. We follow the input method since reasonably reliable estimates of revenue and costs of a contract can be made. See Note 2 of the consolidated financial statements included elsewhere herein for additional disclosures on revenue.

Allowance for Obsolete and Slow-Moving Inventory. Inventories are generally valued using first-in, first-out ("FIFO") or the weighted-average inventory method, stated at the lower of cost or net realizable value, and have been reduced by an allowance for obsolete and slow-moving inventories. The estimated allowance is based on management's review of inventories on hand with minimal sales activity, which is compared to estimated future usage and sales. Inventories identified by management as slow-moving or obsolete are reserved for based on estimated selling prices less disposal costs. Though we consider these allowances adequate and proper, changes in economic conditions in specific markets in which we operate could have a material effect on allowances required.

Impairment of Long-Lived Assets. In accordance with Accounting Standards Codification ("ASC") 360, "Property, Plant and Equipment," management performs impairment tests of long-lived assets, including property and equipment, whenever an event occurs or circumstances change that indicate that the carrying value may not be recoverable or the useful life of the asset has changed. We review our long-lived assets for indicators of impairment such as a decision to idle certain facilities and consolidate certain operations, a current-period operating or cash flow loss or a forecast that demonstrates continuing losses associated with the use of a long-lived asset and the expectation that, more likely than not, a long-lived asset will be sold or otherwise disposed of significantly before the end of its previously estimated useful life. When we identify impairment indicators, we determine whether the carrying amount of our long-lived assets is recoverable by comparing the carrying value to the sum of the undiscounted cash flows expected to result from the use and eventual disposition of the assets. We consider whether impairments exist at the lowest level of independent identifiable cash flows within a reporting unit (for example plant location, program level or asset level) If the carrying value of the assets exceeds the expected cash flows, we estimate the fair value of these assets by using appraisals or recent selling experience in selling similar assets, or for certain assets with reasonably predictable cash flows by performing a discounted cash flow analysis to estimate fair value when market information is not available to determine whether an impairment existed

Business Combinations, Goodwill and Indefinite-Lived Assets Business combinations are accounted for using the purchase method of accounting This method requires the Company to record assets and liabilities of the business acquired at their estimated fair values as of the acquisition date Any excess of the cost of the acquisition over the fair value of the net assets acquired is recorded as goodwill The Company uses valuation specialists to perform appraisals and assist in the determination of the fair values of the assets acquired and liabilities assumed These valuations require management to make estimates and assumptions

As required by ASC 350, "Intangibles - Goodwill and Other ("ASC 350) management performs impairment testing of goodwill at least annually as of October 1 of each year, or more frequently if impairment indicators arise In accordance with ASC 350, management tests goodwill for impairment at the reporting unit level A reporting unit is an operating segment pursuant to ASC 280, Segment Reporting" or one level below the operating segment (component level) as determined by the availability of discrete financial information that is regularly reviewed by operating segment management Our reporting units have been identified at the component level For 2018, 2017 and 2016 we performed quantitative testing for each reporting unit with a goodwill balance

Goodwill testing compares the carrying amount of the reporting unit to its estimated fair value To the extent that the carrying value of the reporting unit exceeds its estimated fair value, an impairment charge is recorded In applying the quantitative approach, we rely on a number of factors including future business plans, actual and forecasted operating results, and market data The significant assumptions employed under this method include discount rates, revenue growth rates including assumed terminal growth rates, future capital expenditures and working capital needs and operating margins used to project future cash flows for a reporting unit The discount rates utilized reflect market-based estimates of capital costs and discount rates adjusted for management s assessment of a market participant's view with respect to other risks associated with the projected cash flows of the individual reporting unit Our estimates are based upon assumptions we believe to be reasonable, but which by nature are uncertain and unpredictable We believe we incorporate ample sensitivity ranges into our analysis of goodwill impairment testing for a reporting unit, such that actual experience would need to be materially out of the range of expected assumptions in order for an impairment to remain undetected

The results of testing as of October 1, 2018 2017 and 2016 for all reporting units confirmed that the estimated fair value exceeded carrying values, and no impairment existed as of those dates

Additionally we test all indefinite-lived intangible assets for impairment at least annually as of October 1 of each year, or more frequently if impairment indicators arise In 2018, 2017 and 2016, we utilized a quantitative approach using the royalty relief method The significant assumptions employed under this method include discount rates, revenue growth rates, including assumed terminal growth rates, and royalty rates The discount rates utilized reflect market-based estimates of capital costs and discount rates adjusted for management's assessment of a market participant's view with respect to other risks associated with the projected cash flows of the individual reporting unit Our estimates are based upon assumptions we believe to be reasonable but which by nature are uncertain and unpredictable We believe we incorporate ample sensitivity ranges into our analysis of intangible impairment testing, such that actual experience would need to be materially out of the range of expected assumptions in order for an impairment to remain undetected

The results of testing as of October 1, 2018, 2017 and 2016 for all reporting units confirmed that the estimated fair value exceeded carrying values, and no impairment existed as of those dates

See Notes 5 and 6 of the consolidated financial statements included elsewhere herein for additional disclosure on goodwill and indefinite-lived intangibles

Income Taxes In accordance with ASC 740, "Income Taxes" ("ASC 740"), we account for income taxes under the asset and liability method whereby deferred tax assets and liabilities are determined based on temporary differences between the financial reporting and the tax bases of assets and liabilities and are measured using the currently enacted tax rates Specifically we measure gross deferred tax assets for deductible temporary differences and carryforwards, such as operating losses and tax credits, using the applicable enacted tax rates and apply the more likely than not measurement criterion

In determining if it is more likely than not that all or some portion of a deferred tax asset will be realized we consider the following factors future reversals of existing taxable temporary differences, future taxable income, taxable income in prior years if carryback is permitted under the tax law, and tax planning strategies that could accelerate taxable income Based on these factors when we have determined that the realizability of certain domestic and foreign deferred tax assets is more likely than not to not be realized a valuation allowance has been established

Further, at each interim reporting period, we estimate an effective income tax rate that is expected to be applicable for the full year Significant judgment is involved regarding the application of global income tax laws and regulations and when projecting the jurisdictional mix of income Additionally, interpretation of tax laws, court decisions or other guidance provided by taxing authorities influences our estimate of the effective income tax rates As a result, our actual annual effective income tax rates and related income tax liabilities may differ materially from our interim estimated effective tax rates and related income tax liabilities Any resulting differences are recorded in the period they become known

Pension and Other Postretirement Benefit Plans We and our subsidiaries have pension plans, principally noncontributory defined benefit or noncontributory defined contribution plans and postretirement benefit plans covering substantially all employees The measurement of liabilities related to these plans is based on management's assumptions related to future events, including interest rates, return on pension plan assets, rate of compensation increases, and health care cost trends Pension plan asset performance in the future will directly impact our net income We have evaluated our pension and other postretirement benefit assumptions, considering current trends in interest rates and market conditions and believe our assumptions are appropriate

We consult with our actuaries at least annually when reviewing and selecting the discount rates to be used The discount rates used by the Company are based on yields of various corporate and governmental bond indices with actual maturity dates that approximate the estimated benefit payment streams of the related pension plans The discount rates are also reviewed in comparison with current benchmark indices, economic market conditions and the movement in the benchmark yield since the previous fiscal year The liability weighted-average discount rate for the defined benefit pension plan is 4 24% for 2018 compared with 3 52% in 2017 For the other postretirement benefit plan, the rate is 4 06% for 2018 and 3 32% for 2017 This rate represents the interest rates generally available in the United States which is the Company's only country with other postretirement benefit liabilities Another assumption that affects the Company's pension expense is the expected long-term rate of return on assets The Company s pension plans are funded The weighted-average expected long-term rate of return on assets assumption is 8 25% for 2018 In determining the expected return on plan assets, we consider both historical performance and an estimate of future long-term rates of return on assets similar to those in our plan We consult with and consider opinions of financial and actuarial experts in developing appropriate return assumptions

Legal Contingencies We are involved in a variety of claims, suits, investigations and administrative proceedings with respect to commercial, premises liability, product liability, employment and environmental matters arising from the ordinary course of business We accrue reserves for legal contingencies, on an undiscounted basis when it is probable that we have incurred a liability and we can reasonably estimate an amount When a single amount cannot be reasonably estimated but the cost can be estimated within a range and no amount within the range is a better estimate than any other amount, we accrue the minimum amount in the range Based upon facts and information currently available, we believe the amounts reserved are adequate for such pending matters We monitor the development of legal proceedings on a regular basis and will adjust our reserves when and to the extent additional information becomes available

Environmental

We have been identified as a potentially responsible party at third-party sites under the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, or comparable state laws which provide for strict and under certain circumstances, joint and several liability We are participating in the cost of certain clean-up efforts at several of these sites However, our share of such costs has not been material and based on available information management does not expect our exposure at any of these locations to have a material adverse effect on our results of operations liquidity or financial condition

We have been named as one of many defendants in a number of asbestos-related personal injury lawsuits Our cost of defending such lawsuits has not been material to date and based upon available information management does not expect our future costs for asbestos-related lawsuits to have a material adverse effect on our results of operations liquidity or financial condition We caution however that inherent in management's estimates of our exposure are expected trends in claims severity frequency and other factors that may materially vary as claims are filed and settled or otherwise resolved

Seasonality; Variability of Operating Results

The timing of orders placed by our customers has varied with, among other factors, orders for customers' finished goods customer production schedules, competitive conditions and general economic conditions The variability of the level and timing of orders has, from time to time, resulted in significant periodic and quarterly fluctuations in the operations of our business units Such variability is particularly evident in the industrial equipment business unit included in the Engineered Products segment, which typically ships a few large systems per year

Forward-Looking Statements

This Annual Report on Form 10-K contains certain statements that are "forward-looking statements" within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act. The words "believes", "anticipates", "plans", "expects" "intends" "estimates" and similar expressions are intended to identify forward-looking statements

These forward-looking statements, including statements regarding future performance of the Company that are subject to known and unknown risks, uncertainties and other factors that may cause our actual results, performance and achievements, or industry results to be materially different from any future results performance or achievements expressed or implied by such forward-looking statements These factors that could cause actual results to differ materially from expectations include but are not limited to, the following our substantial indebtedness, the uncertainty of the global economic environment general business conditions and competitive factors, including pricing pressures and product innovation, demand for our products and services, raw material availability and pricing, fluctuations in energy costs, component part availability and pricing, changes in our relationships with customers and suppliers the financial condition of our customers including the impact of any bankruptcies our ability to successfully integrate recent and future acquisitions into existing operations the amounts and timing, if any, of purchases of our common stock changes in general domestic economic conditions such as inflation rates interest rates, tax rates, unemployment rates, higher labor and healthcare costs, recessions and changing government policies, laws and regulations including those related to the current global uncertainties and crises, adverse impacts to us, our suppliers and customers from acts of

terrorism or hostilities, our ability to meet various covenants, including financial covenants contained in the agreements governing our indebtedness, disruptions, uncertainties or volatility in the credit markets that may limit our access to capital, potential disruption due to a partial or complete reconfiguration of the European Union, increasingly stringent domestic and foreign governmental regulations, including those affecting the environment or import and export controls and other trade barriers, inherent uncertainties involved in assessing our potential liability for environmental remediation-related activities, the outcome of pending and future litigation and other claims and disputes with customers, our dependence on the automotive and heavy-duty truck industries, which are highly cyclical, the dependence of the automotive industry on consumer spending; our ability to negotiate contracts with labor unions, our dependence on key management our dependence on information systems, our ability to continue to pay cash dividends, and the other factors we describe under "Item 1A Risk Factors" included in this Annual Report on Form 10-K Any forward-looking statement speaks only as of the date on which such statement is made, and we undertake no obligation to update any forward-looking statement whether as a result of new information, future events or otherwise, except as required by law In light of these and other uncertainties the inclusion of a forward-looking statement herein should not be regarded as a representation by us that our plans and objectives will be achieved The Company assumes no obligation to update the information in this Annual Report on Form 10-K, except to the extent required by law

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

We are exposed to market risk, including changes in interest rates. As of December 31, 2018, we are subject to interest rate risk on borrowings under the floating rate revolving credit facility provided by our Credit Agreement, which consisted of borrowings of $165.1 million at December 31, 2018. A 100 basis point increase in the interest rate would have resulted in an increase in interest expense on these borrowings of approximately $1.7 million for the year ended December 31, 2018.

Our foreign subsidiaries generally conduct business in local currencies. We face translation risks related to the changes in foreign currency exchange rates. Amounts invested in our foreign operations are translated in U.S. dollars at the exchange rates in effect at the balance sheet date. The resulting translation adjustments are recorded as a component of Accumulated other comprehensive loss in the Shareholders' equity section of the accompanying Consolidated Balance Sheets. Sales and expenses at our foreign operations are translated into U.S. dollars at the applicable monthly average exchange rates. Therefore, changes in exchange rates may either positively or negatively affect our net sales and expenses from foreign operations as expressed in U.S. dollars.

Our largest exposures to commodity prices relate to steel and natural gas prices, which have fluctuated widely in recent years. We do not have any commodity swap agreements, forward purchase or hedge contracts.

Item 8. Financial Statements and Supplementary Data

Index to Consolidated Financial Statements and Supplementary Financial Data

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and the Board of Directors of Park-Ohio Holdings Corp

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Park-Ohio Holdings Corp. and subsidiaries (the Company) as of December 31, 2018 and 2017, the related consolidated statements of income, comprehensive income (loss), shareholders' equity and cash flows for each of the three years in the period ended December 31, 2018, and the related notes and financial statement schedule listed in the Index at Item 15(a) (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated March 5, 2019 expressed an unqualified opinion thereon.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company 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.

Ernst + Young LLP

We have served as the Company's auditor since 1967.

Cleveland, Ohio
March 5, 2019

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and the Board of Directors of Park-Ohio Holdings Corp

Opinion on Internal Control over Financial Reporting

We have audited Park-Ohio Holdings Corp. and subsidiaries' internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control- Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, Park-Ohio Holdings Corp. and subsidiaries (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2018 and 2017, the related consolidated statements of income, comprehensive income (loss), shareholders' equity and cash flows for each of the three years in the period ended December 31, 2018, and the related notes and financial statement schedule listed in the Index at Item 15(a) and our report dated March 5, 2019 expressed an unqualified opinion thereon.

As indicated in the accompanying Management's Report on Internal Control over Financial Reporting, management's assessment of and conclusion on the effectiveness of internal control over financial reporting did not include the internal controls of Canton Drop Forge, Hydrapower Dynamics Limited and the two acquisitions in the Supply Technologies segment, which are included in the 2018 consolidated financial statements of the Company and constituted approximately six percent of the Company's total assets as of December 31, 2018 and approximately four percent of the Company's total revenues for the year then ended. Our audit of internal control over financial reporting of the Company also did not include an evaluation of the internal control over financial reporting of Canton Drop Forge, Hydrapower Dynamics Limited and the two acquisitions in the Supply Technologies segment.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company 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 audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Ernst + Young LLP

Cleveland, Ohio
March 5, 2019

Park-Ohio Holdings Corp. and Subsidiaries
Consolidated Balance Sheets

		December 31, 2018		December 31, 2017
		(In millions, except share data)		
ASSETS				
Current assets				
Cash and cash equivalents	$	55.7	$	82.8
Accounts receivable, net		264.4		242.6
Inventories, net		317.8		282.8
Unbilled contract revenue		66.3		44.5
Other current assets		16.4		16.9
Total current assets		720.6		669.6
Property, plant and equipment, net		219.4		177.0
Goodwill		103.4		100.2
Intangible assets, net		95.3		99.5
Pension assets		57.0		74.3
Other long-term assets		12.8		11.9
Total assets	$	1,208.5	$	1,132.5
LIABILITIES AND SHAREHOLDERS' EQUITY				
Current liabilities				
Trade accounts payable	$	177.8	$	173.7
Current portion of long-term debt and short-term debt		17.9		17.7
Accrued employee compensation		27.5		23.0
Deferred revenue		39.5		23.0
Other accrued expenses		36.2		38.7
Total current liabilities		298.9		276.1
Long-term liabilities, less current portion				
Long-term debt		547.5		515.5
Deferred income taxes		23.4		22.3
Other long-term liabilities		26.1		30.6
Total long-term liabilities		597.0		568.4
Park-Ohio Holdings Corp. and Subsidiaries shareholders' equity				
Capital stock, par value $1 a share				
Serial preferred stock: Authorized — 632,470 shares: Issued and outstanding — none		—		—
Common stock: Authorized — 40,000,000 shares, Issued — 15,555,275 shares in 2018 and 15,153,009 in 2017		15.6		15.2
Additional paid-in capital		125.7		117.8
Retained earnings		265.9		216.1
Treasury stock, at cost, 2,928,869 shares in 2018 and 2,624,354 shares in 2017		(67.3)		(55.2)
Accumulated other comprehensive loss		(40.9)		(17.9)
Total Park-Ohio Holdings Corp. and Subsidiaries shareholders' equity		299.0		276.0
Noncontrolling interests		13.6		12.0
Total equity		312.6		288.0
Total liabilities and shareholders' equity	$	1,208.5	$	1,132.5

The accompanying notes are an integral part of these consolidated financial statements.

Park-Ohio Holdings Corp. and Subsidiaries
Consolidated Statements of Income

	Year Ended December 31,					
		2018		2017		2016
	(In millions, except per share data)					
Net sales	$	1,658.1	$	1,412.9	$	1,276.9
Cost of sales		1,386.6		1,180.1		1,075.7
Gross profit		271.5		232.8		201.2
Selling, general and administrative expenses		176.1		152.3		134.2
Gain on sale of assets		(1.9)		—		—
Litigation settlement gain		—		(3.3)		—
Asset impairment charge		—		—		4.0
Operating income		97.3		83.8		63.0
Other components of pension income and other postretirement benefits expense, net		8.8		6.4		6.2
Interest expense, net		(34.3)		(31.5)		(28.2)
Loss on extinguishment of debt		—		(11.0)		—
Income before income taxes		71.8		47.7		41.0
Income tax expense		(16.6)		(18.2)		(8.8)
Net income		55.2		29.5		32.2
Net income attributable to noncontrolling interest		(1.6)		(0.9)		(0.5)
Net income attributable to ParkOhio common shareholders	$	53.6	$	28.6	$	31.7
Earnings per common share attributable to ParkOhio common shareholders						
Basic	$	4.37	$	2.34	$	2.62
Diluted	$	4.28	$	2.30	$	2.58
Weighted-average shares used to compute earnings per share						
Basic		12.3		12.2		12.1
Diluted		12.5		12.5		12.3

The accompanying notes are an integral part of these consolidated financial statements.

Park-Ohio Holdings Corp. and Subsidiaries
Consolidated Statements of Comprehensive Income (Loss)

	Year Ended December 31,		
	2018	2017	2016
	(In millions)		
Net income	$ 55.2	$ 29.5	$ 32.2
Other comprehensive income (loss)			
Currency translation	(9.7)	19.2	(13.9)
Pension and other postretirement benefits, net of tax	(13.3)	5.6	1.2
Total other comprehensive income (loss)	(23.0)	24.8	(12.7)
Total comprehensive income, net of tax	32.2	54.3	19.5
Comprehensive income attributable to noncontrolling interest	(1.6)	(0.9)	(0.5)
Comprehensive income attributable to ParkOhio common shareholders	$ 30.6	$ 53.4	$ 19.0

The accompanying notes are an integral part of these consolidated financial statements

Park-Ohio Holdings Corp. and Subsidiaries
Consolidated Statements of Shareholders' Equity

	Common Stock							
	Shares	Amount	Additional Paid-In Capital	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive (Loss) Income	Noncontrolling Interest	Total
	(In whole shares)	(In millions)						
Balance at January 1, 2016	14,653,985	$ 14.7	$ 99.0	$ 168.3	$ (46.7)	$ (30.0)	$ 6.9	$ 212.2
Comprehensive income (loss)	—	—	—	31.7	—	(12.7)	0.5	19.5
Stock-based compensation	—	—	10.6	—	—	—	—	10.6
Restricted stock awards issued	172,550	0.2	(0.2)	—	—	—	—	—
Restricted stock cancelled	(4,000)	—	—	—	—	—	—	—
Performance shares issued	1,500	—	—	—	—	—	—	—
Exercise of stock options	22,000	—	0.5	—	—	—	—	0.5
Dividends		-	--	(6.2)				(6.2)
Purchase of treasury stock (62,208 shares)	—	—	—	—	(1.9)	—	—	(1.9)
Income tax effect of share-based compensation exercises and vesting	—	—	(0.6)	—	—	—	—	(0.6)
Acquisition				–			2.1	2.1
Other			(0.5)	(0.2)			0.5	(0.2)
Balance at December 31, 2016	14,846,035	14.9	108.8	193.6	(48.6)	(42.7)	10.0	236.0
Comprehensive income	—	—	—	28.6	—	24.8	0.9	54.3
Stock-based compensation	—	—	8.6	—	—	—	—	8.6
Restricted stock awards issued	266,280	0.3	(0.3)	--	—	—	—	—
Restricted stock cancelled	(2,000)	—	—	—	—	—	—	—
Performance shares issued	4,694	—	—	—	—	—	—	—
Exercise of stock options	38,000	—	0.7	—	—	—	—	0.7
Dividends	—	—	—	(6.3)	—	—	(0.6)	(6.9)
Purchase of treasury stock (178,243 shares)	—	—	—	—	(6.6)	—	—	(6.6)
Acquisition adjustment	—	—	—	—	—	—	1.7	1.7
Other	—	—	—	0.2	—	—	—	0.2
Balance at December 31, 2017	15,153,009	15.2	117.8	216.1	(55.2)	(17.9)	12.0	288.0
Comprehensive income	---			53.6	-	(23.0)	1.6	32.2
Stock-based compensation	–	—	8.3	—	—	—	—	8.3
Restricted stock awards issued	410,100	0.4	(0.4)	—	—	—	—	—
Restricted stock cancelled	(7,834)	—	—	—	—	—	—	—
Dividends	—	—	—	(6.4)	—	—	—	(6.4)
Purchase of treasury stock (304,512 shares)	-				(12.1)			(12.1)
Adoption of ASU 2014-09				2.6				2.6
Balance at December 31, 2018	15,555,275	$ 15.6	$ 125.7	$ 265.9	$ (67.3)	$ (40.9)	$ 13.6	$ 312.6

	Year Ended December 31,		
	2018	2017	2016
Cash dividend per common share	$ 0.50	$ 0.50	$ 0.50

The accompanying notes are an integral part of these consolidated financial statements

Park-Ohio Holdings Corp. and Subsidiaries

Consolidated Statements of Cash Flows

	Year Ended December 31, 2018	2017	2016
		(In millions)	
OPERATING ACTIVITIES			
Net income	$ 55.2	$ 29.5	$ 32.2
Adjustments to reconcile net income to net cash provided by operating activities			
Depreciation and amortization	36.3	31.5	29.5
Stock-based compensation	8.3	8.6	10.6
Gain on sale of assets	(1.9)	—	—
Loss on extinguishment of debt	—	11.0	—
Litigation settlement gain	—	(3.3)	—
Asset impairment charge	—	—	4.0
Deferred income taxes	0.6	5.6	2.8
Net impact of Tax Cuts and Jobs Act	0.3	4.2	
Changes in operating assets and liabilities			
Accounts receivable	(11.9)	(25.1)	13.7
Inventories	(29.4)	(19.0)	8.6
Prepaid and other current assets	(9.7)	(4.4)	(5.5)
Accounts payable and accrued expenses	15.5	23.8	(8.8)
Other noncurrent liabilities	(2.0)	(4.3)	(8.1)
Litigation settlement payment	—	(4.0)	—
Other	(6.5)	(7.4)	(6.1)
Net cash provided by operating activities	54.8	46.7	72.9
INVESTING ACTIVITIES			
Purchases of property, plant and equipment	(45.1)	(27.9)	(28.5)
Proceeds from sale of assets	2.8	—	—
Business acquisitions, net of cash acquired	(46.9)	(39.7)	(23.4)
Net cash used by investing activities	(89.2)	(67.6)	(51.9)
FINANCING ACTIVITIES			
Proceeds from (payments on) revolving credit facility, net	40.3	(8.1)	(36.2)
Payments on term loans and other debt	(15.5)	(31.3)	(4.5)
Proceeds from other long-term debt	4.0	—	34.9
(Payments on) proceeds from capital lease facilities, net	(0.9)	1.5	(1.2)
Issuance of 6.625% senior notes due 2027	—	350.0	—
Deferred financing costs	—	(7.6)	—
Repurchase of 8.125% senior notes due 2021	—	(250.0)	—
Premium on early extinguishment of debt	—	(8.0)	—
Dividends	(6.4)	(6.9)	(6.2)
Purchase of treasury shares	(9.0)	(4.2)	(0.1)
Payments of withholding taxes on share awards	(3.1)	(2.4)	(1.8)
Other	—	0.7	(2.1)
Net cash provided (used) by financing activities	9.4	33.7	(17.2)
Effect of exchange rate changes on cash	(2.1)	5.7	(1.5)
(Decrease) increase in cash and cash equivalents	(27.1)	18.5	2.3
Cash and cash equivalents at beginning of year	82.8	64.3	62.0
Cash and cash equivalents at end of year	$ 55.7	$ 82.8	$ 64.3
Income taxes paid	$ 21.0	$ 11.3	$ 8.7
Interest paid	$ 33.0	$ 29.9	$ 25.9

The accompanying notes are an integral part of these consolidated financial statements.

PARK-OHIO HOLDINGS CORP. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Dollars in millions, except per share data.)

NOTE 1 — Summary of Significant Accounting Policies

Consolidation and Basis of Presentation Park-Ohio Holdings Corp. ("ParkOhio," "we" or the "Company") is a diversified international company providing world-class customers with a supply chain management outsourcing service, capital equipment used on their production lines, and manufactured components used to assemble their products. The Company operates through three reportable segments: Supply Technologies, Assembly Components and Engineered Products. The consolidated financial statements include the accounts of the Company and all of its majority-owned subsidiaries. All intercompany accounts and transactions have been eliminated in consolidation. The Company does not have off-balance sheet arrangements or financings with unconsolidated entities or other persons. The Company leases certain real properties owned by related parties as described in Note 11. Transactions with related parties are not material to the Company's financial position, results of operations or cash flows.

Accounting Estimates The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts in the consolidated financial statements. Actual results could differ from those estimates.

Cash Equivalents The Company considers all highly liquid investments with an original maturity of three months or less when purchased to be cash equivalents.

Accounts Receivable and Allowance for Doubtful Accounts Accounts receivable are recorded at net realizable value. Accounts receivable are reduced by an allowance for amounts that may become uncollectable in the future. The allowance for doubtful accounts was $6.2 million and $4.5 million at December 31, 2018 and 2017, respectively. The Company's policy is to identify and reserve for specific collectability concerns based on customers' financial condition and payment history as well as a general reserve based on historical trends and other information. During 2018 and 2017, we sold approximately $106.8 million and $80.0 million, respectively, of accounts receivable to mitigate accounts receivable concentration risk and to increase working capital efficiency. Sales of accounts receivable are reflected as a reduction of accounts receivable in the Consolidated Balance Sheets, and the proceeds are included in cash flows from operating activities in the Consolidated Statements of Cash Flows. In 2018 and 2017, expense in the amount of $1.0 million and $0.6 million, respectively, related to the discount on sale of accounts receivable is recorded in the Consolidated Statements of Income.

Inventories Inventories are valued using first-in, first-out ("FIFO") or the weighted-average inventory method and stated at the lower of cost or net realizable value, except for the inventories at Canton Drop Forge ("CDF"), which was acquired on February 1, 2018. CDF inventories are stated using the last-in, first-out ("LIFO") method.

	December 31, 2018	December 31, 2017
Major Classes of Inventories		
Raw materials and supplies	$ 85.0	$ 67.6
Work in process	48.9	43.9
Finished goods	182.0	171.3
LIFO reserve	1.9	
Inventories, net	$ 317.8	$ 282.8
Other Inventory Items		
Inventory reserves	$ (34.9)	$ (29.8)
Consigned inventory	$ 10.3	$ 9.8

Property, Plant and Equipment: Property, plant and equipment is carried at cost. Additions and improvements that extend the lives of assets are capitalized, and expenditures for repairs and maintenance are charged to operations as incurred. Depreciation and amortization of fixed assets, including capital leases, is computed principally by the straight-line method based on the estimated useful lives of the assets ranging from five to 40 years for buildings, and one to 20 years for machinery and equipment (with the majority in the range of three to ten years).

The following table summarizes property, plant and equipment:

	December 31, 2018	December 31, 2017
Land and land improvements	$ 11.9	$ 11.6
Buildings	82.3	73.9
Machinery and equipment	392.6	348.6
Leased property under capital leases	35.8	24.1
Total property, plant and equipment	522.6	458.2
Less: Accumulated depreciation	303.2	281.2
Property, plant and equipment, net	$ 219.4	$ 177.0

	Year Ended December 31, 2018	2017	2016
Depreciation expense	$ 29.4	$ 24.9	$ 23.4

Goodwill and Indefinite-Lived Assets: In accordance with Accounting Standards Codification ("ASC") 350, *Intangibles — Goodwill and Other* ("ASC 350"), goodwill and indefinite life intangible assets are not amortized but rather are tested annually for impairment as of October 1, or whenever events or changes in circumstances indicate there may be an indicator of impairment in accordance with ASC 350. Goodwill is tested for impairment at the reporting unit level and is based on the net assets of each reporting unit, including goodwill and intangible assets, compared to its fair value. Our reporting units have been identified at the component level. The Company completed its annual goodwill and indefinite-lived intangibles impairment testing as of October 1 of each year, noting no impairment. To determine fair value, the Company uses primarily an income approach, utilizing a discounted cash flow model based on forecasted cash flows and weighted average cost of capital for its goodwill testing, and a relief of royalty method for its indefinite-lived intangibles testing.

See Notes 5 and 6 of the consolidated financial statements for additional disclosures about goodwill and indefinite-lived intangibles.

Impairment of Other Long-Lived Assets: Other long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate the carrying amount may not be recoverable. Upon indications of impairment, assets and liabilities are grouped at the lowest level for which identifiable cash flows are largely independent of the cash flows of other assets and liabilities. The asset group would be considered impaired when the estimated future net undiscounted cash flows generated by the asset group are less than its carrying value.

Fair Values of Financial Instruments: Certain financial instruments are required to be recorded at fair value. The Company measures financial assets and liabilities at fair value in three levels of inputs. The three-tier fair value hierarchy, which prioritizes the inputs used in the valuation methodologies, is as follows:

Level 1 — Valuations based on quoted prices for identical assets and liabilities in active markets.

Level 2 — Valuations based on observable inputs other than quoted prices included in Level 1, such as quoted prices for similar assets and liabilities in active markets, quoted prices for identical or similar assets and liabilities in markets that are not active, or other inputs that are observable or can be corroborated by observable market data.

Level 3 — Valuations based on unobservable inputs reflecting our own assumptions, consistent with reasonably available assumptions made by other market participants. These valuations require significant judgment.

Changes in assumptions or estimation methods could affect the fair value estimates; however, we do not believe any such changes would have a material impact on our financial condition, results of operations or cash flows. The carrying value of cash and cash equivalents, accounts receivable, accounts payable and borrowings under the Credit Agreement (as defined in Note 7) approximate fair value at December 31, 2018 and December 31, 2017 because of the short-term nature of these instruments. The fair values of long-term debt and pension plan assets are disclosed in Note 7 and Note 12, respectively.

The Company has not changed its valuation techniques for measuring fair value during 2018, and there were no transfers between levels during the periods presented.

Income Taxes: The Company accounts for income taxes under the asset and liability method, whereby deferred tax assets and liabilities are determined based on temporary differences between the financial reporting and the tax bases of assets and liabilities and measured using the current enacted tax rates. In determining these amounts, management determined the probability of realizing deferred tax assets, taking into consideration factors including historical operating results, cumulative earnings and losses, expectations of future earnings, taxable income and the extended period of time over which the postretirement benefits will be paid. As required by ASC 740, "*Income Taxes*" ("ASC 740"), the Company records valuation allowances if, based on the weight of available evidence, it is more likely than not that all or some portion of our deferred tax assets will not be realized.

Revenue Recognition: The Company recognizes revenue, other than from long-term contracts within the Engineered Products segment, when its obligations under the contract terms are satisfied and control transfers to the customer, typically upon shipment. Revenue from certain long-term contracts is accounted for over time, when products are manufactured or services are performed, as control transfers under these arrangements. We follow this method since reasonably reliable estimates of revenue and costs of a contract can be made. See Note 2 for additional disclosure on revenue.

Cost of Sales: Cost of sales is primarily comprised of direct materials and supplies consumed in the manufacture of product, manufacturing labor, depreciation expense and direct overhead expense, and shipping and handling costs.

Concentration of Credit Risk: The Company sells its products to customers in diversified industries. The Company performs ongoing credit evaluations of its customers' financial condition but does not require collateral to support customer receivables. The Company establishes an allowance for doubtful accounts based upon factors surrounding the credit risk of specific customers, historical trends and other information. As of December 31, 2018, the Company had uncollateralized receivables with six customers in the automotive industry, each with several locations, aggregating $46.8 million, which represented approximately 18% of the Company's trade accounts receivable. During 2018, sales to these customers amounted to approximately $338.2 million, which represented approximately 20% of the Company's net sales.

Environmental The Company expenses environmental costs related to existing conditions resulting from past or current operations and from which no current or future benefit is discernible Costs that extend the life of the related property or mitigate or prevent future environmental contamination are capitalized The Company records a liability when environmental assessments and/or remedial efforts are probable and can be reasonably estimated The estimated liability of the Company is not reduced for possible recoveries from insurance carriers and is undiscounted

Foreign Currency Translation The functional currency of the Company's subsidiaries outside the United States is the local currency Financial statements are translated into U S dollars at year-end exchange rates for assets and liabilities and weighted-average exchange rates during the period for revenues and expenses The resulting translation adjustments are recorded in Accumulated other comprehensive income (loss) in shareholders' equity Gains and losses resulting from foreign currency transactions, including intercompany transactions that are not considered long-term investments, are included in the Consolidated Statements of Income

Warranties The Company estimates the amount of warranty claims on sold products that may be incurred based on current and historical data The actual warranty expense could differ from the estimates made by the Company based on product performance The following table presents the changes in the Company's product warranty liability

	Year Ended December 31,		
	2018	2017	2016
Balance at January 1	$ 7 9	$ 7 1	$ 6 1
Claims paid during the year	(5 3)	(4 0)	(3 7)
Warranty expense	3 6	4 7	2 0
Acquired warranty liabilities	—	0 1	2 8
Other	—	—	(0 1)
Balance at December 31	$ 6 2	$ 7 9	$ 7 1

Weighted-Average Number of Shares Used in Computing Earnings Per Share The following table sets forth the weighted-average number of shares used in the computation of earnings per share

	Year Ended December 31,		
	2018	2017	2016
	(In whole shares)		
Weighted average basic shares outstanding	12,255,490	12 211 978	12,126 264
Dilutive impact of employee stock awards	253,023	243,963	148,188
Weighted average diluted shares outstanding	12,508,513	12 455,941	12,274,452

Outstanding stock options with exercise prices greater than the average price of the common shares are anti dilutive and are not included in the computation of diluted earnings per share For the years ended December 31 2018, 2017 and 2016, the anti-dilutive shares were insignificant

Accounting Pronouncements Adopted

In May 2014 the Financial Accounting Standards Board ("FASB") issued Accounting Standard Update ("ASU") 2014-09 *Revenue from Contracts with Customers*," a new comprehensive revenue recognition

standard that supersedes previous guidance under U S GAAP The core principle of the new standard is that a company should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the company expects to be entitled in exchange for those goods or services Our implementation efforts included identification of revenue within the scope of the standard, evaluation of revenue contracts under the guidance, and an assessment of the impacts of the new standard on our consolidated financial statements

The Company adopted the new standard as of January 1 2018 using the modified retrospective method of adoption This method allowed companies to record a one-time adjustment to beginning retained earnings as of January 1, 2018 for the cumulative effect that the standard had on open contracts at the date of adoption During our implementation, we identified certain contracts that now require over time recognition under the new standard, either as goods are manufactured or services are performed, rather than at the time of shipment or completion as recorded under previous guidance Upon adoption, we recorded previously unrecognized revenue of $13 6 million resulting in a cumulative-effect adjustment of $2 6 million to our 2018 beginning retained earnings See Note 2 for further details

In March 2017, the FASB issued ASU 2017-07 "*Compensation Retirement Benefits (Topic 715) Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost*." The ASU requires that an employer report the service cost component in the same line item or items as other compensation costs arising from services rendered by the pertinent employees during the period The Company adopted this standard effective January 1, 2018 Other components of pension income and other postretirement benefits expense, net includes all amounts other than the service cost component Such amounts are included on a separate line below operating income on the condensed consolidated statements of income The new standard requires a retrospective application and allows a practical expedient that permits an employer to use the amounts disclosed in its pension footnote for the prior comparative periods as the estimation basis for applying the retrospective presentation This resulted in the reclassification of the following amounts from previously-reported Selling, general and administrative ("SG&A") expenses for 2017 and 2016

	Year Ended December 31,	
	2017	2016
Amounts recorded in Cost of sales	$ (1 8)	$ (1 8)
Amounts recorded in SG&A expenses	(0 6)	$ (0 6)
Amounts recorded in Other components of pension income and other postretirement benefits expenses, net	6 4	$ 6 2
Total pension income and other postretirement benefits expense, net	$ 4 0	$ 3 8

Recent Accounting Pronouncements Not Yet Adopted

In February 2016, the FASB issued ASU 2016-02, "*Leases (Topic 842)*." This accounting standard requires that a lessee recognize a lease asset and a lease liability on its balance sheet for all leases including operating leases with a term greater than 12 months ASU 2016-02 will require additional disclosures in the notes to the consolidated financial statements and is effective for the Company as of January 1 2019 In July 2018, the FASB issued updated guidance which allows an additional transition method to adopt the new leases standard at the adoption date rather than as of the beginning of the earliest period presented, and recognize a cumulative-effect adjustment to the beginning balance of retained earnings in the period of adoption The Company has elected this transition method at the date of adoption The Company has elected the package of practical expedients permitted under the transition guidance within the new standard, which, among other things, allows it to carry forward historical lease classifications The Company also made an accounting policy election not to record a right-of-use asset or lease liability related to leases with an initial term of 12 months or less The Company recognizes these lease payments in the consolidated income statements on a straight-line basis over the lease term. The Company's implementation team has identified its population of leases, is concluding its testing of the functionality and related controls of its new third-party lease software, is finalizing its incremental borrowing rate, and is determining the quantitative impact as of the transition date. An estimate of the impact on the consolidated financial statements cannot be made at this time.

In June 2016, the FASB issued ASU 2016-13, "*Financial Instruments — Credit Losses (Topic 326): Measurement of Credit Losses of Financial Instruments*," which replaces the current incurred loss impairment model with a methodology that reflects expected credit losses. Under the new methodology, entities will be required to measure expected credit losses on financial instruments held at amortized cost, including trade receivables, based on historical experience, current conditions and reasonable forecasts. Adoption of this guidance is required for interim and annual periods beginning after December 15, 2019, with early adoption permitted for interim and annual periods beginning after December 15, 2018. The Company is currently evaluating the expected impact of this standard.

In February 2018, the FASB issued ASU 2018-02, "*Income Statement — Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income*." The ASU affects any entity that is required to apply the provisions of Topic 220, "Income Statement — Reporting Comprehensive Income," and has items of other comprehensive income for which the related tax effects are presented in other comprehensive income as required by GAAP. The ASU is effective for interim and annual periods beginning after December 15, 2018. Early adoption is permitted. The new standard requires a retrospective application to each period in which the effect of the change in the U.S. federal corporate income tax rate in the Tax Cuts and Jobs Act (the "TCJA") is recognized. The Company is currently evaluating the impact of adopting this guidance.

In August 2018, the FASB issued Accounting Standards Update 2018-13, "*Fair Value Measurement (Topic 820): Disclosure Framework-Changes to the Disclosure Requirements for Fair Value Measurement*," which changes the requirements on fair value measurements by removing, modifying or adding certain disclosures. Adoption of this guidance is required for interim and annual periods beginning after December 15, 2019 with early adoption permitted. The Company is currently evaluating the expected impact of this standard.

No other recently issued ASUs are expected to have a material impact on our results of operations, financial condition or liquidity.

NOTE 2 — Revenue

As discussed above in Note 1, effective January 1, 2018, the Company adopted ASU 2014-09, "*Revenue from Contracts with Customers*." Substantially all of the Company's contracts have a single performance obligation to transfer products to or, in limited cases, perform services for the customer. Accordingly, the Company recognizes revenue when its obligations under the contract terms are satisfied and control transfers to the customer. Revenue is recognized at an amount that reflects the consideration the Company expects to receive in exchange for the good or service, including estimated provisions for rebates, discounts, returns and allowances. The Company sells its products both directly to customers, and in limited cases, through distributors generally under agreements with payment terms between 30-90 days; the Company has no financing components.

The majority of the Company's revenue is derived from contracts (i) with an original contract length of one year or less, or (ii) for which it recognizes revenue at the amount at which it has the right to invoice as products or services are delivered. The Company has elected the practical expedient not to disclose the value of remaining performance obligations associated with these types of contacts.

The Company also has certain contracts which contain performance obligations that are immaterial in the context of the contract with the customer. The Company has elected the practical expedient not to assess whether these promised goods or services are performance obligations.

Supply Technologies provides our customers with Total Supply Management™, a proactive solutions approach that manages the efficiencies of every aspect of supplying production parts and materials to our customers' manufacturing floor, from strategic planning to program implementation. Within this segment, contracts routinely consist of a long-term agreement or master service agreement with quantity and pricing specified through individual purchase orders. Revenue is recognized at a point in time, which is in almost all cases is at the shipping point, as that is when control transfers to the customer.

Assembly Components designs, develops and manufactures aluminum products, highly efficient, high pressure direct fuel injection fuel rails and pipes, fuel filler pipes that route fuel from the gas cap to the gas tank, and flexible multi-layer plastic and rubber assemblies used to transport fuel from the vehicle's gas tank and then, at extreme high pressure, to the engine's fuel injector nozzles. Within this segment, contracts routinely consist of a long-term agreement or master service agreement with quantity and pricing specified through individual purchase orders. Revenue is recognized at a point in time, which is at the shipping point, as that is when control transfers to the customer.

Engineered Products operates a diverse group of niche manufacturing businesses that design and manufacture a broad range of highly-engineered products, including induction heating and melting systems, pipe threading systems and forged and machined products. Engineered Products also produces and provides services and spare parts for the equipment it manufactures. In this segment, revenue is recognized for certain revenue streams at a point in time, and over time for other revenue streams. For point in time arrangements, revenue is recognized at the shipping point, as that is when control transfers to the customer. For over time arrangements, revenue is recognized over the time during which products are manufactured or services are performed, as control transfers under these arrangements over a period of time. Over time arrangements represent 16% of the Company's total consolidated sales for the year ended December 31, 2018. The Company uses the input method to calculate the contract revenues to be recognized, which utilizes costs incurred to date in relation to total expected costs to satisfy the Company's performance obligation under the contract. Incurred costs represent work performed and therefore best depict the transfer of control to the customer.

For over time arrangements, contract liabilities primarily relate to advances or deposits received from the Company's customers before revenue is recognized. These amounts, which totaled $39.5 million and $23.0 million at December 31, 2018 and December 31, 2017, respectively, are recorded as Deferred revenue in the Consolidated Balance Sheets.

For over time arrangements, contract assets primarily relate to revenue recognized in advance of billings to customers under long-term contracts accounted for under percentage of completion. These amounts, which totaled $66.3 million and $44.5 million at December 31, 2018 and December 31, 2017, respectively, are recorded as Unbilled contract revenue in the Consolidated Balance Sheets.

The adoption of ASU 2014-09 had the impact of increasing unbilled contract revenue by $13.6 million, reducing inventory by $10.1 million, increasing accrued income taxes by $0.9 million and increasing beginning retained earnings by $2.6 million as of January 1, 2018.

The Company has elected to account for shipping and handling as activities to fulfill the promise to transfer its products. As such, shipping and handling fees billed to customers in a sales transaction are recorded in Net sales, and shipping and handling costs incurred are recorded in Cost of sales. The Company has elected to exclude from Net sales any value-added, sales or other taxes which it collects concurrent with revenue-producing activities. These accounting policy elections are consistent with the manner in which the Company historically recorded shipping and handling fees and expenses.

We disaggregate our revenue by product line and geographic region of our customer, as we believe these best depict how the nature, amount, timing and uncertainty of our revenues and cash flows are affected by economic factors. See details in the tables below.

	Year Ended December 31, 2018	Year Ended December 31, 2017
PRODUCT LINE		
Supply Technologies	$ 555.3	$ 179.2
Engineered specialty fasteners and other products	81.5	82.6
Supply Technologies Segment	636.8	561.8
Fuel, rubber and plastic products	382.5	366.3
Aluminum products	195.8	158.2
Assembly Components Segment	578.3	524.5
Industrial equipment	312.1	274.4
Forged and machined products	130.9	52.2
Engineered Products Segment	443.0	326.6
Total revenues	$ 1,658.1	$ 1,412.9

	Supply Technologies Segment	Assembly Components Segment	Engineered Products Segment	Total Revenues
Year Ended December 31, 2018				
GEOGRAPHIC REGION				
United States	$ 421.8	$ 410.2	$ 254.3	$ 1,086.3
Europe	98.2	7.8	77.3	183.3
Asia	49.2	30.0	61.2	140.4
Mexico	53.3	34.0	16.2	103.5
Canada	13.3	94.9	22.5	130.7
Other	1.0	1.4	11.5	13.9
Total	$ 636.8	$ 578.3	$ 443.0	$ 1,658.1
Year Ended December 31, 2017				
GEOGRAPHIC REGION				
United States	$ 382.5	$ 380.2	$ 160.6	$ 923.3
Europe	70.3	3.4	69.7	143.4
Asia	44.0	29.9	52.4	126.3
Mexico	52.7	32.7	20.6	106.0
Canada	11.5	77.0	15.3	103.8
Other	0.8	1.3	8.0	10.1
Total	$ 561.8	$ 524.5	$ 326.6	$ 1,412.9

NOTE 3 — Segments

The Company operates through three reportable segments: Supply Technologies, Assembly Components and Engineered Products. Supply Technologies provides our customers with Total Supply Management™

services for a broad range of high-volume, specialty production components. Assembly Components manufactures cast aluminum components, automotive and industrial rubber and thermoplastic products, gasoline direct injection systems, fuel filler and hydraulic assemblies for automotive, agricultural equipment, construction equipment, heavy-duty truck and marine equipment industries, and also provides value-added services such as design and engineering, machining and assembly. Engineered Products operates a diverse group of niche manufacturing businesses that design and manufacture a broad range of high-quality products engineered for specific customer applications.

For purposes of measuring business segment performance, the Company utilizes segment operating income which is defined as revenues less expenses identifiable to the product lines within each segment. The Company does not allocate items that are non-operating, unusual in nature, or are corporate costs, which include but are not limited to executive compensation and corporate office costs. Segment operating income reconciles to consolidated income before income taxes by deducting corporate costs, certain non-cash and/or non-operating items. Other components of pension income and other postretirement benefits ("OPEB") expense, net, and interest expense.

Results by business segment were as follows:

	Year Ended December 31, 2018	2017	2016
Net sales			
Supply Technologies	$ 636.8	$ 561.8	$ 502.1
Assembly Components	578.3	524.5	529.4
Engineered Products	443.0	326.6	245.4
	$ 1,658.1	$ 1,412.9	$ 1,276.9
Segment operating income			
Supply Technologies	$ 49.0	$ 43.3	$ 37.5
Assembly Components	42.9	47.8	48.0
Engineered Products	38.4	19.5	9.4
Total segment operating income	130.3	110.6	94.9
Corporate costs	(34.9)	(30.1)	(27.9)
Gain on sale of assets	1.9	—	—
Litigation settlement gain	—	3.3	—
Asset impairment charge	—	—	(4.0)
Operating income	97.3	83.8	63.0
Other components of pension income and other postretirement benefits expense, net	8.8	6.4	6.2
Interest expense, net	(34.3)	(31.5)	(28.2)
Loss on extinguishment of debt	—	(11.0)	—
Income before income taxes	$ 71.8	$ 47.7	$ 41.0

	Year Ended December 31, 2018	2017	2016
Capital expenditures			
Supply Technologies	$ 5.2	$ 3.3	$ 6.1
Assembly Components	24.3	18.6	16.9
Engineered Products	15.4	5.7	5.5
Corporate	0.2	0.3	—
	$ 45.1	$ 27.9	$ 28.5
Depreciation and amortization expense			
Supply Technologies	$ 5.3	$ 4.7	$ 4.7
Assembly Components	22.2	20.7	20.1
Engineered Products	8.4	5.6	4.1
Corporate	0.4	0.5	0.6
	$ 36.3	$ 31.5	$ 29.5
Identifiable assets			
Supply Technologies	$ 330.1	$ 344.4	$ 262.0
Assembly Components	378.3	351.4	332.9
Engineered Products	433.1	353.6	304.9
Corporate	67.0	83.1	74.5
	$ 1,208.5	$ 1,132.5	$ 974.3

The percentage of net sales by product line included in each segment was as follows

	Year Ended December 31, 2018	2017	2016
Supply Technologies			
Supply Technologies	87%	85%	85%
Engineered specialty products	13%	15%	15%
	100%	100%	100%
Assembly Components			
Fuel-related, rubber and plastic products	66%	70%	67%
Aluminum products	34%	30%	33%
	100%	100%	100%
Engineered Products			
Industrial equipment business	70%	84%	79%
Forged and machined products	30%	16%	21%
	100%	100%	100%

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The Company's percentage of net sales by geographic region was as follows

	Year Ended December 31, 2018	2017	2016
United States	66%	65%	71%
Europe	11%	10%	8%
Asia	8%	9%	8%
Mexico	6%	8%	6%
Canada	8%	7%	6%
Other	1%	1%	1%
	100%	100%	100%

The basis for attributing revenue to individual geographic regions is customer location

At December 31, 2018 2017 and 2016 approximately 68% 65% and 68% respectively of the Company's assets were located in the United States

NOTE 4 — Acquisitions

On February 1, 2018, the Company acquired CDF for $35.6 million in cash, net of cash acquired CDF manufactures forgings for high-performance applications in the global aerospace, oil and gas, and other markets Headquartered in Canton, Ohio, CDF is included in our Engineered Products segment The assets acquired and liabilities assumed were recorded at their estimated fair values as of the acquisition date using level 3 inputs

Below is the estimated purchase price allocation related to the acquisition of CDF

Net working capital	$ 20.8
Property, plant and equipment	21.4
Intangible assets	0.9
Goodwill	3.6
Pension liability	(3.6)
Debt	(2.7)
Other long-term liabilities, including deferred income tax liabilities	(4.8)
Total purchase price (net of cash acquired of $1.2 million)	$ 35.6

On October 1 2018, the Company acquired Hydrapower Dynamics Limited ("Hydrapower") for $7.8 million in cash, net of cash acquired Headquartered in Birmingham, England, Hydrapower is a manufacturer of fluid handling systems incorporating hoses, manipulated tubes and fabricated assemblies for the bus and truck, automotive, agricultural and construction end markets Hydrapower is included in our Assembly Components segment

During 2018 the Company made two other acquisitions in its Supply Technologies segment totaling a cash purchase price of $3.5 million Both acquired companies distribute products into the aerospace and defense end markets

The results of operations of the 2018 are included in our consolidated results from the respective acquisition dates Collectively, the 2018 acquisitions contributed $72.3 million of sales in 2018 The Company is currently finalizing the purchase price allocations of its 2018 acquisitions particularly its valuation of deferred income taxes related to the CDF acquisition

In connection with the 2018 acquisitions, we acquired $0.9 million of indefinite-lived tradenames and $1.5 million of customer relationships.

Goodwill associated with the 2018 acquisitions is not deductible for income tax purposes.

In April 2017, the Company acquired Aero-Missile Components Inc. ("AMC"). AMC, which is included in our Supply Technologies segment, is a supply chain management business providing high-quality specialty fasteners and other components to the defense and aerospace markets in the United States.

In October 2017, the Company completed the acquisition of Heads & All Threads Ltd. ("HAT"). HAT, which is included in our Supply Technologies segment, is a leading European supplier of supply chain management services specializing in developing vendor-managed inventory programs of fasteners, machined parts and other class C components to various industrial end markets.

In December 2017, the Company completed the acquisition of an injection molding business. The acquisition, which is included in our Assembly Components segment, is a manufacturer of precision-molded rubber components for several industrial markets.

The combined purchase price of the 2017 acquisitions was $39.7 million, net of cash acquired. The Company finalized its valuations of the assets acquired and liabilities assumed for the 2017 acquisitions during 2018.

As part of 2017 HAT acquisition, we acquired $3.0 million of customer relationships, including an adjustment in 2018 to increase the acquired assets by $2.0 million in connection with the finalization of the purchase price allocation.

Goodwill associated with the 2017 acquisitions is not deductible for income tax purposes.

NOTE 5 — Goodwill

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

	Supply Technologies	Assembly Components	Engineered Products	Total
Balance at January 1, 2017	$ 6.1	$ 54.1	$ 26.4	$ 86.6
Acquisitions and adjustments	8.4	—	1.5	9.9
Foreign currency translation	0.9	—	2.8	3.7
Balance at December 31, 2017	15.4	54.1	30.7	100.2
Acquisitions and adjustments	(0.5)	1.9	3.6	5.0
Foreign currency translation	(0.7)	—	(1.1)	(1.8)
Balance at December 31, 2018	$ 14.2	$ 56.0	$ 33.2	$ 103.4

NOTE 6 — Other Intangible Assets

	Weighted Average Remaining Useful Life (Years)	December 31, 2018 Gross Value	Accumulated Amortization	Net Value	December 31, 2017 Gross Value	Accumulated Amortization	Net Value
Customer relationships	11.0	$ 86.0	$ 34.5	$ 51.5	$ 83.4	$ 29.3	$ 54.1
Indefinite-lived tradenames	*	24.1	*	24.1	23.7	*	23.7
Technology	16.5	22.9	4.1	18.8	23.6	3.0	20.6
Other	6.6	4.1	3.2	0.9	4.1	3.0	1.1
Total		$ 137.1	$ 41.8	$ 95.3	$ 134.8	$ 35.3	$ 99.5

* Not applicable, as these tradenames have an indefinite life.

Amortization expense of other intangible assets as follows:

	Year Ended December 31 2018	2017	2016
Amortization expense	$ 6.9	$ 6.6	$ 6.1

We estimate amortization expense for the five years subsequent to December 31, 2018 as follows:

2019	$ 6.2
2020	$ 6.1
2021	$ 6.1
2022	$ 6.1
2023	$ 6.1

NOTE 7 — Financing Arrangements

Debt consists of the following:

	Maturity Date	Interest Rate at December 31, 2018	Carrying Value at December 31, 2018	Carrying Value at December 31, 2017
Senior Notes due 2027	April 15, 2027	6.625%	$ 350.0	$ 350.0
Revolving credit facility	April 17, 2022	3.48%	165.1	124.7
Industrial Equipment Group European Facilities	December 21, 2021	3.25%	12.6	27.0
Capital leases	Various	Various	20.7	20.3
Other	Various	Various	24.7	19.9
Total debt			573.1	541.9
Less: Current portion of long-term debt			(14.2)	(15.4)
Less: Short-term debt			(3.7)	(2.3)
Less: Unamortized debt issuance costs			(7.7)	(8.7)
Total long-term debt, net			$ 547.5	$ 515.5

In June 2018, Park-Ohio Industries, Inc. ("Park-Ohio"), the operating subsidiary of Park-Ohio Holdings Corp., entered into Amendment No. 1 to Seventh Amended and Restated Credit Agreement (the "Credit Agreement") with a group of banks to increase the revolving credit facility from $350.0 million to $375.0 million, the Canadian revolving subcommitment from $35.0 million to $40.0 million and the European revolving subcommitment from $25.0 million to $30.0 million. Furthermore, Park-Ohio has the option, pursuant to the Amended Credit Agreement, to increase the availability under the revolving credit facility by an aggregate incremental amount up to $100.0 million.

In April 2017, Park-Ohio completed the issuance, in a private placement, of $350.0 million aggregate principal amount of 6.625% Senior Notes due 2027 (the "Notes"). Interest on the Notes is payable semi-annually in arrears on April 15 and October 15 of each year, and the Notes mature on April 15, 2027. The Notes are unsecured senior obligations of Park-Ohio and are guaranteed on an unsecured senior basis by the 100% owned material domestic subsidiaries of Park-Ohio.

On December 21, 2016, the Company, through its subsidiary IFGE Industrial Equipment Holding Company Limited, entered into a financing agreement with Banco Bilbao Vizcaya Argentaria, S.A. The financing agreement provides the Company a loan up to $25.7 million as of December 31, 2018, as well as a revolving credit facility for up to $11.4 million to fund working capital and general corporate needs. The Company had $17.6 million outstanding on the loan as of December 31, 2018. No amounts have been drawn on the revolving credit facility as of December 31, 2018.

On August 13, 2015, the Company entered into a capital lease agreement (the "Lease Agreement"). The Lease Agreement provides the Company up to $50.0 million for capital leases. Capital lease obligations of $20.7 million were borrowed under the Lease Agreement as of December 31, 2018 to acquire machinery and equipment. See Note 11 for additional disclosure.

On October 21, 2015, the Company, through its subsidiary Southwest Steel Processing LLC, entered into a financing agreement with the Arkansas Development Finance Authority. The agreement provides the Company the ability to borrow up to $11.0 million for expansion of its manufacturing facility in Arkansas. The loan matures in September 2025. The Company has borrowed $8.2 million under this agreement as of December 31, 2018.

The following table represents fair value information of the Notes, classified as Level 1, at December 31, 2018 and 2017. The fair value was estimated using quoted market prices.

	December 31, 2018	December 31, 2017
Carrying amount	$ 350.0	$ 350.0
Fair value	$ 345.8	$ 380.6

Maturities of short-term and long-term debt, excluding capital leases, during each of the five years subsequent to December 31, 2018 are as follows:

2019	$ 11.3
2020	$ 10.3
2021	$ 4.1
2022	$ 167.7
2023	$ 2.6

Foreign subsidiaries of the Company had $26.1 million of borrowings at December 31, 2018 and $40.2 million at December 31, 2017, and outstanding bank guarantees of approximately $14.0 million at December 31, 2018 and $15.1 million in 2017 under their credit arrangements.

The weighted average interest rate on all debt was 5.8% in 2018 and 6.1% in 2017.

NOTE 8 — Income Taxes

Income before income taxes consists of the following:

	Year Ended December 31,		
	2018	2017	2016
United States	$ 35.1	$ 21.4	$ 15.4
Outside the United States	36.7	26.3	25.6
	$ 71.8	$ 47.7	$ 41.0

Income taxes consists of the following:

	Year Ended December 31,		
	2018	2017	2016
Current expense (benefit):			
Federal	$ 6.4	$ 14.3	$ (0.8)
State	0.6	0.7	0.2
Foreign	9.0	7.6	6.6
	16.0	22.6	6.0
Deferred expense (benefit):			
Federal	1.3	(5.4)	1.6
State	0.1	0.3	0.5
Foreign	(0.8)	0.7	0.7
	0.6	(4.4)	2.8
Income tax expense	$ 16.6	$ 18.2	$ 8.8

The TCJA was enacted on December 22, 2017. The TCJA reduced the US federal corporate tax rate from 35% to 21%, required companies to pay a one-time transition tax on earnings of certain foreign subsidiaries that were previously tax deferred, created new taxes on its global intangible low-taxed income ("GILTI"), and provided a foreign-derived intangible income deduction ("FDII"). In 2017 and the first nine months of 2018, we recorded provisional amounts for certain enactment-date effects of the TCJA by applying the guidance in Staff Accounting Bulletin ("SAB") 118 because we had not yet completed our enactment-date accounting for these effects.

During the fourth quarter of 2018, the Company finalized its accounting for the 2017 enactment of the TCJA and recorded net expense of $0.3 million related to the remeasurement of taxes and the one-time transition tax.

The TCJA subjects a US shareholder to tax on GILTI earned by certain foreign subsidiaries. The FASB Staff Q&A, Topic 740 No. 5, Accounting for Global Intangible Low-Taxed Income, states that an entity can make an accounting policy election to either recognize deferred taxes for temporary basis differences expected to reverse as GILTI in future years or to provide for the tax expense related to GILTI in the year the tax is incurred as a period expense. We have elected to account for GILTI as a current period expense. The impact of GILTI at December 31, 2018 was an increase in tax expense of $3.1 million. The impact of FDII at December 31, 2018 was a decrease in tax expense of $0.6 million.

A reconciliation of income tax expense computed by applying the statutory federal income tax rate to income tax expense as recorded is as follows:

	Year Ended December 31,		
	2018	2017	2016
Income tax at U.S. statutory rate	$ 15.1	$ 16.7	$ 14.3
Effect of state income taxes, net	0.6	0.7	0.2
Effect of foreign operations	3.5	(5.2)	(2.1)
Valuation allowance	(3.0)	5.3	0.5
Uncertain tax positions	(0.3)	(2.0)	(4.0)
Non-deductible items	0.5	0.5	0.6
Non-deductible compensation	0.8	0.4	0.8
Manufacturer's deduction	—	(0.8)	(0.5)
Foreign tax credit	(2.2)	—	—
GILTI	3.1	—	—
FDII	(0.6)		
Net impact of TCJA	0.3	4.2	—
Other, net	(1.2)	(1.6)	(1.0)
Income tax as recorded	$ 16.6	$ 18.2	$ 8.8

Significant components of the Company's net deferred income tax assets and liabilities are as follows:

	Year Ended December 31,	
	2018	2017
Deferred income tax assets		
Postretirement benefit obligation	$ 1.8	$ 2.0
Inventory	8.5	9.9
Net operating loss and credit carryforwards	11.4	16.1
Warranty reserve	0.3	0.4
Accrued litigation	0.1	0.1
Compensation	4.7	4.2
Disallowed interest	2.7	—
Other	3.7	4.8
Total deferred income tax assets	33.2	37.5
Deferred income tax liabilities		
Depreciation and amortization	17.6	9.7
Pension	12.3	16.3
Intangible assets	16.1	16.6
Other	3.2	2.8
Total deferred income tax liabilities	49.2	45.4
Net deferred income tax liabilities prior to valuation allowances	(16.0)	(7.9)
Valuation allowances	(5.3)	(11.6)
Net deferred income tax liability	$ (21.3)	$ (19.5)

At December 31, 2018, the Company has U.S., state and foreign net operating loss carryforwards and U.S. foreign tax credit carryforwards for income tax purposes. The foreign net operating loss carryforward is $26.5 million, of which $8.9 million expires between 2019 and 2038 and the remainder has no expiration date. The Company has a tax benefit from a state net operating loss carryforward of $2.2 million that expires between 2019 and 2038. The Company also has a tax benefit from a non-consolidated U.S. net operating loss carryforward of $1.4 million that expires between 2035 and 2036. The foreign tax credit carryforward is $0.1 million and expires in 2028.

As of December 31, 2018 and 2017, the Company was not in a cumulative three-year loss position and it was determined that it was more likely than not that its U.S. deferred tax assets will be realized. During the year ended December 31, 2018, the Company recorded a tax benefit of $6.3 million related to the reversal of valuation allowance, of which $3.0 million was recorded in income tax expense with the remainder reflected in deferred taxes. For the year ended December 31, 2017, the Company recorded tax expense of $6.3 million related to valuation allowance against certain foreign net deferred tax assets and the U.S. foreign tax credits which are not expected to be realizable. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income (including reversals of deferred tax liabilities). The Company reviews all valuation allowances related to deferred tax assets and will reverse these valuation allowances, partially or totally, when appropriate under ASC 740.

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

	2018	2017	2016
Unrecognized Tax Benefit — January 1	$ 1.2	$ 2.9	$ 6.3
Gross Increases to Tax Positions Related to Current Year	0.1	0.1	—
Gross Increases to Tax Positions Related to Prior Years	—	0.6	0.3
Gross Decreases to Tax Positions Related to Prior Years	(0.1)	—	—
Gross Decreases related to settlements with taxing authorities	(0.1)	(0.4)	—
Expiration of Statute of Limitations	(0.2)	(1.9)	(3.7)
Other		(0.1)	
Unrecognized Tax Benefit — December 31	$ 0.9	$ 1.2	$ 2.9

The total amount of unrecognized tax benefits that, if recognized, would affect the effective tax rate is $0.8 million at December 31, 2018 and $0.9 million at December 31, 2017. The Company recognizes accrued interest and penalties related to unrecognized tax benefits in income tax expense. During the years ended December 31, 2018 and 2017, the Company recognized a tax benefit of approximately $0.1 million and $0.3 million, respectively, in net interest and penalties due to the expiration of various uncertain tax positions. The Company had approximately $0.1 million and $0.2 million for the payment of interest and penalties accrued at December 31, 2018 and 2017, respectively. It is reasonably possible that within the next twelve months the amount of gross unrecognized tax benefits could be reduced by approximately $0.1 million as a result of the closure of tax statutes related to existing uncertain tax positions.

The Company is subject to taxation in the U.S. and various state and foreign jurisdictions. The Company's tax years for 2015 through 2018 remain open for examination by the Internal Revenue Service and 2014 through 2018 remain open for examination by various state and foreign taxing authorities.

As of December 31, 2018, the Company has accumulated undistributed earnings generated by our foreign subsidiaries of approximately $183.5 million. Because $176.5 million of such earnings have previously been subject to the one-time transition taxes required by the TCJA, any additional taxes due with respect to such earnings or the excess of the amount for financial reporting over the tax basis of our foreign investments would generally be limited to foreign withholding and state income taxes. We intend, however, to indefinitely reinvest these earnings and expect future U.S. cash generation to be sufficient to meet future U.S. cash needs.

NOTE 9 — Stock-Based Compensation

The Company follows the provisions of ASC 718, *Compensation — Stock Compensation* ("ASC 718"), which requires all share-based payments to employees, including grants of employee stock options, to be recognized in the income statement based on their grant date fair values. Compensation expense for awards with service conditions only that are subject to graded vesting is recognized on a straight-line basis over the term of the vesting period. Compensation expense of performance-based awards is recognized as an expense over the vesting periods of the awards using the accelerated attribution method once performance achievement is deemed probable.

Under the provisions of the Company's 2018 Equity and Incentive Compensation Plan ("2018 Plan"), which is administered by the Compensation Committee of the Company's Board of Directors, incentive stock options, non-statutory stock options, stock appreciation rights ("SARs"), restricted share units, performance shares or stock awards may be awarded to directors and all employees of the Company and its subsidiaries. The 2018 Plan replaces in its entirety the 2015 Long-Term Incentive Plan, as amended ("2015 Plan"), but shares that remained available under the 2015 Plan were added to the aggregate share limit under the 2018 Plan. Stock options will be exercisable in whole or in installments as may be determined, provided that no options will be exercisable more than ten years from the date of grant. The exercise price will be the fair value at the date of grant. The aggregate number of shares of the Company's common stock that may be awarded under the 2018 Plan is 566,698.

A summary of restricted share and performance share activity for the year ended December 31, 2018 is as follows:

	Time-Based		Performance-Based	
	Number of Shares	Weighted Average Grant Date Fair Value	Number of Shares	Weighted Average Grant Date Fair Value
	(in whole shares)		(in whole shares)	
Outstanding — beginning of year	342,859	$ 34.71	165,000	$ 38.10
Granted (a)	249,700	39.53	—	—
Vested	(164,778)	39.99	(55,000)	38.10
Performance- to time-based (b)	110,000	38.10	(110,000)	38.10
Canceled or expired	(7,834)	38.93		
Outstanding — end of year	529,947	$ 35.98	—	$ —

(a) Included in the granted amount are 4,600 restricted share units.

(b) During the second quarter of 2018, 55,000 of the performance-based restricted shares granted in 2017 fully vested based on achievement of the performance criteria. In accordance with the grant agreements, the remaining 110,000 shares became time-based, vesting over the remaining two years of the requisite service period.

The Company recognized compensation expense of $8.3 million, $8.6 million and $10.6 million for the years ended December 31, 2018, 2017 and 2016, respectively, relating to time-based shares and performance-based shares.

The total fair value of restricted shares and share units that vested during the years ended December 31, 2018, 2017 and 2016 was $8.3 million, $7.0 million and $5.1 million, respectively.

As of December 31, 2018, the Company had unrecognized compensation expense of $10.5 million related restricted shares. The unrecognized compensation expense is expected to be recognized over a total weighted average period of 1.9 years.

NOTE 10 — Commitments, Contingencies and Litigation Settlement

The Company is subject to various pending and threatened legal proceedings arising in the ordinary course of business. The Company records a liability for loss contingencies in the consolidated financial statements when a loss is known or considered probable and the amount can be reasonably estimated. Our provisions are based on historical experience, current information and legal advice, and they may be adjusted in the future based on new developments. Estimating probable losses requires the analysis of multiple forecasted factors that often depend on judgments and potential actions by third parties. Although it is not possible to predict with certainty the ultimate outcome or cost of these matters, the Company believes they will not have a material adverse effect on our consolidated financial statements.

Our subsidiaries are involved in a number of contractual and warranty-related disputes. We believe that appropriate liabilities for these contingencies have been recorded, however, actual results may differ materially from our estimates.

During 2017, the Company settled a claim related to equipment provided to a customer in our Engineered Products segment. As of the settlement date, the Company had $7.3 million accrued for this matter. The Company reversed the excess liability and recognized $3.3 million in income in the first quarter of 2017.

In August 2013, we received a subpoena from the staff of the SEC in connection with the staff's investigation of a third party. At that time, we also learned that the Department of Justice ("DOJ") is conducting a criminal investigation of the third party. In connection with its initial response to the staff's subpoena, we disclosed to the staff of the SEC that, in November 2007, the third party participated in a payment on behalf of us to a foreign tax official that implicates the Foreign Corrupt Practices Act. The Board of Directors formed a special committee to review our transactions with the third party and to make any recommendations to the Board of Directors with respect thereto. The Company intends to cooperate fully with the SEC and the DOJ in connection with their investigations of the third party and with the SEC in light of the Company's disclosure. The Company is unable to predict the outcome or impact of the special committee's investigation or the length, scope or results of the SEC's review or the impact on its results of operations. With respect to our disclosure, we have not heard anything from the SEC since 2014 and we do not expect to hear anything further from it, but we will cooperate with the SEC to the extent that it requests any additional information. Accordingly, we do not plan on providing any future disclosure regarding this matter unless circumstances change.

NOTE 11 — Lease Arrangements

Future minimum lease commitments during each of the five years following December 31, 2018 and thereafter are as follows

	Capital Leases	Operating leases
2019	$ 7.3	$ 18.5
2020	6.5	14.0
2021	3.3	10.5
2022	2.2	9.1
2023	1.1	7.2
Thereafter	1.6	23.2
Total minimum lease payments	22.3	$ 82.5
Amounts representing interest	(1.6)	
Present value of minimum lease payments	20.7	
Current maturities	(6.6)	
Long-term capital lease obligation	$ 14.1	

Rental expense for 2018, 2017 and 2016 was $23.4 million, $19.3 million and $18.5 million, respectively

Certain of the Company's leases are with related parties at an annual rental expense of approximately $2.0 million. Transactions with related parties are not material to the Company's financial position, results of operations or cash flows

Assets recorded under capital leases are included in property, plant and equipment and consist of the following

	December 31, 2018	December 31, 2017
Machinery and equipment	$ 35.8	$ 24.1
Less accumulated depreciation	(8.3)	(4.7)
	$ 27.5	$ 19.4

Amortization of machinery and equipment under capital leases is included in depreciation expense

NOTE 12 — Pensions and Postretirement Benefits

The Company and its subsidiaries have pension plans, principally noncontributory defined benefit or noncontributory defined contribution plans, covering substantially all employees. In addition, the Company has an unfunded postretirement benefit plan. One of its defined benefit plans, covering most U.S. employees not covered by collective bargaining agreements, utilizes a cash balance formula. Under a cash balance formula, a plan participant accumulates a retirement benefit consisting of pay credits that are based upon a percentage of current eligible earnings and current interest credits. For the remaining defined benefit plans, benefits are based on the employee's years of service. For the defined contribution plans, the costs charged to operations and the amount funded are based upon a percentage of the covered employees' compensation

The Company's objectives for the pension plan are to monitor the funded ratio, create general investment goals in regards to acceptable risk and liquidity needs ensuring the long-term interests of participants and

beneficiaries are considered, and manage risk by minimizing the short-term and long-term risk of actual expenses and contribution requirements

The following tables set forth the changes in benefit obligation, plan assets, funded status and amounts recognized in the consolidated balance sheet for the defined benefit pension and postretirement benefit plans as of December 31, 2018 and 2017

	Pension Benefits		Postretirement Benefits	
	2018	2017	2018	2017
Change in benefit obligation				
Benefit obligation at beginning of year	$ 60.5	$ 58.5	$ 9.3	$ 10.0
Service cost	3.7	2.4	—	—
Interest cost	2.2	1.8	0.3	0.3
Actuarial losses (gains)	(5.3)	2.4	0.4	0.5
Acquisition of CDF	14.9	—	—	—
Benefits and expenses paid	(4.8)	(4.6)	(1.5)	(1.5)
Benefit obligation at end of year	$ 71.2	$ 60.5	$ 8.5	$ 9.3
Change in plan assets				
Fair value of plan assets at beginning of year	$ 134.8	$ 120.2	$ —	$ —
Actual return on plan assets	(12.1)	20.2	—	—
Company contributions	—	—	1.5	1.5
Cash transfer to fund postretirement benefit payments	(1.0)	(1.0)		
Acquisition of CDF	11.3	—	—	—
Benefits and expenses paid	(4.8)	(4.6)	(1.5)	(1.5)
Fair value of plan assets at end of year	$ 128.2	$ 134.8	$ —	$ —
Funded (underfunded) status of the plans	$ 57.0	$ 74.3	$ (8.5)	$ (9.3)

Amounts recognized in the consolidated balance sheets consist of

	Pension Benefits		Postretirement Benefits	
	2018	2017	2018	2017
Pension assets	$ 57.0	$ 74.3	$ —	$ —
Other current liabilities		-	0.9	1.1
Other long-term liabilities	—	—	7.6	8.2
	$ 57.0	$ 74.3	$ 8.5	$ 9.3
Amounts recognized in Accumulated other comprehensive loss				
Net actuarial loss	$ 34.7	$ 16.5	$ 2.4	$ 2.1
Net prior service cost (credit)	0.3	0.3	(0.1)	(0.1)
Accumulated other comprehensive loss	$ 35.0	$ 16.8	$ 2.3	$ 2.0

The pension plan weighted-average asset allocation at December 31, 2018 and 2017 and target allocation for 2019 are as follows:

		Plan Assets	
	Target 2019	2018	2017
Asset Category			
Equity securities	45-75%	57.6%	65.0%
Debt securities	20-40%	26.5%	23.6%
Other	0-20%	15.9%	11.1%
	100%	100%	100%

The following table sets forth, by level within the fair value hierarchy, the pension plans assets:

	2018		2017	
	Level 1	Total	Level 1	Total
Common stock	$ 34.2	$ 34.2	$ 41.8	$ 41.8
Equity securities	37.9	37.9	39.8	39.8
Foreign stock	5.7	5.7	7.3	7.3
U.S. Government obligations	4.8	4.8	5.8	5.8
Fixed income securities	13.1	13.1	13.7	13.7
Corporate bonds	12.0	12.0	10.2	10.2
Cash and cash equivalents	6.3	6.3	1.4	1.4
Total	$ 114.0		$ 120.0	
Investments measured at net asset value:				
Common collective trusts		0.1		0.7
Hedge funds		14.1		14.1
Total assets at fair value		$ 128.2		$ 134.8

Valuation Methodologies. Following is a description of the valuation methodologies used for pension plan assets measured at fair value. There have been no changes in the methodologies used at December 31, 2018 and 2017.

Common stock, equity securities and foreign stock — These securities consist of direct investments in the stock of publicly-traded companies. Such investments are valued based on the closing price reported in an active market on which the individual securities are traded. As such, the direct investments are classified as Level 1.

U.S. Government obligations, fixed income securities and corporate bonds — Valued at the closing price of each security.

Cash equivalents — Consists of primarily money market funds and certificates of deposit, for which book value equals fair value.

Common collective trusts — Valued at the net unit value of units held by the trust at year end. The unit value is determined by the total value of fund assets divided by the total number of units of the fund owned. The equity investments in collective trusts are predominantly in index funds for which the underlying securities are actively traded in public markets based upon readily measurable prices. Common collective trusts are measured

at fair value using the net asset value per share practical expedient have not been categorized in the fair value hierarchy and are being presented in the tables above to permit a reconciliation of the fair value hierarchy to the total plan assets.

Hedge funds — Consists of direct investments in hedge funds through limited partnership interests. Net asset values are based on the estimated fair value of the ownership interest in the investment as determined by the general partner. The majority of the holdings of the hedge funds are in equity securities traded on public exchanges. The investment terms of the hedge funds allow capital to be redeemed quarterly given prior notice with certain limitations. Hedge funds measured at fair value using the net asset value per share practical expedient have not been categorized in the fair value hierarchy and are being presented in the tables above to permit a reconciliation of the fair value hierarchy to the total plan assets.

For additional information regarding fair value measurements, see Note 1.

The following tables summarize the assumptions used in the valuation of pension and postretirement benefit obligations at December 31 and the measurement of the net periodic benefit cost in the following year. The Company used a spot rate approach by applying the specific spot rates along the yield curve to the relevant projected cash flows in the estimation of the service and interest components of benefit cost.

	Weighted-Average assumptions as of December 31,					
	Pension Benefits			Postretirement Benefits		
	2018	2017	2016	2018	2017	2016
Assumptions used to determine benefit obligation at year-end						
Discount rate	4.24%	3.52%	3.91%	4.06%	3.32%	3.63%
Rate of compensation increase	3.00%	3.00%	3.00%	N/A	N/A	N/A
Health care cost trend rate	N/A	N/A	N/A	6.50%	6.50%	6.50%
Ultimate health care cost trend rate	N/A	N/A	N/A	5.00%	5.00%	5.00%
Year of ultimate trend rate	N/A	N/A	N/A	2025	2025	2025
Assumptions used to determine expense						
Discount rate for benefit obligations	3.51%	3.90%	4.13%	3.35%	3.61%	3.76%
Discount rate for service costs	3.60%	3.98%	4.20%	3.70%	4.24%	4.44%
Discount rate for interest costs	3.08%	3.20%	3.27%	2.92%	2.90%	2.89%
Expected return on plan assets	8.25%	8.25%	8.25%	N/A	N/A	N/A
Rate of compensation increase	3.00%	3.00%	3.00%	N/A	N/A	N/A
Medical health care benefits rate increase	N/A	N/A	N/A	6.50%	6.50%	6.50%
Medical drug benefits rate increase	N/A	N/A	N/A	6.50%	6.50%	6.50%
Ultimate health care cost trend rate	N/A	N/A	N/A	5.00%	5.00%	5.00%
Year of ultimate trend rate	N/A	N/A	N/A	2025	2025	2025

In determining its expected return on plan assets assumption for the year ended December 31, 2018, the Company considered historical experience, its asset allocation, expected future long-term rates of return for each major asset class, and an assumed long-term inflation rate. This assumption was supported by the asset return generation model, which projected future asset returns using simulation and asset class correlation.

	Pension Benefits			Postretirement Benefits		
	2018	2017	2016	2018	2017	2016
Components of net periodic benefit cost						
Service costs	$ 3.7	$ 2.4	$ 2.4	$ —	$ —	$ —
Interest costs	2.2	1.8	1.8	0.3	0.3	0.3
Expected return on plan assets	(11.6)	(9.7)	(9.4)	—	—	—
Amortization of prior service cost (credit)	—	—	—	(0.1)	(0.1)	(0.1)
Recognized net actuarial loss	0.3	1.2	1.1	0.1	0.1	0.1
Benefit (income) costs	$ (5.4)	$ (1.3)	$ (4.1)	$ 0.3	$ 0.3	$ 0.3
Other changes in plan assets and benefit obligations recognized in accumulated other comprehensive (income) loss ("AOCI")						
AOCI at beginning of year	$ 16.8	$ 26.1	$ 25.5	$ 2.0	$ 1.5	$ 4.1
Net (loss) gain arising during the year	(0.3)	(1.1)	1.7	0.3	0.5	(2.6)
Recognition of prior service credit	—	—	—	0.1	0.1	0.1
Recognition of actuarial loss	18.5	(8.2)	(1.1)	(0.1)	(0.1)	(0.1)
Total recognized in accumulated other comprehensive loss at end of year	$ 35.0	$ 16.8	$ 26.1	$ 2.3	$ 2.0	$ 1.5

The estimated net loss and prior service cost for the defined benefit pension plans that will be amortized from accumulated other comprehensive income into net periodic benefit cost over the year ending December 31, 2019 is approximately $3.0 million.

The estimated net loss and prior service cost for the postretirement plans that will be amortized from accumulated other comprehensive income into net periodic benefit cost over the year ending December 31, 2019 is less than $0.1 million.

Below is a table summarizing the Company's expected future benefit payments and the expected payments due to Medicare subsidy over the next ten years:

	Pension Benefits	Postretirement Benefits		
		Gross	Expected Medicare Subsidy	Net including Medicare Subsidy
2019	$ 5.4	$ 1.0	$ 0.9	$ 0.1
2020	5.6	1.0	0.9	0.1
2021	5.7	0.9	0.8	0.1
2022	5.8	0.9	0.8	0.1
2023	5.9	0.9	0.8	0.1
2024 to 2028	29.7	3.4	3.1	0.3

The Company expects to make no contributions to its defined benefit plans in 2019 and beyond, as pension benefits are expected to be paid out of plan assets and postretirement benefits are paid directly by the Company.

Under the postretirement benefit plan, health care benefits are provided on both a contributory and noncontributory basis. The assumed health care cost trend rate has a significant effect on the amounts reported. A one-percentage-point change in the assumed health care cost trend rate would have the following effects:

	1-Percentage Point Increase	1-Percentage Point Decrease
Effect on total of service and interest cost components in 2018	$ —	$ —
Effect on postretirement benefit obligation as of December 31, 2018	$ 0.6	$ (0.5)

In January 2008, a Supplemental Executive Retirement Plan ("SERP") for the Company's current President and former Chairman and Chief Executive Officer ("Former CEO") was approved by the Compensation Committee of the Board of Directors of the Company. The SERP provides an annual supplemental retirement benefit for up to $0.4 million upon the Former CEO's termination of employment with the Company. In the event of a change in control before the Former CEO's termination of employment, he will receive 100% of the SERP. As of December 31, 2018, the Former CEO is fully vested in the SERP. The Company recorded income of $0.1 million in 2018 and $0.2 million in 2017 and 2016 related to the SERP. As of December 31, 2018, the Company has recorded a liability of $3.1 million related to the SERP in Other long-term liabilities.

NOTE 13 — Accumulated Other Comprehensive Income (Loss)

The components of and changes in accumulated other comprehensive income (loss) for the years ended December 31, 2018, 2017 and 2016 were as follows

	Cumulative Translation Adjustment	Pension and Postretirement Benefits	Total
Balance at January 1, 2016	$ (16.9)	$ (13.1)	$ (30.0)
Currency translation	(13.9)	-	(13.9)
Pension and OPEB activity, net of tax	—	1.2	1.2
Balance at December 31, 2016	(30.8)	(11.9)	(42.7)
Currency translation	19.2	-	19.2
Pension and OPEB activity, net of tax		5.6	5.6
Balance at December 31, 2017	(11.6)	(6.3)	(17.9)
Currency translation	(9.7)	—	(9.7)
Pension and OPEB activity, net of tax	—	(13.3)	(13.3)
Balance at December 31, 2018	$ (21.3)	$ (19.6)	$ (40.9)

No income taxes are provided on currency translation as foreign earnings are considered permanently re-invested

NOTE 14 — Related Party Transaction

During 2018, the Company purchased 48,186 outstanding shares of common stock at market price from an executive officer of the Company for cash of $2.0 million. The transaction is included in the purchase of treasury shares in the Consolidated Statements of Cash Flows.

NOTE 15 — Subsequent Event

On January 31, 2019, the Company's Board of Directors declared a quarterly dividend of $0.125 per common share. The dividend was paid on March 1, 2019, to shareholders of record as of the close of business on February 15, 2019 and resulted in a cash outlay of $1.6 million.

NOTE 16 — Selected Quarterly Financial Data (Unaudited)

	Quarter Ended			
	Mar 31	Jun 30	Sept. 30	Dec. 31
2018				
Net sales	$ 405.7	$ 432.2	$ 414.3	$ 405.9
Gross profit	65.1	73.1	65.9	67.4
Net income	10.2	15.0	14.7	15.3
Net income attributable to noncontrolling interest	(0.4)	(0.2)	(0.5)	(0.5)
Net income attributable to ParkOhio common shareholders	$ 9.8	$ 14.8	$ 14.2	$ 14.8
Earnings per common share attributable to ParkOhio common shareholders				
Basic	$ 0.80	$ 1.20	$ 1.15	$ 1.21
Diluted	$ 0.78	$ 1.18	$ 1.14	$ 1.19
Cash dividends per common share	$ 0.125	$ 0.125	$ 0.125	$ 0.125
2017				
Net sales	$ 343.8	$ 350.9	$ 352.2	$ 366.0
Gross profit	55.0	59.8	56.7	61.3
Net income	10.1	3.2	10.2	6.0
Net income attributable to noncontrolling interest	(0.3)	(0.2)	(0.2)	(0.2)
Net income attributable to ParkOhio common shareholders	$ 9.8	$ 3.0	$ 10.0	$ 5.8
Earnings per common share attributable to ParkOhio common shareholders				
Basic	$ 0.80	$ 0.25	$ 0.82	$ 0.48
Diluted	$ 0.79	$ 0.24	$ 0.80	$ 0.46
Cash dividends per common share	$ 0.125	$ 0.125	$ 0.125	$ 0.125

Income of $1.9 million from the gain on sale of assets was recorded in the second quarter of 2018.

Income of $3.3 million from the reversal of a litigation reserve was recorded in the first quarter of 2017 in conjunction with the settlement of the IPSCO legal matter.

A loss on extinguishment of debt of $11.0 million was recorded in the second quarter of 2017 in connection with the April 2017 repurchase of our Senior Notes due 2021 and amendment of our credit agreement.

Income tax expense of $4.2 million was recorded in the fourth quarter of 2017 from the net impact of the TCJA.

Supplementary Financial Data

Schedule II

PARK-OHIO HOLDINGS CORP.

SCHEDULE II — VALUATION AND QUALIFYING ACCOUNTS AND RESERVES

Description	Balance at Beginning of Period	Charged to Costs and Expenses	Deductions and Other	Balance at End of Period
Year Ended December 31, 2018				
Allowances deducted from assets				
Trade receivable allowances	4.5	2.0	(0.3) (A)	6.2
Inventory reserves	29.8	7.5	(2.4) (B)	34.9
Tax valuation allowances	11.6	(6.3)	—	5.3
Year Ended December 31, 2017				
Allowances deducted from assets				
Trade receivable allowances	$ 4.0	1.5	(1.0) (A)	$ 4.5
Inventory reserves	30.2	5.6	(6.0) (B)	29.8
Tax valuation allowances	5.3	5.6	0.7 (C)	11.6
Year Ended December 31, 2016				
Allowances deducted from assets				
Trade receivable allowances	$ 3.3	$ 1.5	$ (0.8) (A)	$ 4.0
Inventory reserves	29.0	6.0	(4.8) (B)	30.2
Tax valuation allowances	4.8	0.5	—	5.3

Note (A)- Uncollectable accounts written off, net of recoveries

Note (B)- Amounts written off

Note (C)- Amount related to 2017 acquisitions

Item 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosure

None

Item 9A. Controls and Procedures

Evaluation of disclosure controls and procedures

As of the end of the period covered by this report, we carried out an evaluation, under the supervision and with the participation of our Chairman and Chief Executive Officer and our Vice President and Chief Financial Officer, of the effectiveness of our disclosure controls and procedures pursuant to Rule 13a-15(e) and Rule 15d-15(e) of the Securities Exchange Act of 1934, as amended ("Exchange Act"). Based upon this evaluation, our Chairman and Chief Executive Officer and Vice President and Chief Financial Officer concluded that, as of the end of the period covered by this Annual Report on Form 10-K, our disclosure controls and procedures were effective.

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rule 13a-15(f) under the Exchange Act. As required by Rule 13a-15(c) under the Exchange Act, management carried out an evaluation, with participation of our Chairman and Chief Executive Officer and Vice President and Chief Financial Officer, of the effectiveness of our internal control over financial reporting as of December 31, 2018. The framework on which such evaluation was based is contained in the report entitled "Internal Control — Integrated Framework" issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 Framework) (the "COSO Report"). Management's assessment and conclusion on the effectiveness of internal controls over financial reporting did not include the internal controls of CDF, Hydrapower and the two acquisitions in the Supply Technologies segment, which constituted approximately six percent of the Company's total assets as of December 31, 2018 and approximately four percent of the Company's total revenues for the year then ended. Based upon the evaluation described above under the framework contained in the COSO Report, our management has concluded that our internal control over financial reporting was effective as of December 31, 2018.

Ernst & Young LLP, our independent registered public accounting firm, who audited the consolidated financial statements of the Company for the year ended December 31, 2018, also audited the effectiveness of the Company's internal control over financial reporting, excluding CDF, Hydrapower and the two acquisitions in the Supply Technologies segment. Their report is set forth on pages 38 - 39 of this Annual Report on Form 10-K and is incorporated by reference into this Item 9A.

Changes in internal control over financial reporting

There have been no changes in our internal control over financial reporting that occurred during the fourth quarter of 2018 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

None

Part III

Item 10. Directors, Executive Officers and Corporate Governance

The information concerning directors, the identification of the audit committee and the audit committee financial expert and our code of ethics required under this item is incorporated herein by reference from the material contained under the captions "Election of Directors" and "Corporate Governance" as applicable in our definitive proxy statement for the 2019 annual meeting of shareholders to be filed with the SEC pursuant to Regulation 14A not later than 120 days after the close of the fiscal year (the "Proxy Statement"). The information concerning Section 16(a) beneficial ownership reporting compliance is incorporated herein by reference from the material contained under the caption "Principal Shareholders — Section 16(a) Beneficial Ownership Reporting Compliance" in the Proxy Statement. Information relating to executive officers is contained in Part I of this Annual Report on Form 10-K.

Item 11. Executive Compensation

The information relating to executive officer and director compensation and the compensation committee report contained under the heading "Executive Compensation" in the Proxy Statement is incorporated herein by reference. The information relating to compensation committee interlocks contained under the heading "Corporate Governance — Compensation Committee Interlocks and Insider Participation" in the Proxy Statement is incorporated herein by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information required under this item is incorporated herein by reference from the material contained under the caption "Principal Shareholders" in the Proxy Statement, except that information required by Item 201(d) of Regulation S-K can be found below.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The information required under this item is incorporated herein by reference to the material contained under the captions "Corporate Governance Director Independence" and "Transactions With Related Persons" in the Proxy Statement.

Item 14. Principal Accountant Fees and Services

The information required under this item is incorporated herein by reference to the material contained under the caption "Audit Committee — Independent Auditor Fee Information" in the Proxy Statement.

Part IV

Item 15. Exhibits and Financial Statement Schedules

(a)(1) The following financial statements are included in Part II, Item 8 of this annual report on Form 10-K

All other schedules for which provision is made in the applicable accounting regulations of the SEC are not required under the related instructions or are not applicable and, therefore, have been omitted.

(3) Exhibits

Exhibit	
3.1	Amended and Restated Articles of Incorporation of Park-Ohio Holdings Corp. (filed as Exhibit 3.1 to the Form 10-K of Park-Ohio Holdings Corp. for the year ended December 31, 1998, SEC File No. 000-03134 and incorporated by reference and made a part hereof)
3.2	Code of Regulations of Park-Ohio Holdings Corp. (filed as Exhibit 3.2 to the Form 10-K of Park-Ohio Holdings Corp. for the year ended December 31, 1998, SEC File No. 000-03134 and incorporated by reference and made a part hereof)
4.1	Indenture, dated April 17, 2017, among Park-Ohio Industries, Inc., the Guarantors (as defined therein) and Wells Fargo Bank, National Association, as trustee (including Form of Note) (filed as Exhibit 4.1 to the Form 8-K of Park-Ohio Holdings Corp. filed on April 17, 2017, SEC File No. 000-03134 and incorporated herein by reference and made a part hereof)
4.2	Seventh Amended and Restated Credit Agreement, dated April 17, 2017, among Park-Ohio Industries, Inc., RB&W Corporation of Canada, the European Borrowers (as defined therein) party thereto, the other Loan Parties (as defined therein), the Lenders (as defined therein), JPMorgan Chase Bank, N.A., as administrative agent, JPMorgan Chase Bank, N.A., Toronto Branch, as Canadian agent, J.P. Morgan Europe Limited, as European agent and J.P. Morgan Securities Inc., as sole lead arranger and bookrunning manager (filed as Exhibit 4.3 to the Form 8-K of Park-Ohio Holdings Corp. filed on April 17, 2017, SEC File No. 000-03134 and incorporated herein by reference and made a part hereof)

Exhibit	
10.1	Form of Indemnification Agreement entered into between Park-Ohio Holdings Corp. and each of its directors and certain officers (filed as Exhibit 10.1 to the Form 10-K of Park-Ohio Holdings Corp. for the year ended December 31, 1998, SEC File No. 000-03134 and incorporated by reference and made a part hereof)
10.2*	2015 Equity and Incentive Compensation Plan (filed as Exhibit 4.4 to Form S-8 of Park-Ohio Holdings Corp., filed on June 4, 2015, SEC File No. 000-03134 and incorporated by reference and made a part hereof)
10.3*	2018 Equity and Incentive Compensation Plan (filed as Exhibit 4.4 to Form S-8 of Park-Ohio Holdings Corp., filed on June 27, 2018, SEC File No. 000-03134 and incorporated by reference and made a part hereof)
10.4*	Form of Restricted Share Agreement between the Company and each non-employee director (filed as Exhibit 10.1 to Form 8-K of Park-Ohio Holdings Corp., filed on January 25, 2005, SEC File No. 000-03134 and incorporated herein by reference and made a part hereof)
10.5*	Form of Restricted Share Agreement for Employees (filed as Exhibit 10.1 to Form 10-Q for Park-Ohio Holdings Corp. for the quarter ended September 30, 2006, SEC File No. 000-03134 and incorporated herein by reference and made a part hereof)
10.6*	Form of Incentive Stock Option Agreement (filed as Exhibit 10.5 to Form 10-K of Park-Ohio Holdings Corp. for the year ended December 31, 2004, SEC File No. 000-03134 and incorporated by reference and made a part hereof)
10.7*	Form of Non-Statutory Stock Option Agreement (filed as Exhibit 10.6 to Form 10-K of Park-Ohio Holdings Corp. for the year ended December 31, 2004, SEC File No. 000-03134 and incorporated herein by reference and made a part hereof)
10.8*	Park-Ohio Industries, Inc. Annual Cash Bonus Plan (filed as Exhibit 10.2 to the Form 10-Q for Park-Ohio Holdings Corp. filed August 10, 2015, SEC File No. 000-03134 and incorporated by reference and made a part hereof)
10.9*	Form of Performance Based Restricted Share Agreement (filed as Exhibit 10.1 to Form 10-Q of Park-Ohio Holdings Corp. filed August 10, 2015, SEC File No. 000-03134 and incorporated by reference and made a part hereof)
10.10*	Supplemental Executive Retirement Plan for Edward F. Crawford, effective as of March 10, 2008 (filed as Exhibit 10.9 to Form 10-K of Park-Ohio Holdings Corp. for the year ended December 31, 2007, SEC File No. 000-03134 and incorporated by reference and made a part hereof)
10.11*	Non-qualified Defined Contribution Retirement Benefit Letter Agreement for Edward F. Crawford, dated March 10, 2008 (filed as Exhibit 10.10 to Form 10-K of Park-Ohio Holdings Corp. for the year ended December 31, 2007, SEC File No. 000-03134 and incorporated by reference and made a part hereof)
10.12*	2009 Director Supplemental Defined Contribution Plan of Park-Ohio Holdings Corp. (Filed as Exhibit 10 to Form 10-Q of Park-Ohio Holdings Corp. filed May 10, 2011, SEC File No. 000-03134 and incorporated by reference and made a part hereof)
10.13	Registration Rights Agreement, dated April 17, 2017, among Park-Ohio Industries, Inc., the Guarantors (as defined therein) and the initial purchasers that are party thereto (filed as Exhibit 10.1 to the Form 8-K of Park-Ohio Holdings Corp. filed on April 17, 2017, SEC File No. 000-03134 and incorporated herein by reference and made a part hereof)

Exhibit	
21.1	List of Subsidiaries of Park-Ohio Holdings Corp.
23.1	Consent of Independent Registered Public Accounting Firm
24.1	Power of Attorney
31.1	Principal Executive Officer's Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2	Principal Financial Officer's Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1	Certification requirement under Section 906 of the Sarbanes-Oxley Act of 2002
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Label Linkbase Document
101.LAB	XBRL Taxonomy Extension Presentation Linkbase Document
101.PRE	XBRL Taxonomy Extension Definition Linkbase Document

* Reflects management contract or other compensatory arrangement required to be filed as an exhibit pursuant to Item 15(c) of this Report

Item 16. Form 10-K Summary

None

SIGNATURES

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

PARK OHIO HOLDINGS CORP
(Registrant)

By /s/ Patrick W. Fogarty
Name Patrick W. Fogarty
Title Vice President and Chief Financial Officer
(Principal Financial and Accounting Officer)

Date March 5, 2019

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed by the following persons in the capacities and on the dates indicated.

* Matthew V. Crawford	Chairman, Chief Executive Officer and Director (Principal Executive Officer)	March 5, 2019
* Edward F. Crawford	President and Director	
* Patrick W. Fogarty	Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)	
* Patrick V. Auletta	Director	
* John D. Grampa	Director	
* Howard W. Hanna	Director	
* Dan T. Moore III	Director	
* Ronna Romney	Director	
* Steven H. Rosen	Director	
* James W. Wert	Director	

* The undersigned, pursuant to a Power of Attorney executed by each of the directors and officers identified above and filed with the Securities and Exchange Commission, by signing his name hereto, does hereby sign and execute this report on behalf of each of the persons noted above, in the capacities indicated.

March 5, 2019

By /s/ ROBERT D. VILSACK
Robert D. Vilsack, Chief Legal Officer

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Exhibit 31 1

PRINCIPAL EXECUTIVE OFFICER'S CERTIFICATIONS
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Matthew V Crawford, certify that

1 I have reviewed this annual report on Form 10-K of Park-Ohio Holdings Corp .

2 Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report.

3 Based on my knowledge, the financial statements and other financial information included in this report fairly present in all material respects the financial condition results of operations and cash flows of the registrant as of, and for the periods presented in this report

4 The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have

a Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant including its consolidated subsidiaries, is made known to us by others within those entities particularly during the period in which this report is being prepared

b Designed such internal control over financial reporting or caused such internal control over financial reporting to be designed under our supervision to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles.

c Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures as of the end of the period covered by this report based on such evaluation, and

d Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect the registrant's internal control over financial reporting, and

5 The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions)

a All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information and

b Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting

By /s/ Matthew V Crawford
Name Matthew V Crawford
Title Chairman and Chief Executive Officer

Dated March 5, 2019

Exhibit 31 2

PRINCIPAL EXECUTIVE OFFICER'S CERTIFICATIONS
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I Patrick W Fogarty certify that

1 I have reviewed this annual report on Form 10-K of Park-Ohio Holdings Corp

2 Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report.

3 Based on my knowledge, the financial statements, and other financial information included in this report fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report

4 The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have

a Designed such disclosure controls and procedures or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities particularly during the period in which this report is being prepared

b Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles.

c Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation and

d Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect the registrant's internal control over financial reporting, and

5 The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions)

a All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information, and

b Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting

By /s/ Patrick W Fogarty
Name Patrick W Fogarty
Title Vice President and Chief Financial Officer

Dated March 5 2019

Exhibit 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Park-Ohio Holdings Corp (the "Company") on Form 10-K for the period ended December 31 2018 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned officers of the Company certifies pursuant to 18 U S C § 1350, as adopted pursuant to § 906 of the Sarbanes Oxley Act of 2002 that to such officer's knowledge

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and

(2) The information contained in the Report fairly presents in all material respects the financial condition and results of operations of the Company as of the dates and for the periods expressed in the Report

By /s/ Matthew V Crawford
Name Matthew V Crawford
Title Chairman and Chief Executive Officer

By /s/ Patrick W Fogarty
Name Patrick W Fogarty
Title Vice President and Chief Financial Officer

Dated March 5 2019

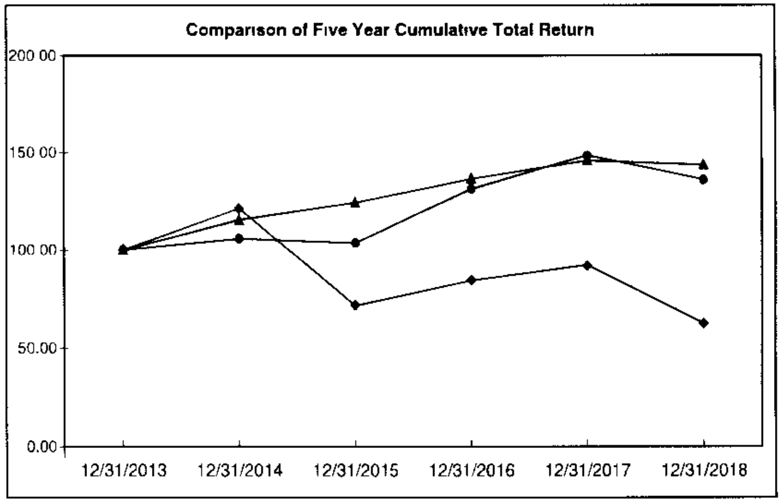
The foregoing certification is being furnished solely pursuant to 18 U S C § 1350 and is not being filed as part of the Report or as a separate disclosure document

THIS PAGE IS NOT PART OF PARKOHIO'S FORM 10-K FILING

ParkOhio Performance Graph

The following graph compares the cumulative total return of ParkOhio's common stock for the five-year period ending December 31, 2018, against the cumulative total return of the S&P SmallCap 600 Index (broad market comparison) and the NASDAQ Stock Market (US companies) (line of business comparison) The graph and table assume $100 was invested on December 31, 2013 and that all dividends were reinvested

Produced on 3/15/2019 including data to 12/31/2018



Legend

Symbol	Total Return Index For	12/2013	12/2014	12/2015	12/2016	12/2017	12/2018
♦	Park-Ohio Holdings Corp	100.00	121.13	71.52	84.33	92.15	62.34
▪	S&P Smallcap 600 Index	100.00	105.76	103.67	131.20	148.56	135.96
▲	NASDAQ Stock Market (US Companies)	100.00	115.31	124.20	136.36	145.76	143.37

Notes

A The lines represent monthly index levels derived from compounded daily returns that include all dividends
B The indexes are reweighted daily, using the market capitalization on the previous trading day
C If the monthly interval, based on the fiscal year-end is not a trading day, the preceding trading day is used
D The index level for all series was set to $100.00 on 12/31/2013

Board of Directors

Matthew V Crawford [a,d]
Chairman and Chief Executive Officer

Edward F Crawford [a,d]
President

Patrick V. Auletta [e]
President Emeritus
KeyBank National Association

John D. Grampa [b]
Retired Chief Financial Officer
Materion Corporation

Howard W Hanna IV
President
Howard Hanna Real Estate Services

Dan T Moore III [c,e]
Chief Executive Officer
Dan T Moore Co

Ronna Romney [e]
Director
Molina Healthcare, Inc

Steven H. Rosen [b,c]
Co-Chief Executive Officer
Resilience Capital Partners

James W. Wert [b]
Chief Executive Officer and President
CM Wealth Advisors, Inc

(a) Executive Committee
(b) Audit Committee
(c) Compensation Committee
(d) Long-Range Planning Committee
(e) Nominating and Corporate Governance Committee

Officers

Matthew V. Crawford
Chairman and Chief Executive Officer

Edward F Crawford
President

Patrick W Fogarty
Vice President and Chief Financial Officer

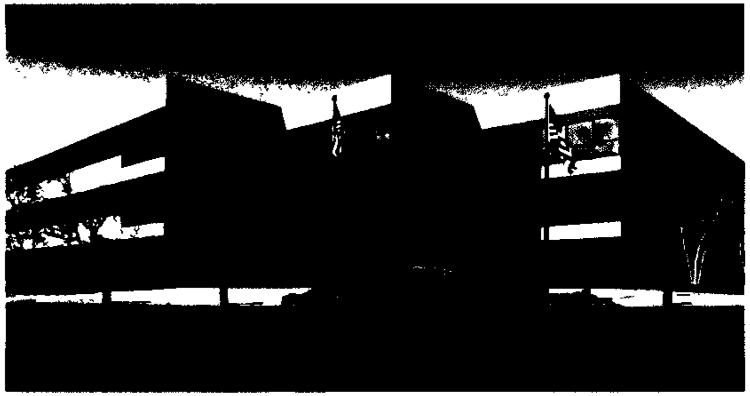
Robert D Vilsack
Secretary and Chief Legal Officer

Shareholder Information and Press Releases

ParkOhio files Forms 10-K and 10-Q with the Securities and Exchange Commission Shareholders may obtain copies of these reports, including ParkOhio's Annual Report on Form 10-K for 2018, and copies of ParkOhio's Annual Report to Shareholders, without charge, by accessing the Company's website at www pkoh com or by writing or calling

Corporate Secretary
Park-Ohio Holdings Corp
6065 Parkland Boulevard
Cleveland, Ohio 44124
(440) 947-2000
www.pkoh.com

ParkOhio's recent news releases may also be accessed through its website



ParkOhio World Headquarters

Please send your suggestions or recommendations to investor@pkoh com or mail them to our headquarters