

General Machinery & Special Vehicles

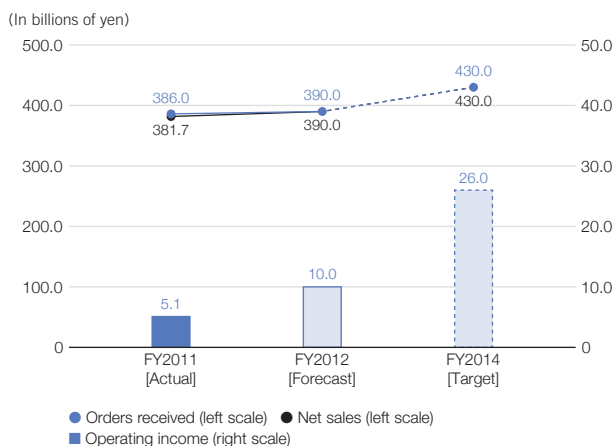


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Basic Strategy

- Achieve a streamlined structure
- Upgrade the service business
- Build up global business (development, production, sales, procurement)

FY2014 targets



Fiscal 2011 Review

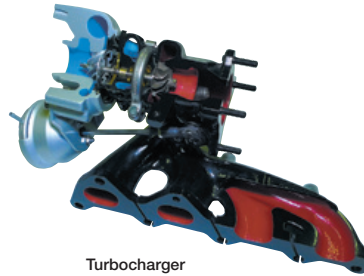
Orders for forklifts were brisk for the year. Demand was centered on Asia, where economic growth continues, and North America, where market recovery is gaining momentum. MHI also reported growth in orders for medium- and small-sized engines to Asia, including Japan, with the latter driven by demand from reconstruction following the Great East Japan Earthquake. Orders for turbochargers were also higher atop demand primarily from Europe and North America. As a result, the total value of consolidated orders and consolidated net sales for General Machinery & Special Vehicles both increased, to ¥386.0 billion and ¥381.7 billion, respectively. The segment posted operating income of ¥3.5 billion for a substantial year-on-year improvement. In addition to higher sales, earnings rose as MHI stepped up activities to boost profitability that included streamlining the machinery ranges it produces. Capital investments in this segment amounted to ¥10.3 billion, used mainly to upgrade and expand turbocharger production equipment. In terms of research and development, the segment recorded ¥15.0 billion in research and development expenses. R&D focused mainly on efforts to respond to market polarization and diversification of demand. Specific issues included ensuring compliance with environmental regulations, low

Relationship Between General Machinery & Special Vehicles and Business Domains

Business domain	Customers/ Markets	Segment					
		Shipbuilding & Ocean Development	Power Systems	Machinery & Steel Infrastructure Systems	Aerospace Systems	General Machinery & Special Vehicles	Others (Air-Conditioning/ Machine Tool)
Energy & Environment	<ul style="list-style-type: none"> • Power companies • Gas companies • Resource companies (oil, chemicals, steel) 		<ul style="list-style-type: none"> • GTCC • Large-sized thermal power plants • Nuclear energy 	<ul style="list-style-type: none"> • Environmental plants • Chemical plants 			
Machinery, Equipment & Systems	<ul style="list-style-type: none"> • Core industries (steel, etc.) • Automotive industry • Logistics, etc. 		<ul style="list-style-type: none"> • Stationary engines 	<ul style="list-style-type: none"> • Compressors • Iron and steel machinery • Crane and material handling systems 		<ul style="list-style-type: none"> • Turbochargers • Forklift trucks • Engines 	<ul style="list-style-type: none"> • Air-conditioning equipment • Machine tools
Transportation	<ul style="list-style-type: none"> • Airlines (air) • Shipping companies (sea) • Railways (land), etc. 	<ul style="list-style-type: none"> • Commercial ships 		<ul style="list-style-type: none"> • Transportation systems 	<ul style="list-style-type: none"> • Commercial aircraft 		
Defense & Aerospace	<ul style="list-style-type: none"> • Ministry of Defense (land, sea, air) • JAXA 	<ul style="list-style-type: none"> • Destroyers and submarines for the Ministry of Defense 			<ul style="list-style-type: none"> • Defense aircraft • Missiles • Space systems 	<ul style="list-style-type: none"> • Special vehicles 	



1,500kW Gas Engine Generation System in Container
"MEGANINJA"



Turbocharger



Forklift Trucks "GRENDIA" (1 to 3.5A ton)

fuel consumption, and achieving lighter weight and a more compact form for turbochargers, engines, industrial vehicles, special vehicles, and other products that contribute to social infrastructure and the fields of energy and the environment.

Future Initiatives

MHI positioned fiscal 2011 and 2012 as two years for streamlining and building foundations in General Machinery & Special Vehicles. Action taken in fiscal 2011 to enhance productivity and reduce costs, most notably by encouraging overseas procurement, combined with a more robust, streamlined structure have succeeded in making the segment profitable for the first time in four years. Fiscal 2013 and 2014 have been named as the two years for massive profit growth. To this end, MHI is pursuing three directives to solidify foundations in General Machinery & Special Vehicles in fiscal 2012—achieve a streamlined structure, upgrade the service business, and build up global business (development, production, sales and procurement).

In turbochargers, MHI will leverage simulation technology to develop highly reliable, high-efficiency turbochargers with two goals in mind—building framework for sales volume of 1 million units in fiscal 2016, and achieving a 30% market share. Europe is the biggest market for these products. MHI will assign design staff to MHI Equipment Europe B.V., its regional base there, and establish a customer-based model. Beyond delivering stronger customer support from the development

stages, this model will enhance both production and services offered. With respect to production, MHI will develop a global production framework that fully utilizes its overseas bases, a step that should mitigate foreign exchange rate risk and make production more efficient.

In engines, MHI will promote broader sales of its container-type gas engine generator (MEGANINJA) newly developed this year, and will also develop a high-efficiency gas engine generator. These steps reflect a push by MHI to respond to changes in energy demand, as well as working toward the goal of shifting from the sale of stand-alone units to power generation systems. Similarly, MHI will aggressively capture demand from China's distributed generation system policy by establishing a joint venture with Shanghai Diesel Engine Co., Ltd. to carry out local production of medium and large engines. MHI is also proposing to relocate production to India and other regions close to customers.

In forklifts, MHI will further promote the shift to electrification, and will look to strengthen its global collaborative business framework and service business. In line with this, MHI will build a more streamlined structure by reducing global production from six to four sites after reviewing its production framework. To strengthen its hand in electric forklifts, MHI is promoting the development of its own high-capacity, lithium-ion battery, and will build a more resilient service business by rolling out globally the service business model of North America-based Group company Rapidparts, Inc.