

The DAIHATSU logo is presented in a white rectangular box with rounded corners, set against a dark blue background. The text 'DAIHATSU' is in a bold, white, sans-serif font. The background of the entire slide features a bright blue sunburst or light flare effect in the upper center, with rays extending outwards, creating a sense of energy and focus.

DAIHATSU

DAIHATSU DIESEL MFG. CO., LTD.

Fiscal Year Ended March 31, 2018

Financial Results Briefing

May 2018

Sales Breakdown/Market Share

Sales Breakdown

Business

Internal combustion engines

96%

Other

4%

Section

Marine-use

approx. 80%

Land-use

approx. 20%

Application

Auxiliary power generators

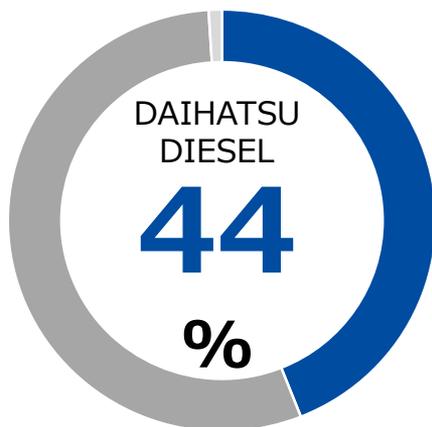
approx. 80%

Main propulsion systems

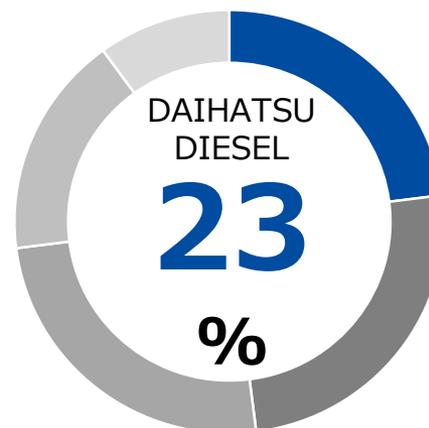
approx. 20%

Market Share (Auxiliary Engines for Large Ocean-going Vessels)

〈Share in Japan〉

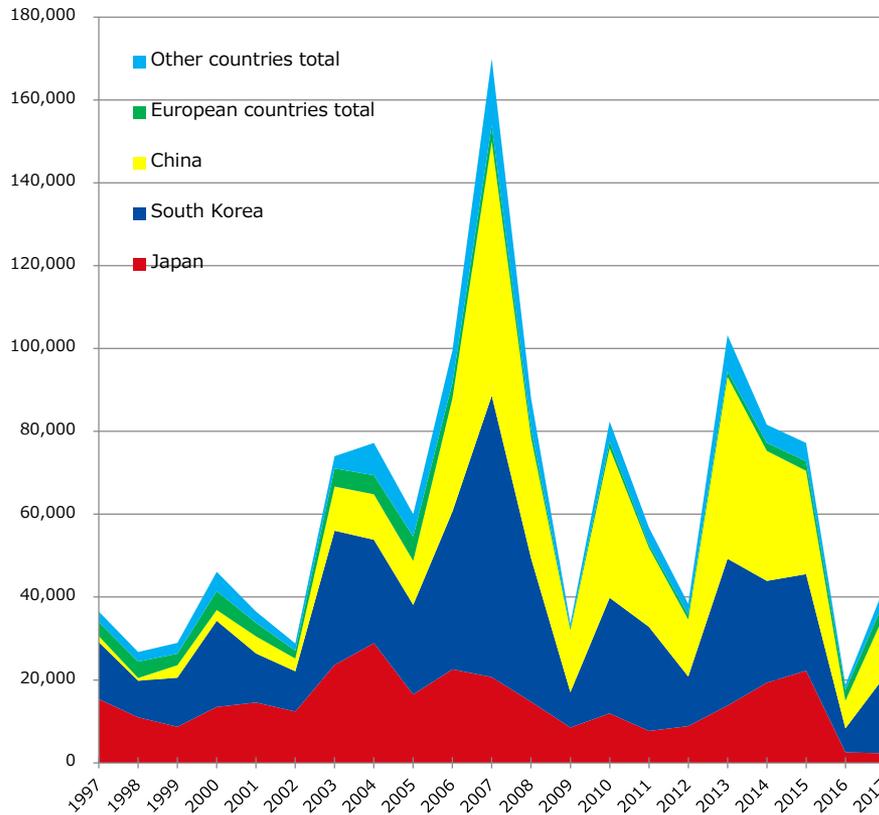


〈Overseas market share〉

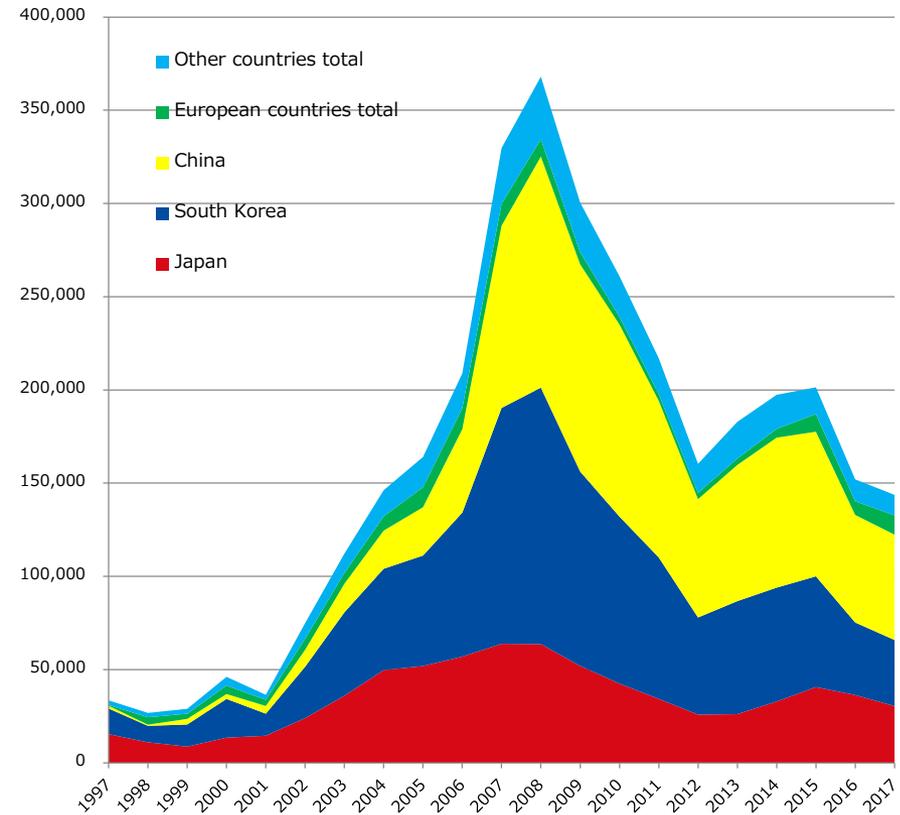


Market Trends for Newbuild Vessels

Volume of orders received, by country



Volume of work in hand, by country

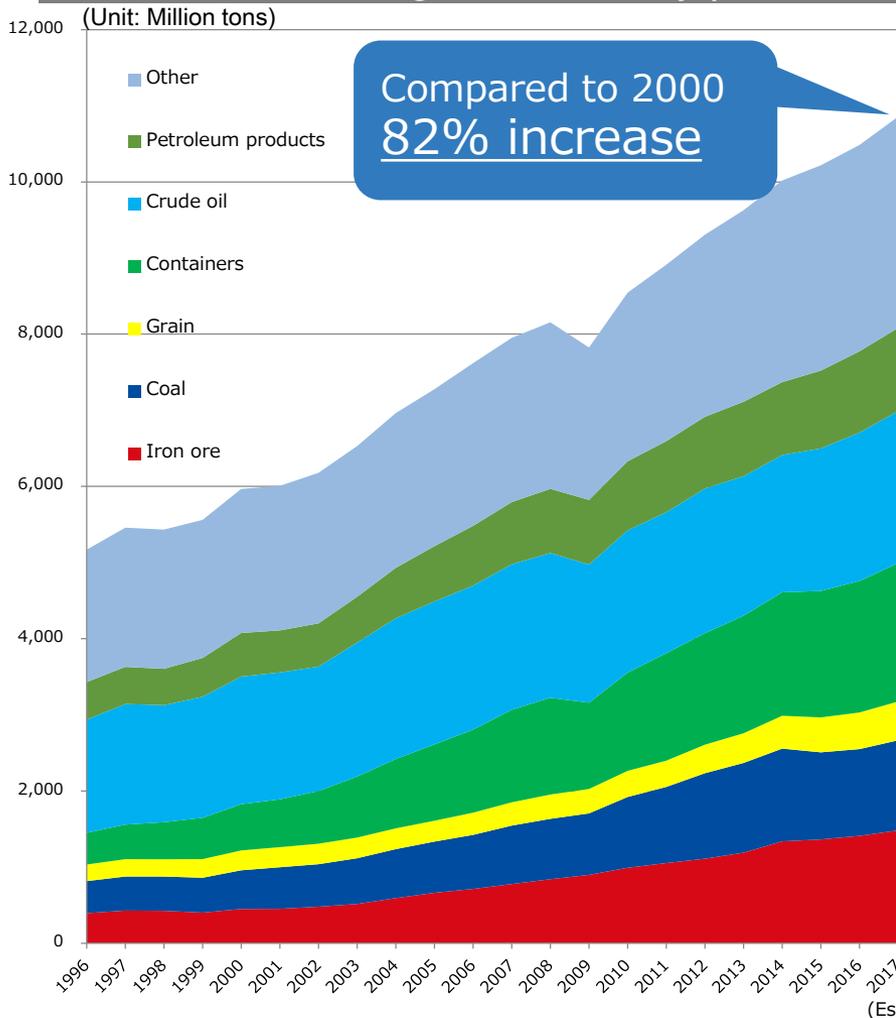


Source: The Shipbuilders' Association of Japan

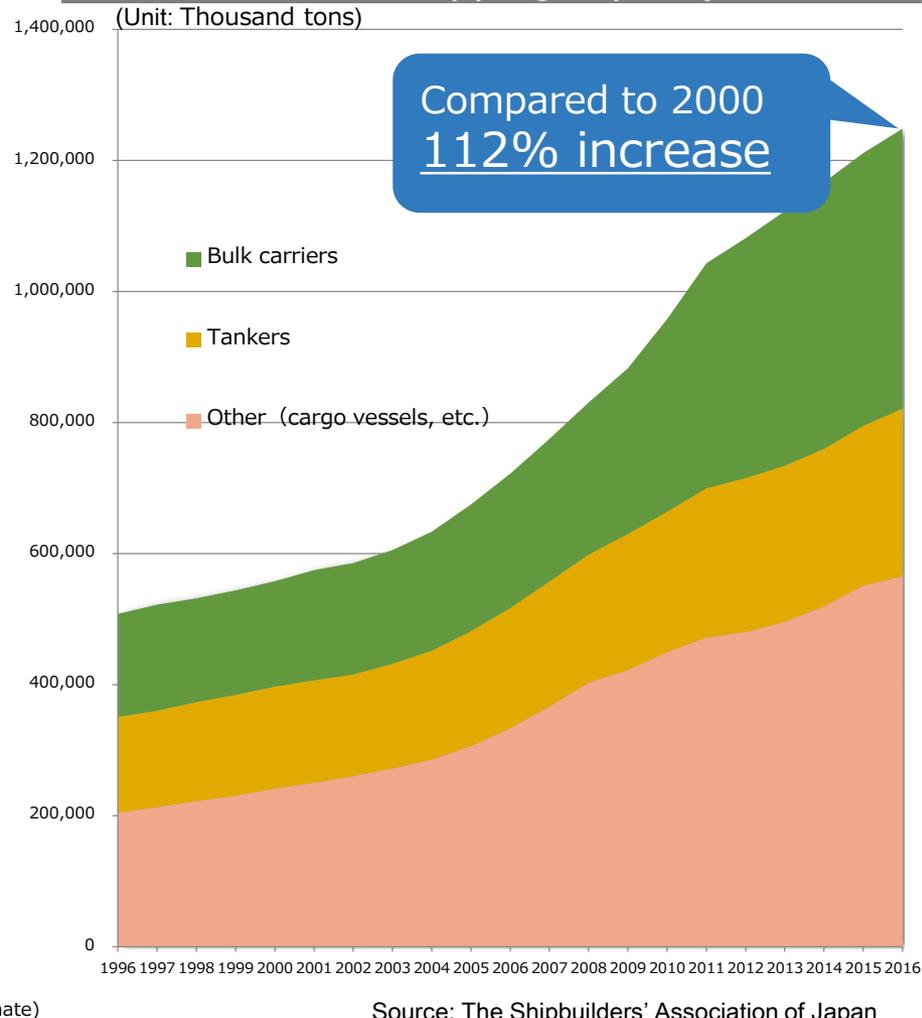
- Orders received showed an uneven increase overall, with a spike in 2006 to 2007 just before the 2008 financial crisis. The marine cargo market is now on a recovery trend despite the downturn in the marine cargo market in 2016
- Volume of work in hand showed recovery following a major slump after the 2008 financial crisis, but is decreasing at present

Market Trend for Marine Cargo

Global ocean cargo volumes, by product



Global shipping capacity



Increasing trend in shipping capacity in line with increase in ocean cargo volume
→ stable increase in maintenance demand expected

Stable capture of earnings over life-cycle (30 years)

POINT

- ▶ Post-voyage maintenance services are key.
- ▶ Cumulative total of engine units (number of ships carrying our engines) is decisive.

Sales by Horsepower(10,000 hp)



*Does not include technological partners in China

Strengthening Business in the After-sales-service Market/Overseas Strategy (Licensing)

10 years ago Sales approx. ¥15.0 billion

Holding the line

- Business focus was selling engines to builders of new vessels.
- Sales for the after-sales-service did not really exist.

Major
increase

Now Sales approx. ¥26.0 billion

Shifting to the offensive

- Creation of sales teams specializing in parts
- Launch of strategic sales targeting ship-owners and ship-managers in the after-sales-service market

Issues
for the
future

Genuine parts usage ratio is approx. 50%.
Scope exists for increasing this rate.

- ▶ Gradually expand sales to mid-sized ship-owners as well.

Licensing (in China)

- Contract partner since 1982
- Granting of rights for Manufacture and marketing of certain classes of internal combustion engine
- Expand market share of DAIHATSU brand

Anqing CSSC Diesel Engine Co., Ltd.

Anqing Diesel

Anhui Province, China
(Yangtze River Basin, 600 km from Shanghai)

SHAANXI DIESEL ENGINE HEAVY INDUSTRY CO., LTD.

Shaanxi Diesel

Shaanxi Province, China
(50 km from Xi'an)

Recent Major Initiatives in Line with Mid-term Management Plan



DAIHATSU DIESEL MFG. CO., LTD.

Business Environment

Tighter environmental regulations: Exhaust gas regulations (NOx, SOx, CO2, etc.), and diversification of fuels

Strategy ▶ SCR and dual fuel engines

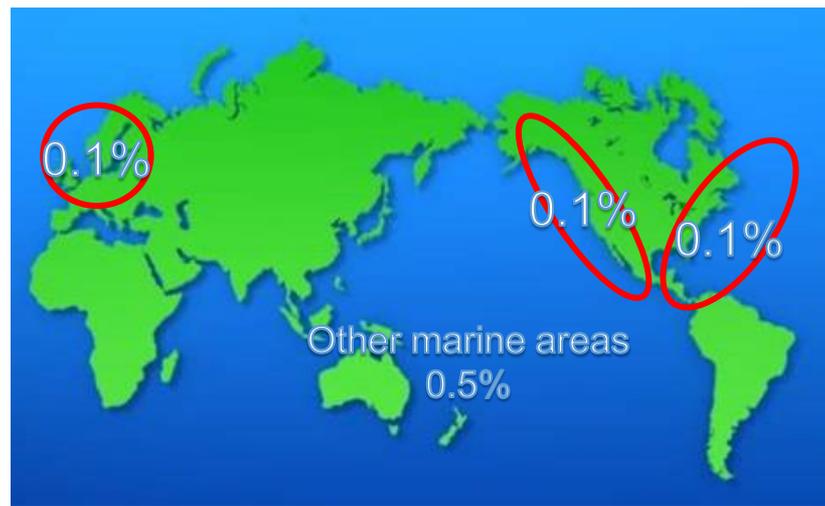
2016	2017	2018	2019	2020	2021	2022	2023
NOx Tier III regulations: North America /Caribbean Sea				Emissions standard: (80)%			
NOx Tier III regulations: North Sea /Baltic Sea				Emissions standard: (80)%			
CO2: Europe				Operating data reporting system			
CO2: IMO				Operating data reporting system			
CO2: EEDI regulations				Fuel economy standard: (20)%			
SOx: Baltic Sea /North Sea /offshore USA and Canada /Caribbean Sea				Sulfur in fuel oil 0.1%			
SOx: Other marine areas currently 3.5% ->				Sulfur in fuel oil 0.5%			

Examples of exhaust gas regulations for vessels

- NOx: Nitrogen oxide
- SOx: Sulfur oxide

SOx regulations* (2020-)

- The Baltic Sea, the North Sea, 200 nautical miles offshore USA and Canada, and USA Caribbean Sea area: 0.1%
- Other marine areas: 0.5%



SOx regulations* (-2010)

- The Baltic Sea and the North Sea: 1.5%
- Other marine areas: 4.5%



* Regulations on sulfur concentration in fuel oil under MARPOL Annex VI

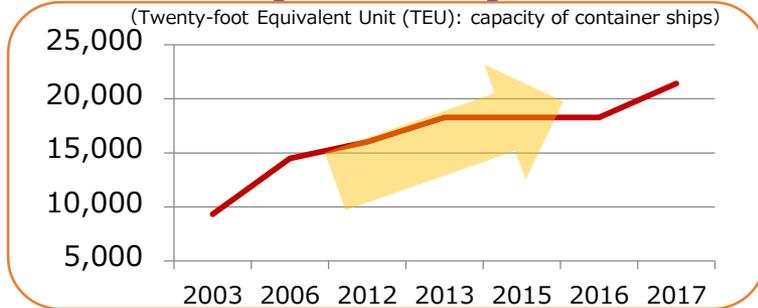
Business Environment

Larger engines: Aggressive capital investment by domestic shipyards, energy conservation

Strategy ▶ **Expand our product lineup**
DE-33, DEL-23, dual fuel engines

Strategy ▶ **New Himeji Factory**

Maximum loading
quantity of container
vessels



Utilization of IoT: Supporting autonomous ship operation and seafarer shortage

Strategy ▶ **Maintenance support service for marine-use auxiliary engines (C-MAX)**

(Number of seafarers in Japan)

	1980	1990	2004	2010
Foreign-going	38,425	10,084	3,008	2,256
Domestic	63,208	56,100	30,708	28,060



Update on Recent Major Progress (1) (New Himeji Factory)

New Himeji Factory (Operation will start in Fall 2018)

Environmentally-conscious, innovative, and efficient large-scale engine manufacturing plant for future generations



- **Located on the coast**
Improved efficiency of manufacturing and shipping operations
*Finished products will be shipped from the adjacent public berth
- **Introduce advanced production facility and system**
In-house logistics and visual aids such as andon (electric light board) and abnormality display device, etc.
- **Toyota's production systems**
Introduce lead-time shortening methods
- **Spread benefits of innovation at Moriyama Factory across all operations**



Transport using wheelift



Efficient assembly lines

出荷	試運転	直結
3 2 1	6 5 4 3 2 1	4 3 2 1
3 2 1		8 7
速報	配管	正常
組立ライン		
80	B1 B2 B3 B4 B5	計画停止
		異常

Andon (electric light board)

* Status of production lines are indicated

2月14日 火 10:05					
	組立	直結	配管	試運転	出荷
本日予定	1	2	2	1	1
本日実績	0	1	1	0	0
累計予定	15	13	12	14	13
累計実績	14	12	11	13	12
残業予定	30	60	30	30	0
残業実績	60	30	30	30	0

Production information monitor

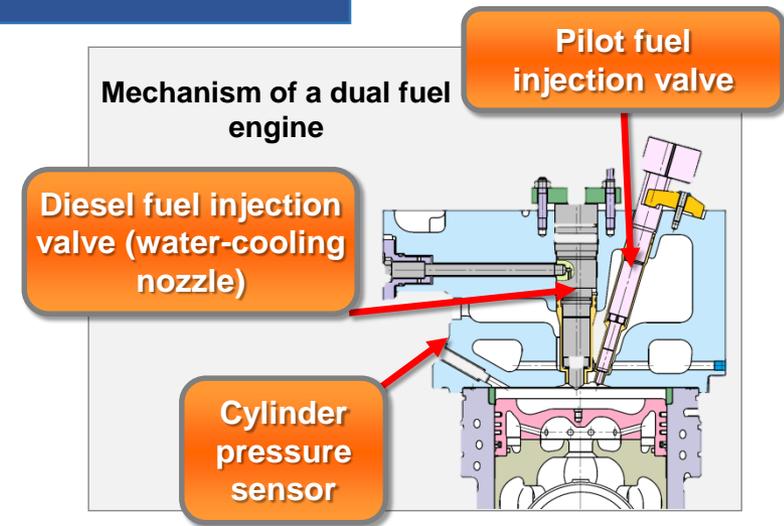
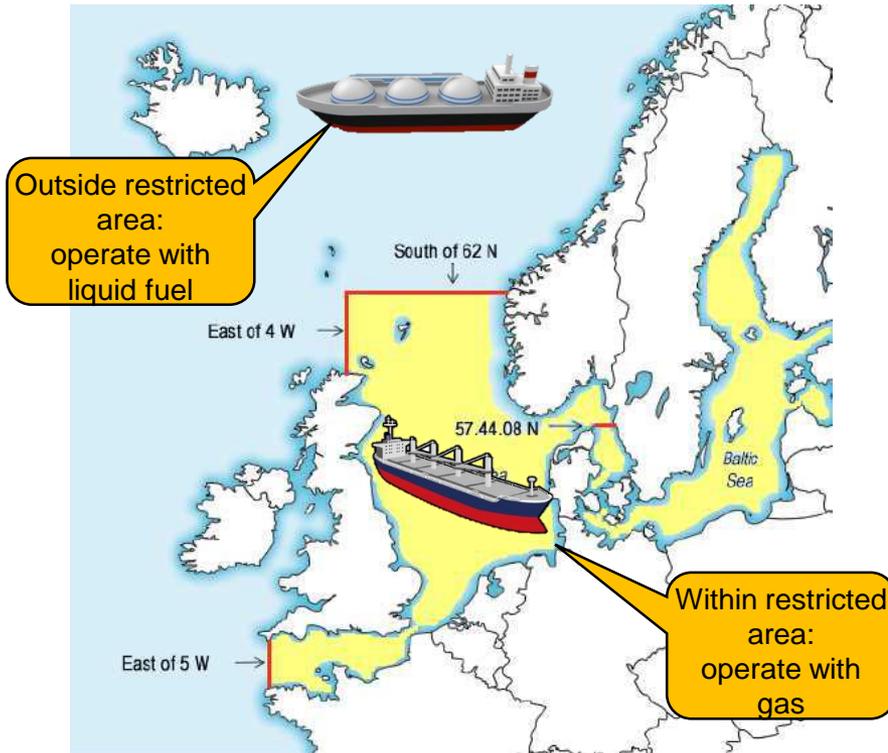
* Status of production (plan vs. result)

Dual fuel engines (marine-use)

- Acquired certification in 2014 for compliance with NOx Tier III regulations

Develop sales promotion of environmentally-conscious dual fuel engines that enable optimum selection of fuels according to the operating status of vessels

(Use examples)



Dual fuel engine (land-use)

- **Delivered emergency power generator to a local government disaster response headquarters (The objective is to secure a BCP (business continuity plan) power source for disaster response)**
Dual fuel gas turbine that uses both liquid fuel and city gas as fuel
- **Shipped the first dual fuel engine to Tsukuba Space Center of The Japan Aerospace Exploration Agency (JAXA) on February 2, 2018**



Gas turbine power generation facility for
Crisis Management and Disaster Prevention Center



First dual fuel engine for JAXA
(continuous/emergency power generation)

Update on Recent Major Progress (3) (Environment-related Products)

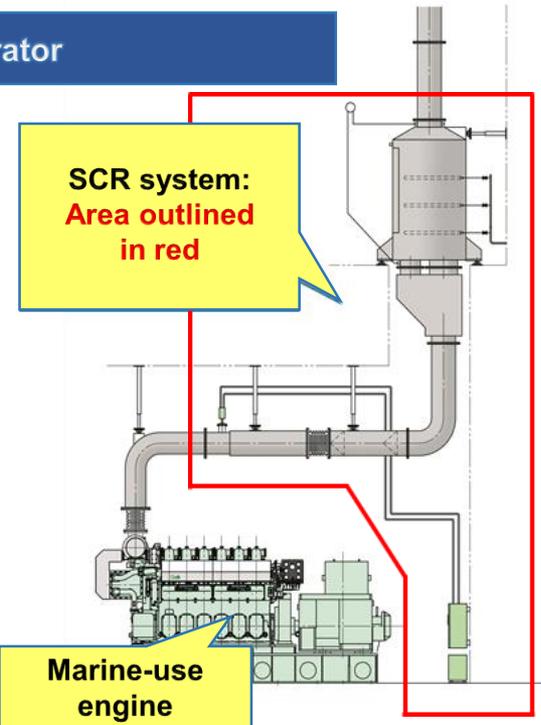
SCR (selective catalytic reduction system) + Aqueous urea solution generator

- **Detoxification of NOx (nitrogen oxides) in exhaust gas emissions and compliance with IMO (International Maritime Organization) Tier III standards**

Tier III standards require an 80% reduction in the emission rate of NOx in exhaust gas emissions compared with Tier I standards

- **First shipment in October 2017**
- **Orders already received for over 70 units**
- **Developed a space-saving-designed aqueous urea solution generator in-house**

It can generate a highly pure urea solution that serves as an SCR reductant



Aqueous urea solution generator



Onboard trial on Hanoi Bridge of Kawasaki Kisen Kaisha, Ltd.

Update on Recent Major Progress (4) (Peripheral Business Domains)

Maintenance support service for marine-use auxiliary engines

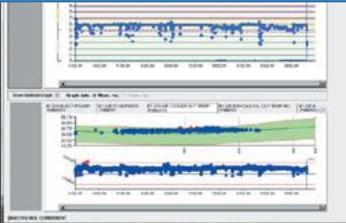
- **Next-generation engine condition monitoring system for ship-to-land communication via communication satellite**
(C-MAX LC-A: Built through collaboration between multiple marine-use device manufacturers)
- **Initiatives to support autonomous ship operation**
- **First order received in July 2017**



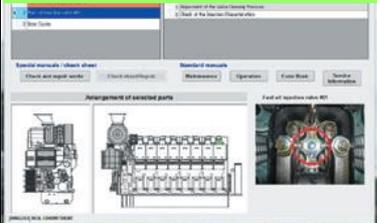
Acquire engine condition monitoring data from sensors mounted on engines

Automatic diagnosis and troubleshooting
(Facilitates timely maintenance and contributes to the prevention of malfunctions)

Automatic diagnosis



Troubleshooting



Engine management solutions completed inboard
(Supports safer operation and helps to reduce life cycle costs)

Fiscal Year Ended March 31, 2018 Summary of Earnings

DAIHATSU

DAIHATSU DIESEL MFG. CO., LTD.

Summary

(Unit: Million yen)

	March 2016 Results	March 2017 Results	March 2018 Results	YoY difference	
				Increase/ decrease	(%)
Net sales	57,019	58,934	60,166	1,232	2.1%
Operating income	5,493	3,498	3,044	(453)	(13.0)%
Ordinary income	5,438	3,441	3,104	(337)	(9.8)%
Net income	3,596	2,319	2,095	(223)	(9.6)%
Basic earnings per share	112.98	72.87	65.83	(7.04)	(9.6)%
Total assets	75,060	78,981	80,969	1,987	2.5%
Equity ratio	45.6%	46.1%	47.0%	0.9%	—

POINT

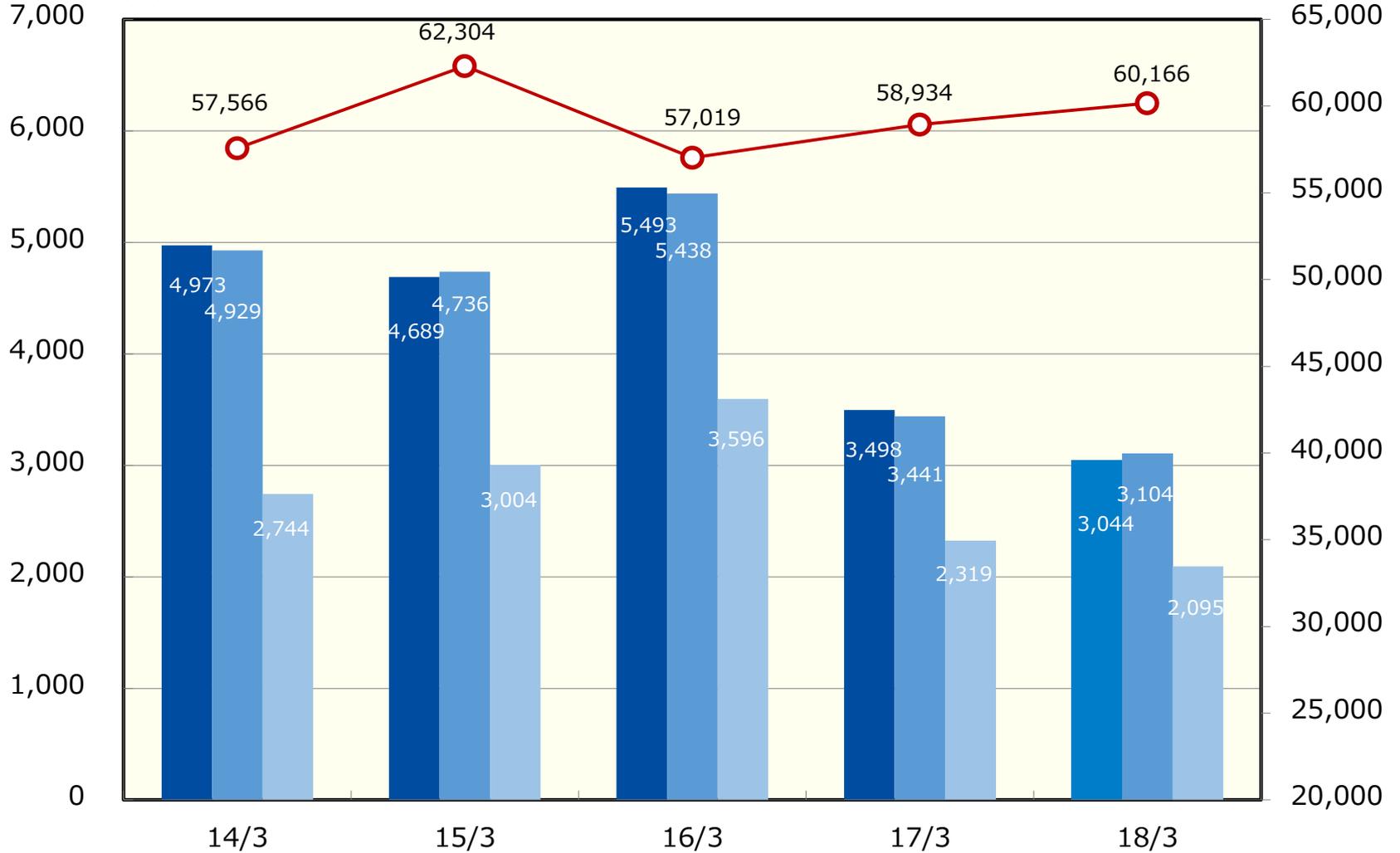
- Sales expanded due to increased ship size and land-use projects
- Profitability picture became increasingly severe for sales of diesel engine units

Trend of Sales and Earnings

Operating income Ordinary income Net income Net sales

(Unit: Million yen)

(Unit: Million yen)

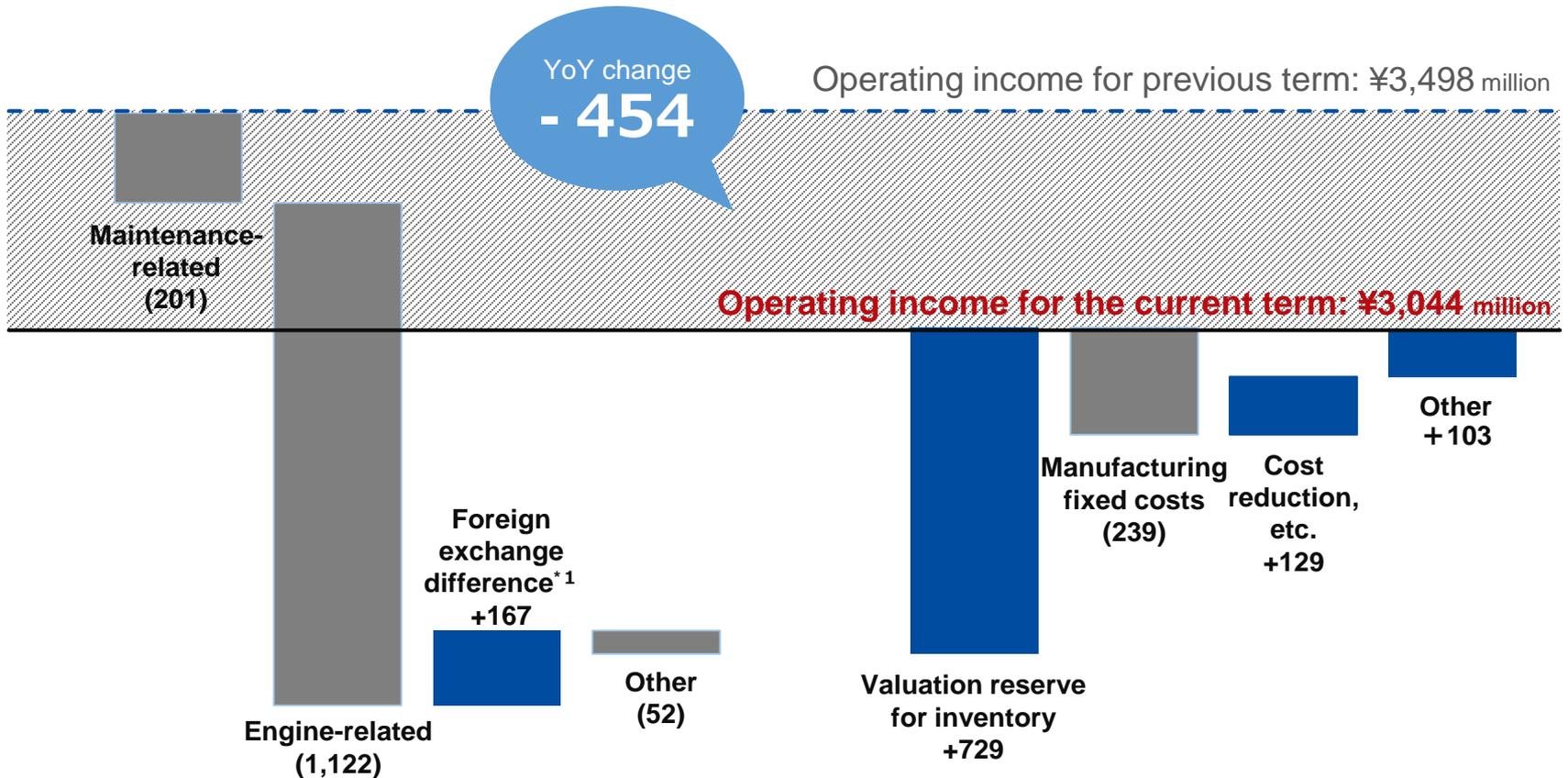


Analysis of Increase/Decrease in Earnings

Sales

Expenses

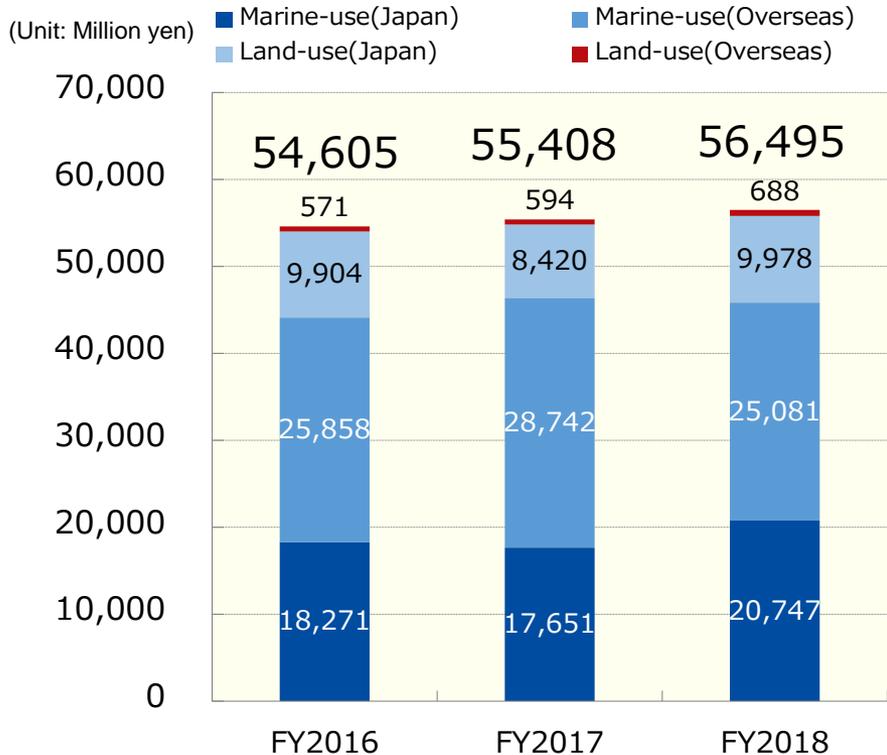
(Unit: Million yen)



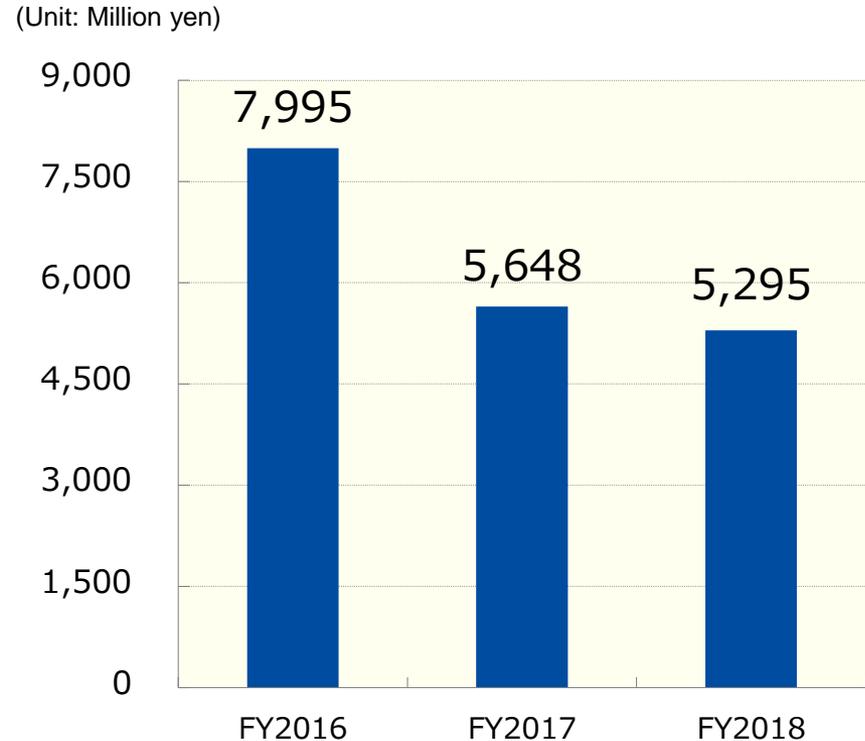
*1 Exchange rate: ¥108.35 for the previous term; ¥110.53 for the current term

Net Sales and Earnings for the Internal Combustion Engine Section

Net sales



Internal combustion engine section earnings

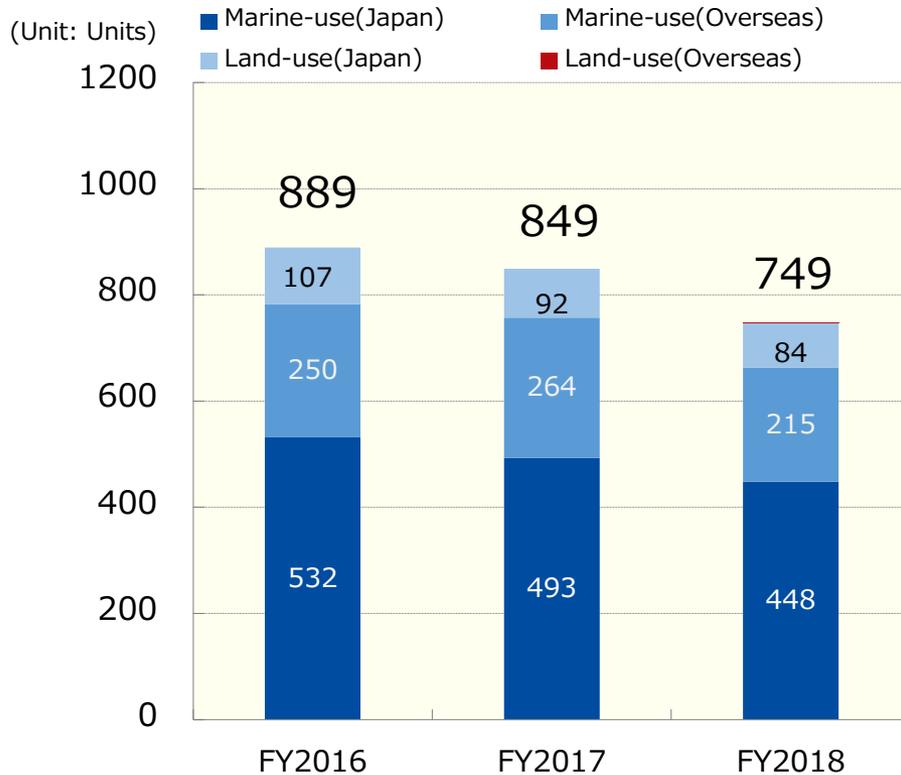


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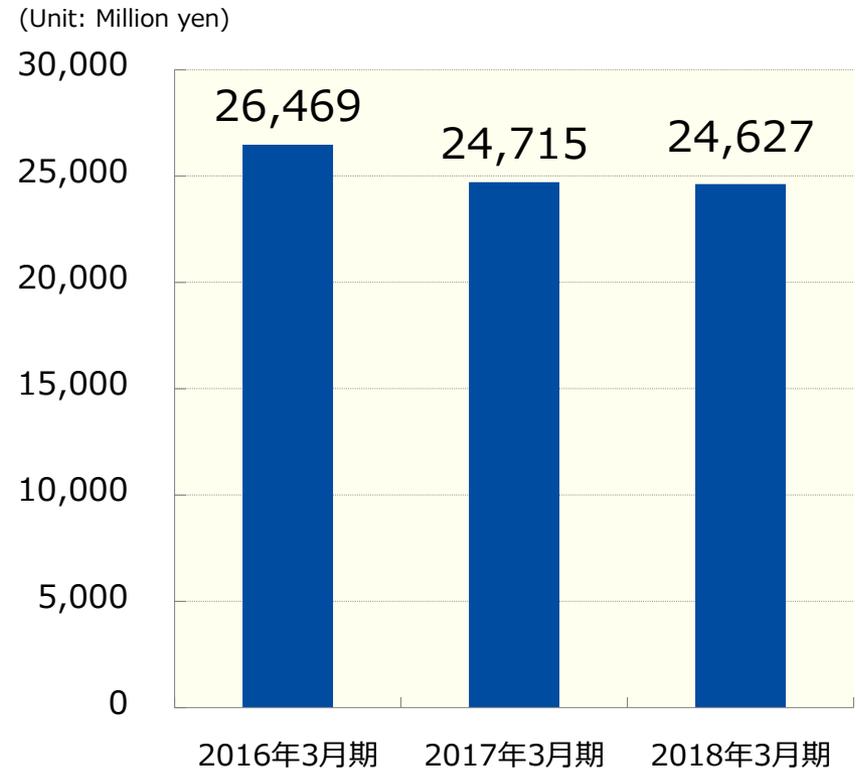
- Proportion of larger diesel engines for marine-use increased, but total units sold decreased
- Profitability picture became increasingly bleak for sales of diesel engine units

Unit Sales and Maintenance-related Net Sales

Units sold



Maintenance-related net sales



POINT

- Total units sold decreased owing to deferral of delivery dates
- Maintenance-related sales were almost flat

Earnings Forecasts

(Unit: Million yen)

	March 2018 Results	March 2019	
		Forecast	Increase/decrease (%)
Net sales	60,166	57,000	(5.3)
Operating income	3,044	2,500	(17.9)
Ordinary income	3,104	2,400	(22.7)
Net income	2,095	1,500	(28.4)
Basic earnings per share	65.83	47.09	(28.4)

*Exchange rates: March 2018 (Results): ¥110.53, March 2019 (Estimate): ¥100.00

Forecast

- Unit sales of diesel engines for marine-use to increase, but higher proportion of smaller engines to cause sales to decrease
- Profitability deterioration for main engine units to continue
- Maintenance-related sales estimated to increase slightly

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Please be aware that actual results may differ significantly from forecasts, due to changes in the business environment, etc.

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