

Driveline Business



Takumi Matsumoto
General Chief of Driveline Systems Business Unit

Through the energy-saving, improved travelling safety, and other benefits provided by our driveline parts, we will contribute to the creation of a safer and more secure society. We will also contribute to the enjoyment of driving through vehicle torque control.

Description of business

Providing driveline products for vehicles, torque control devices (TCDs), hydraulic systems and valve units for fuel cell vehicles (FCVs), etc., related to the basic vehicle function of "driving."

Value created in fiscal 2018

Development of a drive shaft providing outstanding high-efficiency and quietness

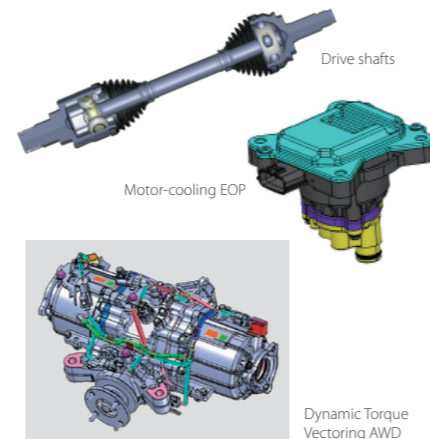
- Development of highly efficient and quiet drive shaft that contributes to fuel economy and quietness in anticipation of the era of autonomous driving and vehicle electrification.
- In the future, we will expand the size deployment of this drive shaft and support the realization of cars with better fuel efficiency.

Received an order for a new application product for the era of vehicle electrification

- Received an order for the first motor cooling electric oil pump (EOP) in Europe in anticipation of the era of vehicle electrification.
- Going forward, JTEKT will contribute to sustainable development of the automotive industry through the increase in EVs, specifically with the start of production in Europe, where demand for EVs is expected to increase.

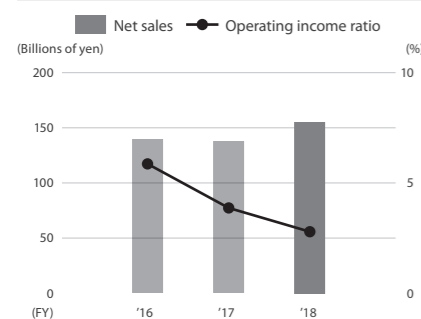
Sales launch of new-function vehicles equipped with JTEKT products

- Sales launch of RAV4 with Toyota Motor's "Dynamic Torque Vectoring AWD"¹ function equipped with ITCC².
- Going forward, we will continue to contribute to further improving the environmental and safety performance of vehicles by improving vehicle fuel efficiency, driving stability, and running performance through the provision of products with new technologies.

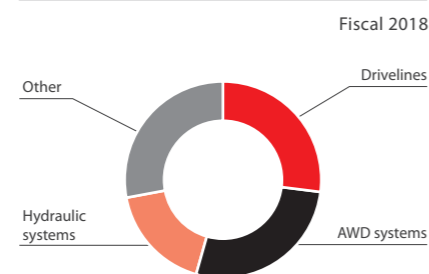


- Intelligent Torque Controlled Coupling: A mechanism that detects the difference between front and rear wheel rotation and achieves optimal front and rear wheel torque distribution by electronic control
- The rear wheel torque is controlled independently on the left and right sides, and during 2WD driving, the rotation of the rear wheel drive system is stopped and loss is greatly reduced.

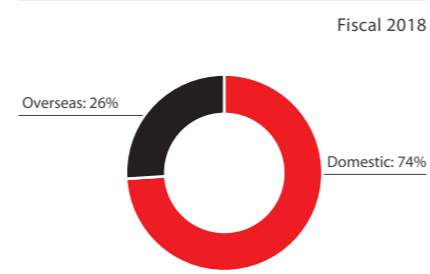
Net sales and operating income ratio



Ratio of sales by product

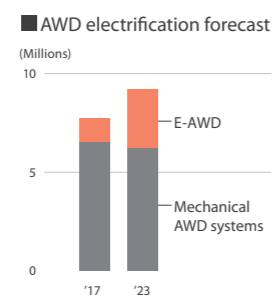


Sales ratio



Business environment analysis

- From individual units to system proposals, customers' needs are changing
- Customers' demands for E-AWD³ and other EV products have increased globally and are diversifying in each region



3. Electric-All Wheel Drive: A four-wheel drive system equipped with a motor drive device that does away with mechanical drive force transmission for the front and rear wheels

Strengths

Based on our core technology and development capabilities, extensive lineup, and customer base, JTEKT contributes to the realization of a society where everyone can move safely, securely, and comfortably.

Core technological and developmental capabilities

Core technological and developmental capabilities based on deep knowledge of tribology, torque management, and hydraulic control

Extensive lineup

Extensive lineup of drivelines, hydraulic systems, TCDs, and other products

Customer base

JTEKT's customer base is global in scale, including both developed and developing countries

Safe, secure, and comfortable society

Solutions for social issues (from the perspective of the SDGs)



- Contributing to the realization of a safer automotive industry by producing high-quality, innovative parts that enhance automobile turn and stop capabilities



- Contributing to the realization of cars with higher fuel efficiency through the provision of highly efficient drive parts



- Contributing to the sustainable development of the industry as a whole by providing products that meet the needs of EVs

Medium-term policies

With the aim of exponentially advancing our position as a driveline system supplier, we will accelerate strengthening of our system development capabilities and engage in product development for vehicle electrification.

Strengthen development of driveline systems

- Evolution from conventional modules to system suppliers not only to propose individual products to customers but also to propose driveline systems themselves.
- Work to further improve proposal capabilities to promptly propose systems to customers

Strengthen engineering sales capabilities

- Establish a system to anticipate market trends in each region, including CASE⁴, and conduct strategic global promotions based on market trends.
- Through this promotion system, we will strengthen our engineering sales capabilities so that we can carry out proposal activities that exceed customer expectations.

Strengthen global foundation

- The demand for automobiles is rising mainly in developing countries, and the global development and production system will be strengthened to meet the demand in each country.
- Establish a system to provide products that meet the needs of customers in each region in an optimal system

4. Acronym that stands for Connected, Autonomous, Shared, and Electric



Winter test



Torsen Type B

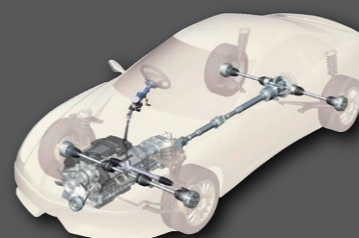


JTEKT Automotive South Carolina

Focus

Product lineups compatible with EV, HV, ICE⁵, and all other vehicles

Up to now, we have deepened and enhanced our drive shaft and hydraulic system product lineups and strengthened our development capability for various vehicles. As a result, our ability to propose functions and systems required by customers has been improved. Going forward, we will continue to develop high-performance products, expand driveline products that offer outstanding rigidity and quietness, hydraulic systems with smaller and lighter products in line with vehicle specifications, and AWD with electrification-compatible products in an effort to strengthen Only One proposals that leverage our strengths.



5. Internal combustion engine: Machine that generates power through the internal combustion of fuel

Global Topics

Strengthening global response capabilities, from development to production

In tandem with the development of production systems in North America and the ASEAN region, which are our overseas market targets, we will promote human resources development to accelerate application and software development. At the present, we are enhancing development personnel in Japan, and in order to retain human resources in each region overseas we will strengthen human resources development and retention to meet the needs of the coming era, including enhancements to technical center functions and alliances with other companies.

