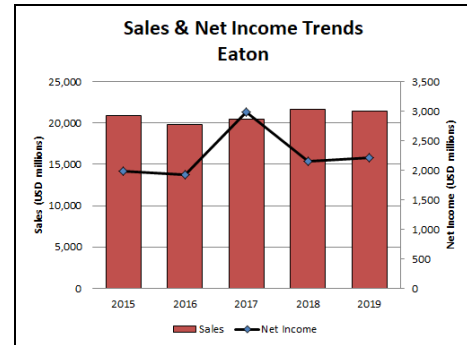


# Eaton Corporation

## Outlook

- For first nine months of 2020, Eaton's sales fell to \$13.2 billion, down 18 percent from \$16.1 billion in the 2019 timeframe
- Net income dropped to \$935 million, down almost 47 percent from the same period in 2019
- Despite the plunge, the company felt that things were improving from the worst of the COVID-19 crisis earlier in 2020
- Aerospace segment sales were down due to continued downturn in commercial aviation, partially offset by growth in military sales



## Headquarters

Eaton Corporation plc  
Eaton House  
30 Pembroke Rd  
Dublin 4, Ireland  
Telephone: + 1 (440) 523-5000  
Website: <https://www.eaton.com/>

Eaton was founded in 1911 as a manufacturer of truck axles and was incorporated in 1916 in the state of Ohio. In 2012, Eaton acquired the power management firm Cooper Industries plc in a deal valued at about \$12 billion. The company reincorporated in Ireland as a "plc" (public limited company) following the Cooper

merger. This involved establishing a registered head office in Dublin. (Operational headquarters remained in Ohio.)

Today, the company offers more than 5,000 types of products worldwide. Its principal products are electrical systems and components for power quality, distribution, and control; fluid power systems and services for industrial, mobile, and aircraft equipment; intelligent truck drivetrain systems; and automotive engine air management systems, powertrain solutions, and specialty controls for performance, fuel economy, and safety.

## Structure and Personnel

Craig Arnold  
Chairman and Chief Executive Officer  
Heath Monesmith  
President & Chief Operating Officer,  
Industrial Sector  
Uday Yadav  
President & Chief Operating Officer,  
Electrical Sector  
Brian S. Brickhouse  
President, Americas Region, Electrical Sector  
Tim Darkes  
President, Europe, Middle East and Africa Region,  
Corporate and Electrical Sector  
João V. Faria  
President, Vehicle Group  
Scott Hearn  
President, Crouse-Hinds and B-Line business,  
Electrical Sector

Nanda Kumar  
President, Aerospace Group  
Howard Liu  
President, Asia Pacific Region, Electrical Sector  
Paulo Ruiz Sternadt  
President, Hydraulics Group  
Nancy Berardinelli-Krantz  
Senior Vice President,  
Global Ethics and Compliance  
William W. Blausey Jr.  
Senior Vice President and  
Chief Information Officer  
Thomas B. Okray  
Executive Vice President and Chief Officer  
April Miller Boise  
Executive Vice President and General Counsel

## Eaton Corporation

Rogério Branco

Senior Vice President, Corporate Supply Chain Management

Mary Kim Elkins

Senior Vice President, Taxes

Yan Jin

Senior Vice President, Investor Relations

Harold V. Jones

Executive Vice President, Eaton Business System and Sustainability

Raja Macha

Executive Vice President and Chief Technology Officer

Ernest W. Marshall Jr.

Executive Vice President and Chief Human Resources Officer

John J. Matejka

Senior Vice President, Internal Audit

Kirsten Park

Senior Vice President, Treasury

Harpreet Saluja

Senior Vice President, Corporate Development and Planning

Ken D. Semelsberger

Senior Vice President and Controller

Taras G. Szmagala

Senior Vice President, Public & Community Affairs and Corporate Communications

Aravind Yarlaga

Executive Vice President and Chief Digital Officer

## Product Areas

Eaton is a Tier 1 and Tier 2 supplier to the industries it serves. The company manages its businesses as follows:

1. Electrical
2. Hydraulics
3. Aerospace
4. Vehicle
5. eMobility

**Electrical.** This unit provides electrical components, industrial components, residential products, single phase power quality, emergency lighting, fire detection, wiring devices, structural support systems, circuit protection, and lighting products. Key markets for this segment are industrial, institutional, governmental, utility, commercial, residential, and information technology.

**Hydraulics.** This segment manufactures hydraulic systems and components for use in mobile and industrial applications. Products include transmissions, clutches, hybrid power systems, superchargers, engine valves and valve actuation systems, cylinder heads, locking and limited slip differentials, transmission controls, fuel vapor components, fluid connectors, and conveyance products. The principal markets for the Hydraulics segment are the oil and gas, renewable energy, marine, agriculture, construction, mining, forestry, utility, material handling, truck and bus, machine tool, molding, primary metal, and power generation markets.

**Aerospace.** Eaton Aerospace manufactures and integrates hydraulic power generation systems for

aerospace applications, including pumps, motors, hydraulic power units, hose and fittings, and electro-hydraulic pumps; controls and sensing products including valves, cylinders, electronic controls, electromechanical actuators, sensors, aircraft flap and slat systems, and nosewheel steering systems; fluid conveyance products, including hoses, thermoplastic tubing, fittings, adapters, couplings, and sealing and ducting; and fuel systems including fuel pumps, sensors, valves, adapters, and regulators. These systems are used on both commercial and military aircraft and the related aftermarkets.

**Vehicle.** The Vehicle Group comprises the company's Truck and Automotive segments. The Truck segment manufactures drivetrain systems and components for medium- and heavy-duty commercial vehicles. The Automotive division's principal products include transmissions, clutches, hybrid power systems, superchargers, engine valves and valve actuation systems, cylinder heads, locking and limited slip differentials, transmission controls, fuel vapor components, fluid connectors, and conveyance products.

**eMobility.** This segment specializes in the products and components that improve the power management and performance of both on-road and off-road vehicles. Products include high voltage inverters, converters, fuses, onboard chargers, circuit protection units, vehicle controls, power distribution, fuel tank isolation valves, and commercial vehicle hybrid systems.

**Eaton Corporation****Facilities**

A full listing of aerospace related locations is available here:

<https://www.eaton.com/Eaton/ProductsServices/Aerospace/WorldwideLocations/index.htm>

Eaton Corporation plc, Eaton House, 30 Pembroke Rd, Dublin 4, Ireland. Corporate headquarters.

Eaton Center, 1000 Eaton Blvd, Cleveland, OH 44122. Telephone: + 1 (216) 523-5000. This is the regional headquarters for North America.

Eaton Aerospace (Headquarters), 9650 Jeronimo Rd, Irvine, CA 92618. Telephone: + 1 (949) 452-9500.

Website:

[www.eaton.com/Eaton/ProductsServices/Aerospace](http://www.eaton.com/Eaton/ProductsServices/Aerospace)

Eaton Aerospace, Fuel & Motion Control Systems Division, 4690 Colorado Blvd, Los Angeles, CA 90039. Telephone: + 1 (818) 409-0200.

Eaton Aerospace, Fluid & Electrical Distribution Division, 15 Durant Ave, Bethel, CT 06801. Telephone: + 1 (203) 796-6000. This facility produces pressure switches, transducers, and industrial products for commercial and military applications.

Eaton Aerospace, Fluid & Electrical Distribution Division, 300 South East Ave, Jackson, MI 49203. Telephone: + 1 (517) 787-8121. This unit produces hose assemblies, fittings, quick-disconnect self-sealing couplings, and clamps for the aerospace market.

**Corporate Overview**

Eaton is a global, diversified, industrial manufacturer of fluid power systems; electrical power quality, distribution, and control systems; automotive engine air management and fuel economy systems; and "intelligent" truck systems for fuel economy and safety.

**New Products and Services**

**KF-X Pump.** In February 2018, Eaton and Doosan Corporation Mottrol signed an agreement to supply hydraulic pumps for South Korea's first domestically manufactured fighter aircraft, the KF-X.

**DISA Data Center Expansion.** In November 2017, Eaton was awarded a \$10.7 million contract from the Defense Information Systems Agency (DISA) to expand one of its large data centers in Ohio. Eaton was awarded the contract under the U.S. Air Force's Power Conditioning & Continuation Interfacing Equipment (PCCIE) program. Eaton will provide all necessary turnkey engineering services and power quality and electrical distribution equipment for the project – which is expected to be complete in the first half of 2018.

**Duct and Tube Repair.** In October 2017, Eaton's duct and tube repair business began adding capability to do repairs that are more complex. Customers – including airlines and maintenance, repair, and overhaul (MRO) companies – can send in damaged ducts or tubes, and in 15 days or less, the service will evaluate, repair, and test them. The service can provide this for ducts and tubes from any manufacturer.

If the repair is too complex for the 15-day window, Eaton's exchange program will provide a spare or already repaired part to avoid additional customer downtime. According to Eaton, the service can cut

costs at airlines. The company said one repair could save as much as \$50,000 compared to replacing the damaged part.

**Plant Expansion/Organization Update**

**Bangalore Facility.** In November 2019, Eaton opened its first aerospace manufacturing facility in India. The new facility, located in Bangalore, will manufacture hose assemblies and other fluid distribution products, including oil debris monitoring systems, to serve commercial, business, and regional aircraft.

**eMobility Unit Formed.** In 2018, Eaton formed a new eMobility unit to address increasing demand for high-voltage electrified vehicle technologies. EMobility was formed by combining products, expertise, and global manufacturing capabilities from Eaton's Electrical and Vehicle businesses. Eaton plans to invest more than \$500 million over the next five years to develop new products and technologies, including smart diagnostic technologies, intelligent power electronics, and predictive health monitoring.

**Oxalis Acquired.** In January 2015, Eaton acquired U.K.-based Oxalis Group Ltd. Oxalis manufactures closed-circuit TV camera stations, public address / general alarm systems, and other electrical products for the hazardous area, marine, and industrial communications markets. Terms were not disclosed.

**Aftermarket Division Formed.** In April 2014, Eaton Aerospace formed its new Aftermarket Division. The company said this organization is focused on accelerating market growth and enhancing service and support for Eaton's commercial and military aftermarket customers.



## Eaton Corporation

**Moscow Office Established.** In October 2009, Eaton opened a corporate office in Russia as part of a growth initiative in that country. Recently, Eaton announced a cooperative agreement with Russian Helicopters JSC for parts assembly in Russia and was selected to supply the hydraulic system for the new MC-21 single-aisle aircraft line to be produced by Irkut.

### Mergers/Acquisitions/Divestitures

**Power Distribution Inc Acquired.** In February 2020, Eaton completed its acquisition of Power Distribution, Inc (PDI). Headquartered in Richmond, Virginia, PDI is a supplier of power distribution, static switching, and power monitoring equipment and services for data centers and industrial and commercial customers. Terms were not announced.

**Hydraulics Business Divestiture.** In January 2020, Eaton agreed to sell its Hydraulics business to Danfoss A/S, a Danish industrial company, for \$3.3 billion in cash. Eaton's Hydraulics business, which accounted for 86 percent of Eaton's Hydraulics segment revenue in 2019, produces hydraulics components, systems, and services for industrial and mobile equipment. The business had sales of \$2.2 billion in 2019 and employs approximately 11,000 people. Eaton will retain the Filtration and Golf Grip businesses that were reported in the company's Hydraulics segment. The sale is expected to be completed in the first quarter of 2021.

**Automotive Fluid Conveyance Unit Sold.** In January 2020, Eaton completed the sale of its Automotive Fluid Conveyance Division to Quantum Capital Partners. The Automotive Fluid Conveyance Division manufactures hydraulic power assisted steering, active ride systems, oil cooling, air conditioning, and plastic components for the automotive industry. It employs approximately 1,300 people. Terms of the transaction were not disclosed.

**Lighting Business Sold.** In October 2019, Eaton agreed to sell its Lighting business to Signify N.V. for a \$1.4 billion in cash. The Lighting business had sales of \$1.7 billion in 2019. The deal was completed in March 2020.

**Souriau-Sunbank Acquired.** In July 2019, Eaton agreed to acquire the Souriau-Sunbank Connection Technologies business of TransDigm Group Incorporated for \$920 million. Headquartered in Versailles, France, Souriau-Sunbank is a global leader in highly engineered electrical interconnect solutions for harsh environments for customers in the aerospace, defense, industrial, energy, and transport industries. The acquisition was completed in December 2019.

Website: <https://usa.souriau.com/en-en>

**Innovative Switchgear Solutions Acquired.** In July 2019, Eaton acquired Innovative Switchgear Solutions, Inc (ISG), a specialty manufacturer of medium-voltage electrical equipment serving the North American utility, commercial, and industrial markets. Terms of the transaction were not disclosed.

**Ulusoy Elektrik Acquired.** In April 2019, Eaton completed the acquisition of an 82.3 percent controlling interest in Ulusoy Elektrik Imalat Taahhut ve Ticaret A.S., a manufacturer of medium voltage electrical equipment based in Ankara, Turkey.

**Safran Acquires Aerospace Units.** In May 2014, Safran acquired Eaton's Aerospace Power Distribution Management Solutions and Integrated Cockpit Solutions business for \$270 million. This business employs approximately 350 people at manufacturing facilities in Costa Mesa, California, and Sarasota, Florida. The business produces illuminated switches, cockpit panel assemblies, pilot controls, and passenger safety unit latches, as well as circuit protection and power distribution and switch components, for aerospace and industrial applications. The Aerospace Power Distribution Management Solutions activities would be consolidated within the Aircraft Equipment business. The Integrated Cockpit Solutions activities would be consolidated within the Defense business. Sales were approximately \$102 million in 2013.

**Cooper Industries Merger.** In November 2012, Eaton completed its \$11.8 billion merger with electrical equipment supplier Cooper Industries plc of Ireland. The acquisition was announced in May 2012 and combined Eaton and Cooper into a new global power management company named Eaton Corporation plc. Under terms of the deal, Eaton shareholders gained control of 73 percent of the new Eaton, which is incorporated in Ireland but retains its administrative headquarters in Ohio.

**Eaton Acquires Tuthill.** In December 2010, Eaton acquired the Tuthill Coupling Group. Terms of the deal were not disclosed. The Tuthill Coupling Group manufactures pneumatic and hydraulic quick coupling solutions and leak-free connectors used in industrial, construction, mining, defense, energy, and power applications. The operation employs approximately 220 people in locations in Berea, Ohio, and Annemasse, France.

**Eaton Acquires CopperLogic.** In October 2010, Eaton completed its acquisition of CopperLogic Inc, a manufacturer of electrical and electromechanical systems. Terms of the deal were not disclosed. CopperLogic has facilities in the U.S. and Canada, with headquarters in Houston, Texas, and Mississauga, Ontario. The company employs approximately 170

## Eaton Corporation

people and had sales of approximately \$35 million at the time of the acquisition.

**EMC Engineers Acquired.** In July 2010, Eaton acquired EMC Engineers Inc. Terms of the deal were not disclosed. Headquartered in Denver, Colorado, EMC Engineers is an energy engineering and services company that delivers energy efficiency solutions for governmental, educational, commercial, and industrial facilities. The firm retrofits and modernizes mechanical, electrical, and control systems and performs energy modeling and analysis, facility commissioning, and energy savings performance contracting. EMC Engineers had 2009 sales of \$24 million and employs approximately 155 people.

### Teaming/Competition/Joint Ventures

**AAR.** In June 2013, Eaton signed an agreement with AAR to supply an array of hydraulic, fuel, and electrical products to support AAR's component MRO contracts. Under the agreement, Eaton will supply hydraulic, fuel, and electrical components for airlines operating large fleets of Boeing and Airbus aircraft. Products include hydraulic spare parts for repair of Eaton's engine-driven pumps and AC motor pumps and electrical components installed on Eaton's cargo door actuators. The relationship also enables Eaton and AAR to pursue opportunities for flight-hour service agreements in which Eaton supplies spare components to AAR for use in repairs of Eaton's hydraulic, fuel, conveyance, and electrical products.

**Cummins.** In April 2017, Eaton and Cummins formed a joint venture to produce automated transmissions for heavy-duty and medium-duty commercial vehicles. The joint venture is named Eaton Cummins Automated Transmission Technologies.

**Leonardo.** In July 2008, Eaton and Alenia Aeronautica (now Leonardo) signed an agreement to cooperate in a work share program on the F-35 Lightning II Joint Strike Fighter. The agreement involves the design, development, and production of hydraulic, fuel, and power thermal management system tubes for the wing assemblies of the conventional takeoff and landing (CTOL) F-35 Lightning II. Leonardo is under contract with Lockheed Martin to produce half of the wing sections for the CTOL F-35. Under the agreement, Leonardo will manufacture 15 percent of the tubing that will be installed in the wing sections. Eaton will manufacture and supply 85 percent of the tubing.

**Microgrid Demonstration.** In April 2017, the U.S. Department of Defense selected an Eaton team to

conduct a microgrid demonstration under the Environmental Security Technology Certification Program at Ft. Custer Training Center in Michigan. The project team will be led by Electricore Inc and supported by Eaton and Consumers Energy and will be hosted by the Michigan Army National Guard. The project will develop a microgrid that can "island from" the utility grid to enhance power surety, energy resilience, distributed generation management, and demand response while contributing to the critical power needs of nearby military installations. Eaton's Electrical Engineering Services and Systems team will provide all necessary turnkey engineering services and power management solutions, including equipment upgrades, installation of additional energy storage and natural gas generation resources, and implementation of microgrid control and communication components.

**OEM Services.** In October 2019, Eaton signed a long-term agreement with OEM Services to provide maintenance, repair, and overhaul services on Airbus and Boeing aircraft components to benefit A320, A330, A340, B777, and B787 operators in the Russian airline market. Eaton will perform repair services on a broad portfolio of airframe fuel and hydraulic components, engine fuel and sensing products, and electrical actuation products.

**RUAG.** In June 2011, Eaton Corporation entered a long-term agreement with RUAG Aviation of Switzerland to provide MRO services and component support for the worldwide fleet of Northrop Grumman F-5 fighter aircraft.

**Russian Helicopters.** In June 2009, Eaton and Russian Helicopters JSC announced the formation of a new business alliance for parts assembly in Russia. Eaton will assist Russian Helicopters in setting up a hose assembly facility at the Mil Moscow Helicopter Plant. The hoses will be manufactured and assembled for Russian Helicopters using parts and material supplied by Eaton's Aerospace facility in Gilching, Germany.

**Shanghai Aircraft Manufacturing.** In July 2010, Eaton and Shanghai Aircraft Manufacturing Co Ltd (SAMC), a subsidiary of Commercial Aircraft Corporation of China, signed a joint venture agreement to support the COMAC C919 single-aisle commercial aircraft program. In June 2011, the venture – Eaton SAMC (Shanghai) Aircraft Conveyance System Co Ltd – was officially opened. Based in Shanghai, the operation focuses on the design, development, manufacture, and support of fuel and hydraulic conveyance systems for the global civil aviation market.

## Eaton Corporation

Eaton followed the COMAC joint venture with another major Chinese program win — AVIC XAC's MA700 regional turboprop airliner. Eaton has signed letters of intent with AVIC Aircraft Co, Ltd (XAC) to supply fuel tank inerting, fuel distribution, and high-pressure

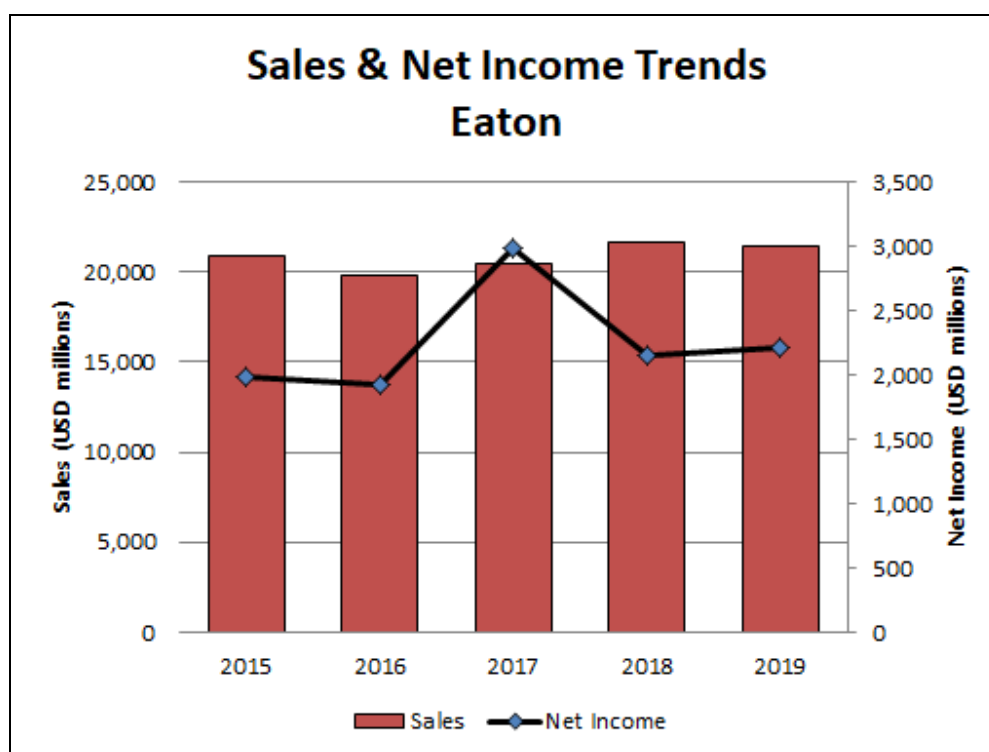
ducting systems for the MA700. SAMC owns a 51 percent interest in the new joint venture and Eaton a 49 percent interest. A joint manufacturing facility opened in China in October 2016.

## Financial Results/Corporate Statistics

Eaton's net sales for 2019 fell 1 percent, to \$21.4 billion. The company posted net income of about \$2.2 billion for 2019, compared with \$2.1 billion for 2018. Sales to the U.S. government are not reported and are estimated at less than 1 percent of sales.

### Eaton (NYSE: ETN)

(USD millions)	2015	2016	2017	2018	2019
Net Sales	20,855	19,747	20,404	21,609	21,390
Net Income	1,981	1,925	2,986	2,146	2,213
R&D Expenditures	625	589	584	584	606
Total Backlog	4,100	4,000	4,800	5,300	5,400
Long-Term Debt	7,746	6,711	7,167	6,768	7,819
Shareholder Equity	15,186	14,897	17,253	16,142	16,133
Debt-to-Equity Ratio	.51	.45	.41	.41	.48
Employees	97,000	95,000	96,000	99,000	101,000

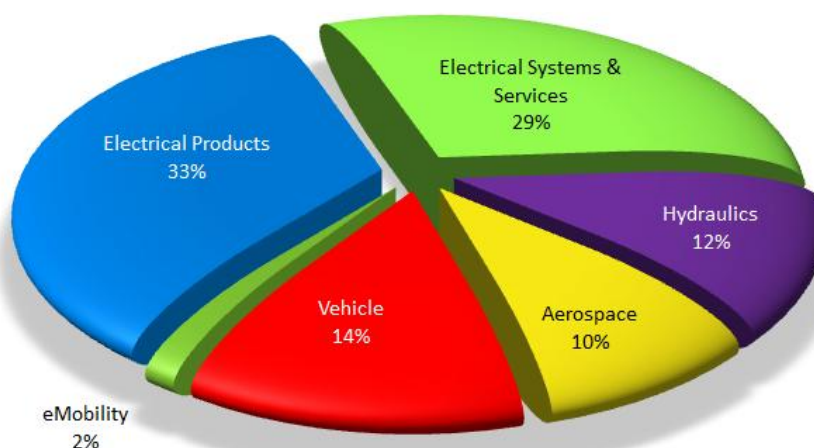


**Eaton Corporation****Industry Segments**

A breakdown of Eaton's sales and income by major market segment for the past five years is given below.

<b>SALES</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
(USD millions)					
Electrical Products	6,976	6,703	6,917	7,124	7,148
Electrical Systems & Services	5,931	5,662	5,666	6,024	6,287
Hydraulics	2,459	2,222	2,468	2,756	2,552
Aerospace	1,807	1,753	1,744	1,896	2,044
Vehicle	3,682	3,141	3,326	3,489	3,038
eMobility	-	266	283	320	321
<b>TOTAL</b>	<b>20,855</b>	<b>19,747</b>	<b>20,404</b>	<b>21,609</b>	<b>21,390</b>
<b>OPERATING INCOME</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
(USD millions)					
Electrical Products	1,156	1,186	1,233	1,311	1,390
Electrical Systems & Services	776	711	770	896	1,027
Hydraulics	246	198	288	370	286
Aerospace	310	335	332	398	495
Vehicle	645	471	541	611	460
eMobility	-	57	50	44	17
<b>TOTAL</b>	<b>3,133</b>	<b>2,958</b>	<b>3,214</b>	<b>3,630</b>	<b>3,675</b>

**2019 Sales by Segment  
Eaton**

**Major Competitors**

Eaton's major competitors in the aerospace market include units of Collins Aerospace, Honeywell, Danaher, Textron, Triumph Group, and Parker Hannifin.

## Eaton Corporation

### Strategic Outlook

Eaton is primarily a power management company offering equipment to electrical, hydraulic, and mechanical power markets. While power management is a primary focus of Eaton's portfolio, the company does have a presence in aerospace subcomponent manufacturing. For this market, Eaton produces aerospace fuel, hydraulics, and pneumatic systems for commercial and military aircraft.

The company made a major move to expand its aerospace operations with the purchase of Souriau-Sunbank Connection Technologies from the TransDigm Group. Souriau-Sunbank is supplier of highly engineered interconnect solutions for harsh environments, serving customers primarily in aerospace, defense, and space end markets. As such, it will fit in nicely with Eaton Aerospace's current offerings in that market space.

Just as that deal was being completed, the COVID-19 pandemic hit and ripped through the company's revenues. For first nine months of 2020, Eaton's sales fell to \$13.2 billion, down 18 percent from \$16.1 billion in the 2019 timeframe. Net income dropped to \$935 million, down almost 47 percent from the same period in 2019. Despite the plunge, the company felt that things were improving from the worst of the crisis earlier in the year.

Aerospace segment sales were down, driven by the continued downturn in commercial aviation, which was partially offset by growth in military sales. This trend will likely linger throughout 2021 as markets slowly begin to rebound now that a vaccine is being deployed globally.

### Prime Award Summary

Eaton did not rank in the Federal Procurement Data System – Next Generation ([www.fpds.gov](http://www.fpds.gov)) Top 100 Contractors Report. Information on the company's federal contracting can be sourced from the database of [www.USAspending.gov](http://www.USAspending.gov), the official U.S. government source for data on federal awards. Individual contract awards are listed in the U.S. Contract Awards section of this report (below).

### Program Activity

In terms of aerospace and defense, Eaton is primarily a subcontractor providing specialized components to prime manufacturers. For detailed information on or analysis of specific aerospace and defense programs or equipment, please refer to the applicable Forecast International service (for example, *Civil Aircraft*, *Military Vehicles*, *Warships*, *Missiles*, *Electronic Systems*, and *Aviation Gas Turbines*). The following are the company's business interests:

- Aircraft Components
- Defense Electronics
- Systems Integration
- Space Systems Components

Some long-term programs that have been announced by the company include the following:

**A350 XWB Trent Components.** In January 2009, Rolls-Royce selected Eaton to provide two services for the Trent XWB aircraft engine selected for the Airbus A350 program. Eaton will design, develop, and supply the main engine fuel pump and engine build-up subsystems for the next generation of Trent engines. The Trent XWB was selected to power the new

Airbus A350 XWB platform. Revenue from these applications could exceed \$750 million over the 40-year life of the program.

**Airbus A380 Components.** The A380 features the world's first 5,000-psi commercial-platform hydraulic and fluid distribution systems – all designed, developed, and supplied by Eaton. Eaton is also supplying the aircraft's main fuel system pumps and conveyance components, high-pressure permanent fittings, flexible hoses, air distribution equipment, Trent 900 jet-engine fluid monitoring chip detectors, and the Trent 900 Engine Build-Up (EBU) package.

**Airbus A400M Components.** In January 2006, Eaton was selected to design, develop, and supply a complement of hydraulic actuation control and fluid delivery components for the new A400M tactical transport. In addition, Eaton was selected to provide the aircraft's ground service panel and maintenance panel subsystems.

**Bell V-280 Components.** In May 2014, Bell Helicopter selected Eaton to provide the hydraulic system for the Bell V-280 tiltrotor aircraft. Eaton's



## Eaton Corporation

contributions will include system design and analysis, component modification and qualification, and flight-testing support. The new aircraft made its maiden flight in December 2017.

**Boeing 787 Components.** In November 2006, Boeing selected Eaton to provide quick-disconnect coupling products and hose products for the new 787 Dreamliner commercial aircraft. The potential value of the contract is estimated at more than \$88 million over the life of the program. Boeing selected the Eaton Aeroquip brand quick-disconnect coupling and hoses to support the new aircraft's integrated cooling system and power equipment cooling system. These systems provide efficient liquid-cooled thermal management across an array of electrical systems and instruments within the platform. After numerous delays, the Dreamliner finally made its first flight in December 2009.

**C919 Components.** In July 2012, Eaton signed a letter of intent with Commercial Aircraft Corporation of China Ltd (COMAC) to supply the cargo door actuation system for the COMAC C919 program. Eaton's cargo door actuation system will lift the fore and aft cargo doors on the C919 passenger jet. The value of the contract was not disclosed.

**Cessna Citation Fuel Systems.** In July 2008, Cessna selected Eaton as the fuel systems supplier for the new large-cabin intercontinental Model 850 Citation Columbus business jet. The value of the program to Eaton is estimated at \$100 million over 20 years.

**CH-47 Components.** In November 2008, Eaton received new business from Boeing in support of a U.S. Army multiyear contract awarded to Boeing for 191 CH-47 advanced multimission helicopters. Specifically, Eaton will supply the hydraulic system engine pump, motor pump, and control box and hydraulic control valves; fluid conveyance system hoses, tubes, and fittings; and lubrication system components as well as the helicopter's engine health debris monitoring components. Terms were not disclosed.

**CH-53K Components.** In November 2007, Sikorsky selected Eaton to supply the integrated fuel system for Sikorsky's new military heavy-lift helicopter, the CH-53K. This is in addition to the contract for the helicopter's hydraulic power generation system and fluid conveyance package awarded to Eaton in July. During the development phase of the program, which ran through 2014, Eaton provided the integrated fuel system support hardware for five helicopter shipsets in addition to a number of system development test sets. Based on the expected production of more than 156 helicopters for the U.S. Marine Corps, the contract value is

approximately \$96 million and, when combined with anticipated Foreign Military Sales, is expected to exceed \$160 million over the approximate 12-year life of the program.

**Embraer E-Jets Components.** In October 2013, Eaton Aerospace was selected to supply hydraulic components for the newly launched E-Jets E2 commercial aircraft family. Embraer's second generation of E-Jets comprises three new airplanes: the E190-E2, the E195-E2, and the E175-E2. Eaton will provide pumps and power transfer units for all three aircraft. The contract amount is estimated at \$400 million for the life of the program.

**Embraer Legacy Components.** In October 2008, Eaton was selected by Embraer to supply four systems on the Legacy 450 midlight and Legacy 500 midsize business jets. The packages include the nosewheel steering system, landing gear control and indication system, landing gear extension and retraction system, and hydraulic system control module. The total package represents \$100 million in revenue over the life of the program.

**Embraer VLJ Components.** In October 2005, Embraer selected Eaton to provide five key packages for its Very Light Jet program. Eaton designed, developed, and manufactured the aircraft's hydraulic power generation package; the aircraft's flap system and landing gear control hydraulic components; and miscellaneous cockpit controls, including the throttle, landing gear, and flap selector. The revenues from these aerospace contracts are estimated at \$70 million over the life of the program. Eaton is also pursuing additional packages on Embraer's Very Light Jet program and the new Light Jet development program. The Embraer VLJ entered service in December 2008.

**F-35 Joint Strike Fighter Systems.** In November 2004, Eaton's aerospace business in Jackson, Michigan, began work with Lockheed Martin to increase Eaton's role on the F-35 Joint Strike Fighter by expanding its scope of work on the wing fluid delivery system. Eaton is currently contracted to supply the delivery system through an existing contract with Lockheed Martin. Eaton presented the first tube assembly during a program milestone recognition event at the facility.

The expanded wing fluid delivery work and increased technical assistance will increase Eaton's potential revenue on the F-35 by \$1 billion, based on production of 2,600 aircraft over the life of the program (estimated to be through 2027). The \$1 billion increase brings the overall revenue for Eaton to almost \$3 billion, including the hydraulic power generation system, general actuation, and wing fluid delivery system work.

## Eaton Corporation

In February 2003, Goodrich selected Eaton's aerospace business to provide the hydraulic nose landing gear steering motor assembly on the JSF. The potential value of this contract is \$87 million over the life of the program. Eaton's Sterer Fluid Controls facility, located in Los Angeles, would provide the assembly for all variants of the F-35.

**Irkut MC-21 Hydraulics.** In August 2009, Eaton was selected to supply the hydraulic system for the new MC-21 single-aisle aircraft line to be produced by Irkut Corporation. Eaton will engage a number of Russian suppliers in the design and manufacture of system subcomponents. According to the company, this cooperation will provide learning opportunities both for Russian companies working within the Western supply chain for the first time and for Eaton, working with Russian aerospace suppliers.

**KC-390 Components.** In July 2012, Embraer selected Eaton to supply hydraulic components for the KC-390 next-generation military transport aircraft in a life-of-program contract valued at \$41 million. Eaton will supply engine-driven pumps, AC motor pumps, and transfer units to power the airplane's hydraulic systems. The components will be manufactured by Eaton's Power and Motion Control division in Jackson, Mississippi. This is the third contract awarded to Eaton for support of the KC-390 platform. Under separate contract agreements, Eaton will supply the onboard inert gas generation system for the airplane; design, develop, and supply airframe fuel system components; and provide production units and aftermarket support throughout the life of the KC-390 program.

**KC-46 Tanker Components.** In June 2011, Eaton announced it would be a supplier for Boeing's KC-46 tanker program. Eaton completed a Memorandum of Agreement with Boeing to supply products over the life of the program. Eaton content will include hydraulic and fuel distribution subcomponents, cargo door

electro-mechanical actuation systems, hydraulic system components, electrical sensing and control devices, and cockpit controls.

**MA700 Components.** In January 2015, Eaton signed a letter of intent with the Aviation Industry Corporation of China (AVIC), Xi'an division, to supply fuel tank inerting and fuel distribution systems for the MA700 regional turboprop airliner. In addition to designing and manufacturing customized components, Eaton will provide engineering, development, and support certification services for both systems.

**MMA Components.** In June 2004, the U.S. Navy's award to Boeing of a \$3.89 billion contract for Boeing 737 Multimission Maritime Aircraft (MMA) included new business for Eaton. Under the terms of the contract, the Boeing-led team will produce seven test aircraft during the program's System Development and Demonstration (SDD) phase. Plans call for the purchase of up to 108 MMA aircraft by the Navy to replace its aging fleet of 223 P-3 aircraft. The total program acquisition value is estimated at \$20 billion. Eaton provides a number of components and subsystems on the Boeing 737-600/-700/-800/-900 platforms, including the stabilizer trim motor; bent axis flap motor; emergency standby electric motor pump; cockpit switches; hydraulic hoses, fittings and couplings; and CFM56-7 turbine-engine debris-monitoring products.

**PC-21 Components.** In December 2009, Pilatus Aircraft selected Eaton to supply components for a fleet of PC-21 turboprop aircraft destined for the UAE Air Force and Air Defense. Eaton, through the Conveyance Systems division of its Aerospace business, located in Gilching, Germany, is a supplier of bleed air ducts, tube fittings, V-band clamps, and all hose assemblies for the PC-21. The company's Hydraulic Systems division in Los Angeles is a supplier of the nose landing gear actuator and roll spoiler actuator.

**Eaton Corporation****U.S. Contract Awards**

Below is a listing of major contracts recently awarded to Eaton from the United States government (contracts as of press date). No contracts were awarded in 2017. Note that the Description section is excerpted directly from U.S. DoD listings. For full details on contracts and their associated modifications, visit <https://www.defense.gov/Newsroom/Contracts/>

Date	Award (USD millions)	Contract #	Description
9/23/16	?	FA8217-16-D-0003	A COMBINED \$75,000,000, MULTIPLE-AWARD IDIQ CONTRACT FOR POWER CONDITIONING CONTINUATION & INTERFACING EQUIPMENT. THIS ACQUISITION PROVIDES COMMERCIAL STATIC UNINTERRUPTIBLE POWER SYSTEMS TO BACK UP THE AIR FORCE'S SENSITIVE ELECTRONIC MISSION EQUIPMENT WORLDWIDE.
11/18/16	11.2	SPRDL1-17-D-0014	HYDRAULIC MOTORS.
3/28/18	37.9	SPRDL1-18-D-0070	AXIAL PISTON PUMPS.
3/2019	9.0	SPE7LX-19-D-0016	HOSES, ASSEMBLIES & OTHER RELATED PARTS.
10/2/19	69.4	SPE7MX-20-D-0003	HOSES, ASSEMBLIES & OTHER RELATED PARTS.
12/10/19	197.0	FA8217-16-D-0003	POWER CONVERTING & CONTINUATION INTERFACING EQUIPMENT.
4/30/20	39.1	SPE7MX-20-D-0071	HOSES, HOSE ASSEMBLIES, COUPLINGS & VALVE SPARE PARTS.
9/3/20	7.3	SPRRA2-20-D-0038	HYDRAULIC PUMP ASSEMBLIES.

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