Powertrain Control



Results for Fiscal 2015 and Growth Strategies

	FY2015	FY2014	Change YoY
Revenue (Billions of yen)	1,529.0	1,433.4	6.7%

In fiscal 2015, the year ended March 31, 2015, revenue increased on the back of higher automobile production volumes mainly in North America, China, and Europe as well as the weak yen.

Going forward, as a system supplier in the environment field, we will develop, propose, and promote the widespread use of products that trigger new trends while contributing to society.

In the internal combustion engine (ICE) field, we are helping to improve the fuel efficiency and performance of engines while expanding sales by enhancing the attributes of gasoline direct injection as well as diesel common rail systems. In the field of electric motors, we will also be contributing to improved fuel efficiency and performance as well as an upswing in sales by enhancing the capabilities of such essential hybrid components as motor generators and inverters and by reducing the size and costs of these products. We will leverage our core technologies and experience in the fields of starters, alternators, engine cooling systems, and semiconductors to develop new products including battery packs that make full use of our proprietary technologies. In the aftermarket business for products with our proprietary technologies at their core.

Fiscal 2015 Topics

New Products and Technologies

Developed a new fuel injection (FI) system for small-motor motorcycles called DIET-FI*. DIET-FI is a world first FI system to do away with the use of throttle position and engine temperature sensors. Instead, it uses newly developed control technologies that ensure the same fuel economy and environmental performance as conventional FI systems, thus helping to cut costs. DIET-FI is currently manufactured by Gongcheng DENSO (Chongqing) Co., Ltd., a Group company that manufactures motorcycle components, and supplied to Wuyang-Honda Motors (Guangzhou) Co., Ltd.

* DIET-FI (DENSO Intelligent Economical Technology-Fuel Injection)

Developed a new common rail system that ensures high fuel efficiency for diesel vehicles. The system incorporates spray nozzles that deliver the world's highest level widespread distribution of atomized particles as well as injectors that improve the degree of FI freedom. The system has been adopted in Mazda Motor Corporation's SKYACTIV technology and is being delivered for use in the new Mazda 2 (DEMIO) model.

Business Expansion and New Companies

Decided to expand the plant in Apodaca, Mexico, owned and operated by DENSO MEXICO S.A. DE C.V. (DNMX), in response to the growth in automobile production in North America. Following construction of a new production line for transmission components, plans are in place to commence production from December 2015.

Group company HAMANAKODENSO Co., Ltd. established a new company, HAMADEN MEXICO S.A. DE C.V. (HDMX), to produce engine-related components for use in automobiles in response to the growth in automobile production in North America. Construction of a new facility began in January 2015, with completion scheduled for August 2015. Plans are also in place to start up production of solenoids and other components that help to control engines and airflows in stages from August 2016 for delivery to customers in North and South America.

Decided to expand operations at DENSO Manufacturing Athens Tennessee, INC., a production base located in Tennessee, United States. This is in response to the increase in production of gasoline direct injection products triggered by an upswing in demand on the back of growing interest in fuel efficiency and concerns surrounding exhaust gas regulations. Production is scheduled to start in July 2016.

Decided to construct a new plant in response to the increase in vehicle production in the ASEAN region. The new plant will be located in the Phnom Penh Special Economic Zone in Cambodia where DENSO Cambodia Co., Ltd. operates its existing plant. The new facility is scheduled to begin production of magnetos and oil coolers from July 2016.

Main Products

Engine Control Components

Ignition coils, Magnetos	Ceramic substrates
Spark plugs	Diesel particulate filters (DPFs)
Glow plugs	Engine ECUs for motorcycles
Exhaust gas sensors	Exhaust gas temperature sensors

System Control Components

Intake and exhaust products: Exhaust gas recirculation (EGR) valves, Throttle bodies, Integrated air fuel modules, etc. Variable valve products: Variable cam timing (VCT) components, Oil flow control valve (OCV) Drive control products: Integrated mechatronic modules, AT solenoid valves, Valve bodies, Shift-by-wire actuators Evaporator products: Purge valves, Evaporative leak check pump modules Sensors: Knock sensors, Air flow meters, Accelerator pedal modules (APMs) Filters: Oil filters, Air cleaners

Diesel Injection Products

Common rail systems In-line fuel injection pumps, Rotary fuel injection pumps Nozzles Fuel filters



Common rail systems

Gasoline Injection Products

Fuel pumps Fuel pump modules Fuel injectors Direct injection components (Injector, Pump)



Fuel pump module

O Engine Electrical Systems

Starters Alternators MG stators ISG Lithium-ion battery packs



Alternator

Electric Hybrid Vehicle (EHV) Components

Inverters

DC-DC converters

Battery monitoring units



Inverter