

The DAIHATSU logo is displayed in white, bold, uppercase letters within a white rectangular box. The background of the slide is a blue underwater scene with a bright light source at the top center, creating a sunburst effect and illuminating the water and some fish.

DAIHATSU DIESEL MFG. CO., LTD.

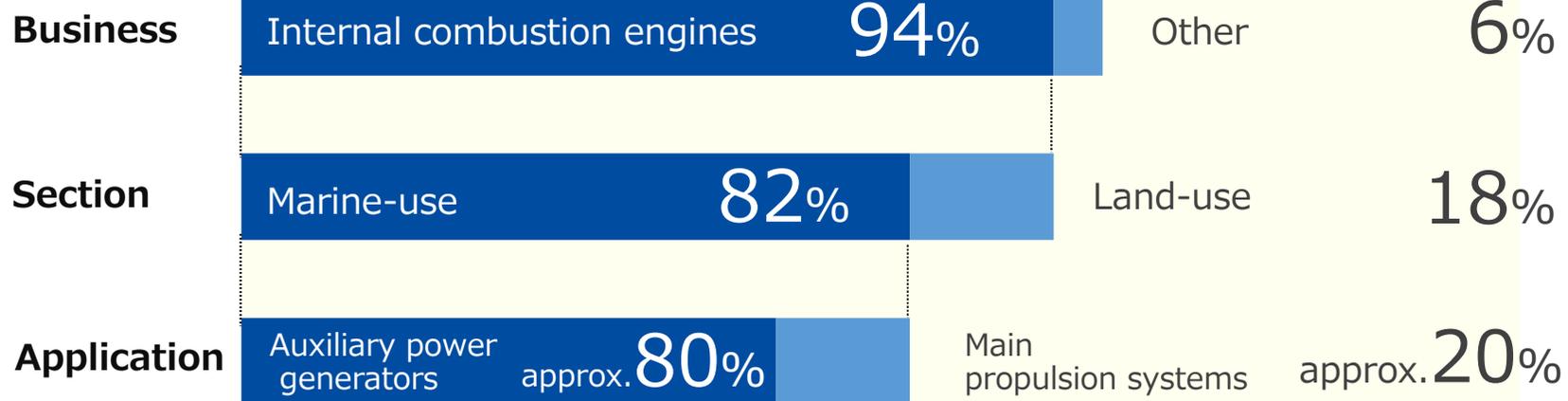
Fiscal Year Ended March 31, 2019

# Financial Results Briefing

May 2019

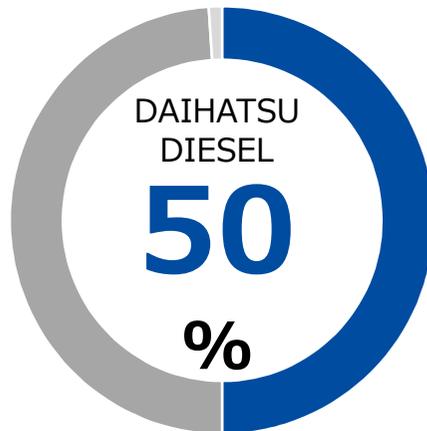
# Sales Breakdown/Market Share

## Sales Breakdown

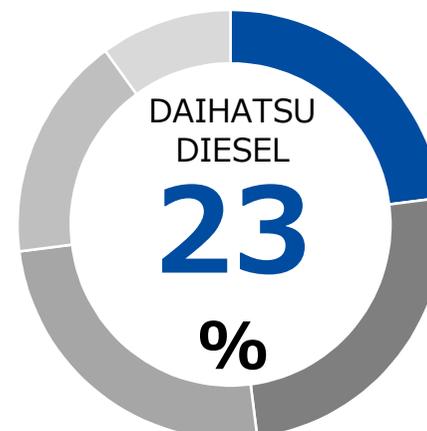


## Market Share (Auxiliary Engines for Large Ocean-going Vessels)

〈Share in Japan〉



〈Overseas market share〉

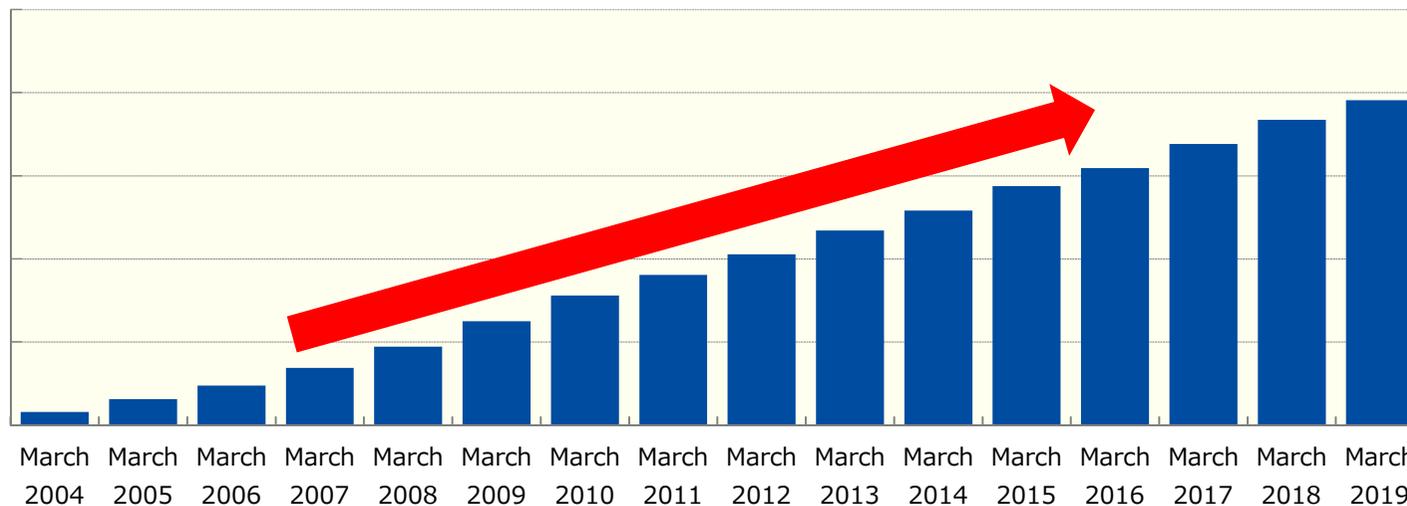


## Remarks on Earnings

# 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.



\*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.

- ▶ Strategic deployment of CMAXS system.

## 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

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**DAIHATSU**

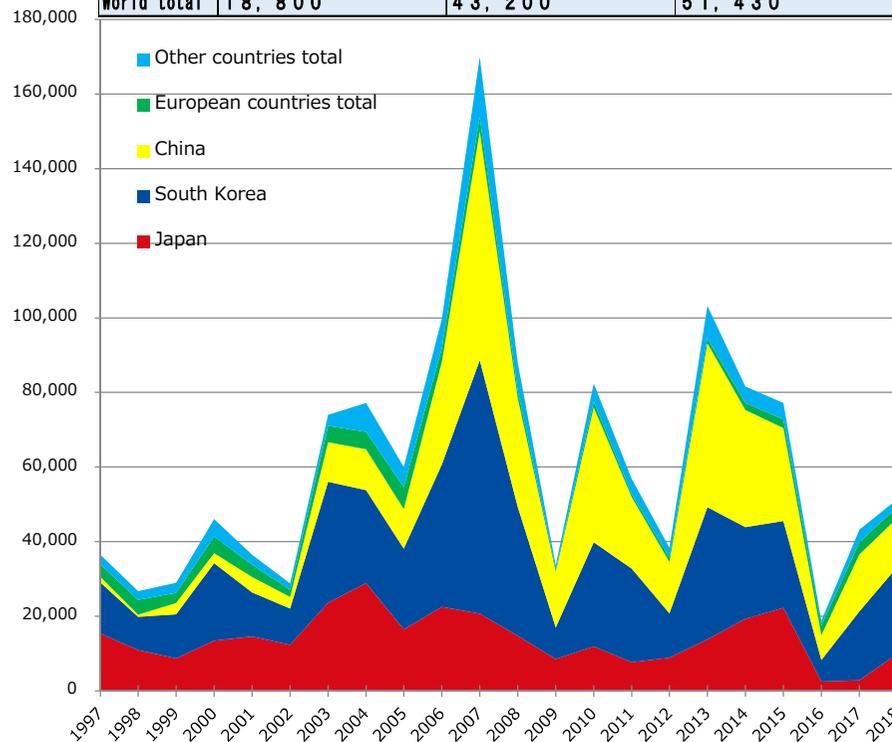
DAIHATSU DIESEL MFG. CO., LTD.

# Market Trends for Newbuild Vessels

Source: The Shipbuilders' Association of Japan

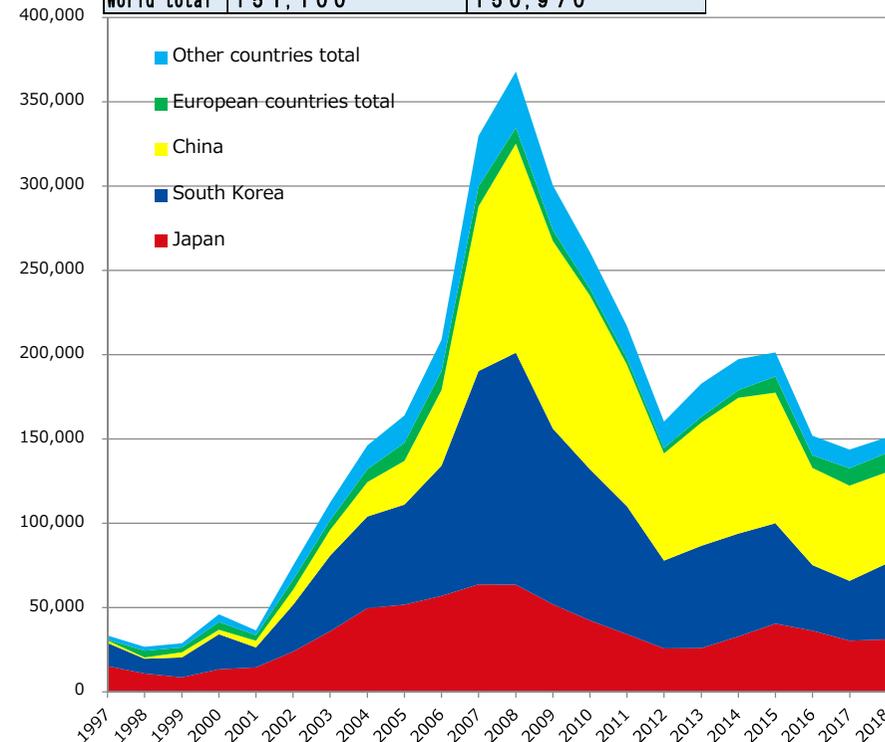
## Volume of orders received, by country

	2016	2017	2018
Japan	2,520 (13%)	2,830 (7%)	9,950 (19%)
Korea	5,780 (31%)	18,500 (43%)	23,360 (45%)
China	6,550 (35%)	15,200 (35%)	13,070 (25%)
World total	18,800	43,200	51,430



## Volume of work in hand, by country

	2017	2018
Japan	34,900 (23%)	31,270 (21%)
Korea	35,400 (23%)	44,930 (30%)
China	61,300 (41%)	54,140 (36%)
World total	151,100	150,970

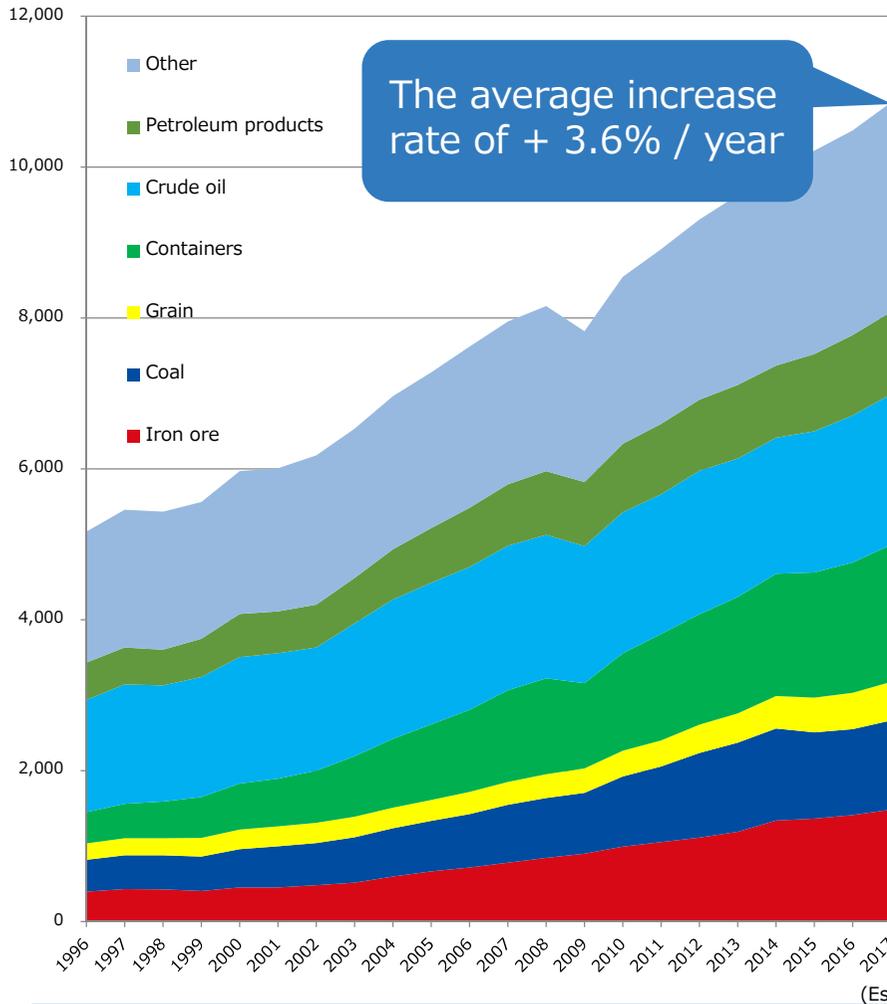


- Orders received showed an uneven increase overall, with a spike in 2006 to 2007 just before the 2008 financial crisis. The marine cargo market is now on a recovery trend despite the downturn in the marine cargo market in 2016

# Market Trend for Marine Cargo

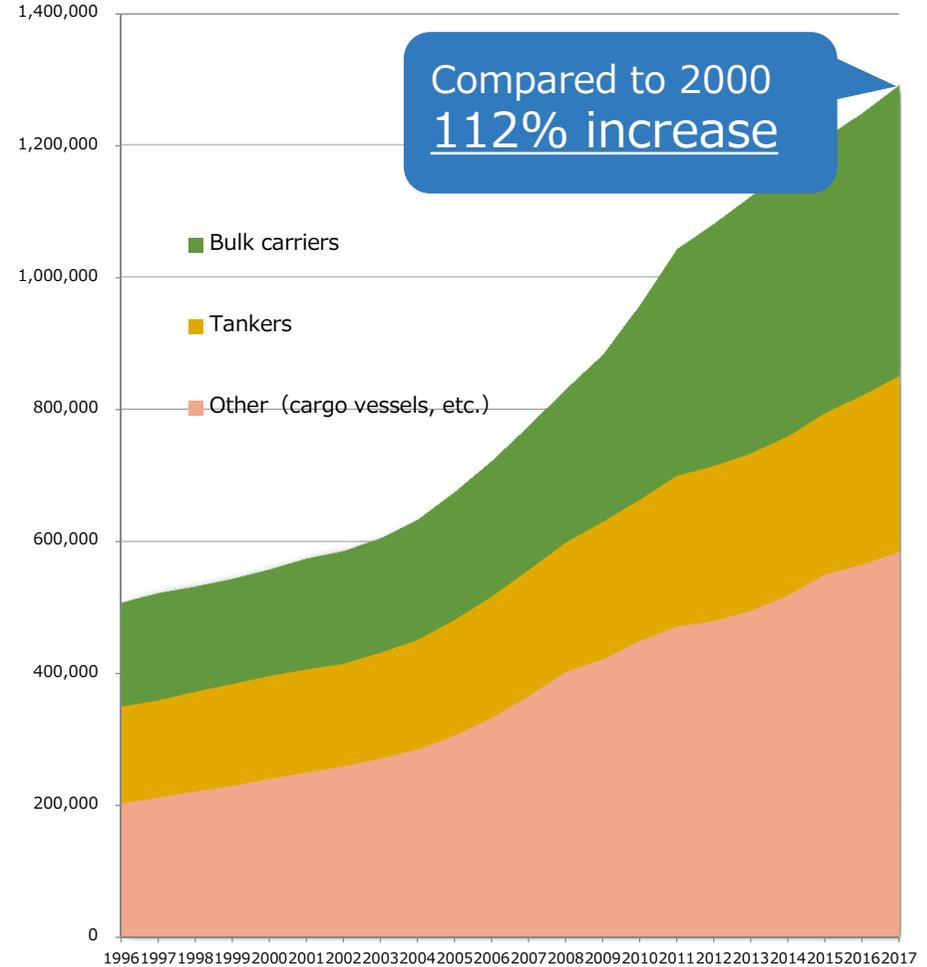
Global ocean cargo volumes, by product

(Unit: Million tons)



Global shipping capacity

(Unit: Thousand tons)



Source: The Shipbuilders' Association of Japan

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

# Initiatives in Line with Mid-term Management Plan

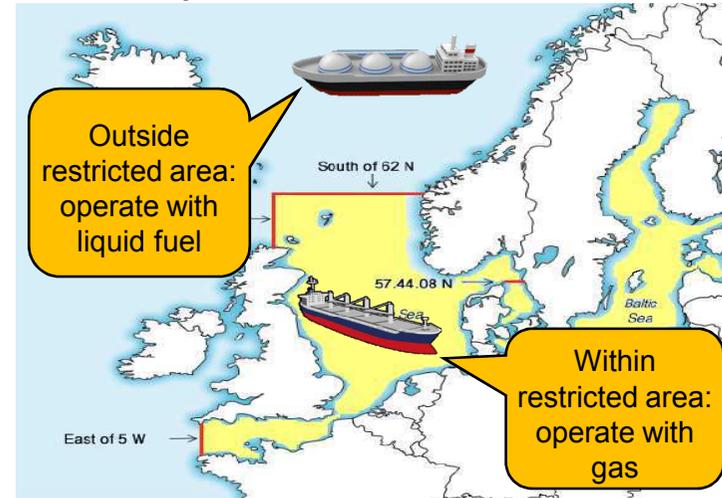
Tighter environmental regulations: Exhaust gas regulations (NOx, SOx, CO2, etc.), and diversification of fuels

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%			

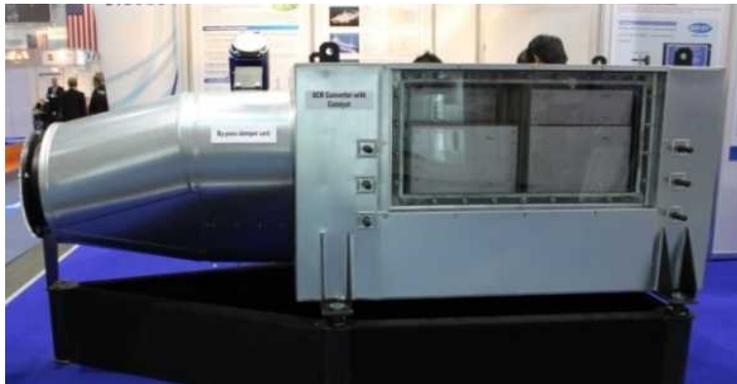
Examples of exhaust gas regulations for vessels

- NOx: Nitrogen oxide
- SOx: Sulfur oxide

(Use examples : Dual fuel engines for marine-use)



## Strategy ▶ SCR and dual fuel engines



SCR

(a selective catalytic reduction device)



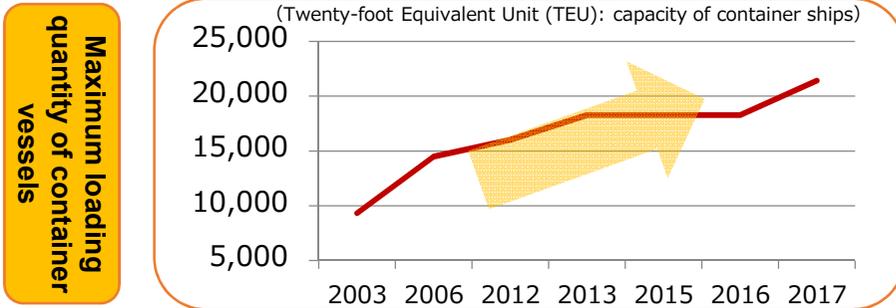
dual fuel engines

# Initiatives in Line with Mid-term Management Plan

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

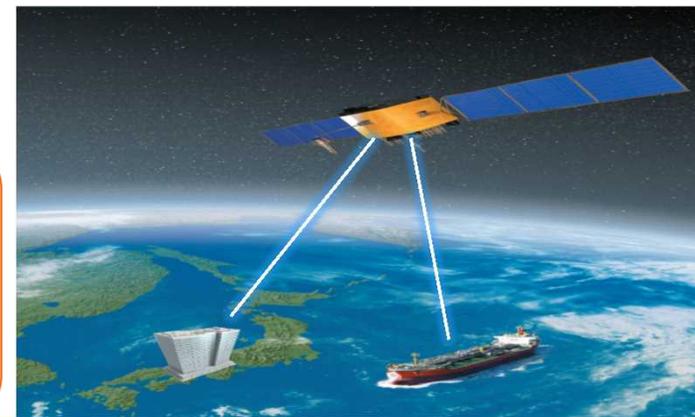
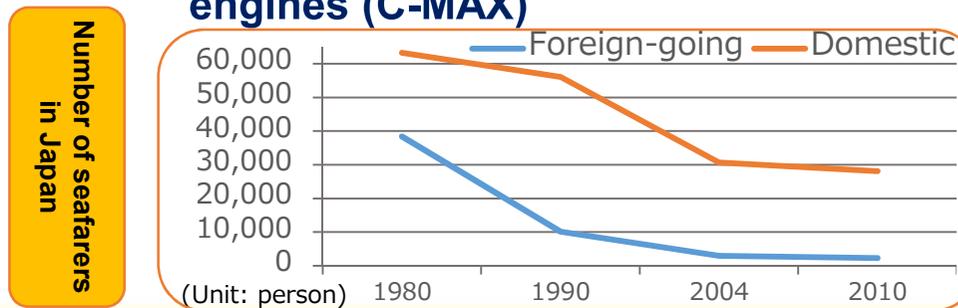
**Strategy** ▶ **New Himeji Factory**

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



Utilization of IoT: Supporting autonomous ship operation and seafarer shortage

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



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

## New Himeji Factory

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



feature

- Located on the coast
- Introduce advanced production facility and system
- Toyota's production systems
- Spread benefits of innovation at Moriyama Factory across all operations

Shipping from the berth



Transport using wheel lift



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	
連携	配管	
組立ライン		
B0	B1 B2 B3 B4 B5	

■ 正常  
■ 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)

## Update on Recent Major Progress (2) (Environment-related Products)

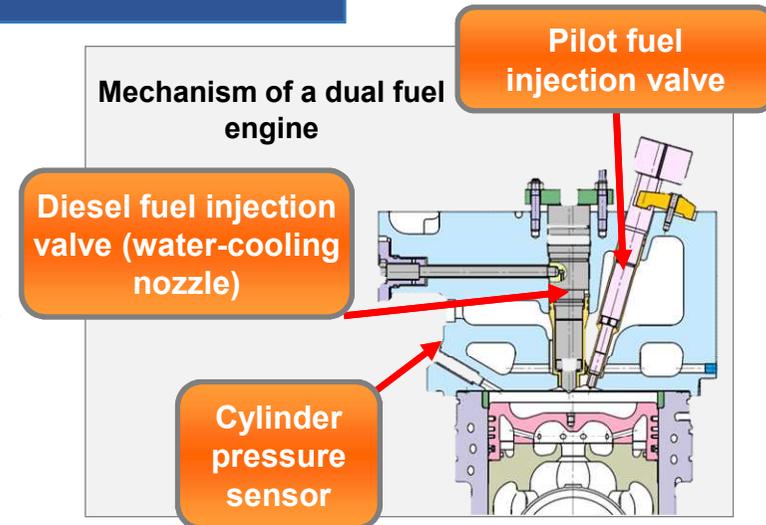
### Dual fuel engines

#### (marine-use) compliance with IMO (International Maritime Organization) Tier III standards

- Acquired certification in 2014 for compliance with NOx Tier III regulations
- First shipment expected in the fiscal year ending March 31, 2020

#### (land-use) secure a BCP (business continuity plan) power source for disaster response

- Delivered a dual fuel gas turbine to a local government disaster response headquarters in March 2017
- Shipped the first dual fuel engine to Tsukuba Space Center of The Japan Aerospace Exploration Agency (JAXA) on February, 2018



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

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

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

### (SCR)

- First shipment in October 2017
- Orders received for over 170 units as of April 2019
- Shipment of over 90 units expected in the fiscal year ending March 31, 2020

Detoxification of NO<sub>x</sub> (nitrogen oxides) in exhaust gas emissions and compliance with IMO (International Maritime Organization) Tier III standards  
80% reduction in the emission rate of NO<sub>x</sub> in exhaust gas emissions compared with Tier I standards



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

### (Aqueous urea solution generator)

- First unit shipped in February 2019
- Orders received for 4 units as of March 2019

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



First shipment of aqueous urea solution generator

# Fiscal Year Ended March 31, 2019

## Summary of Earnings

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DAIHATSU DIESEL MFG. CO., LTD.

# Summary

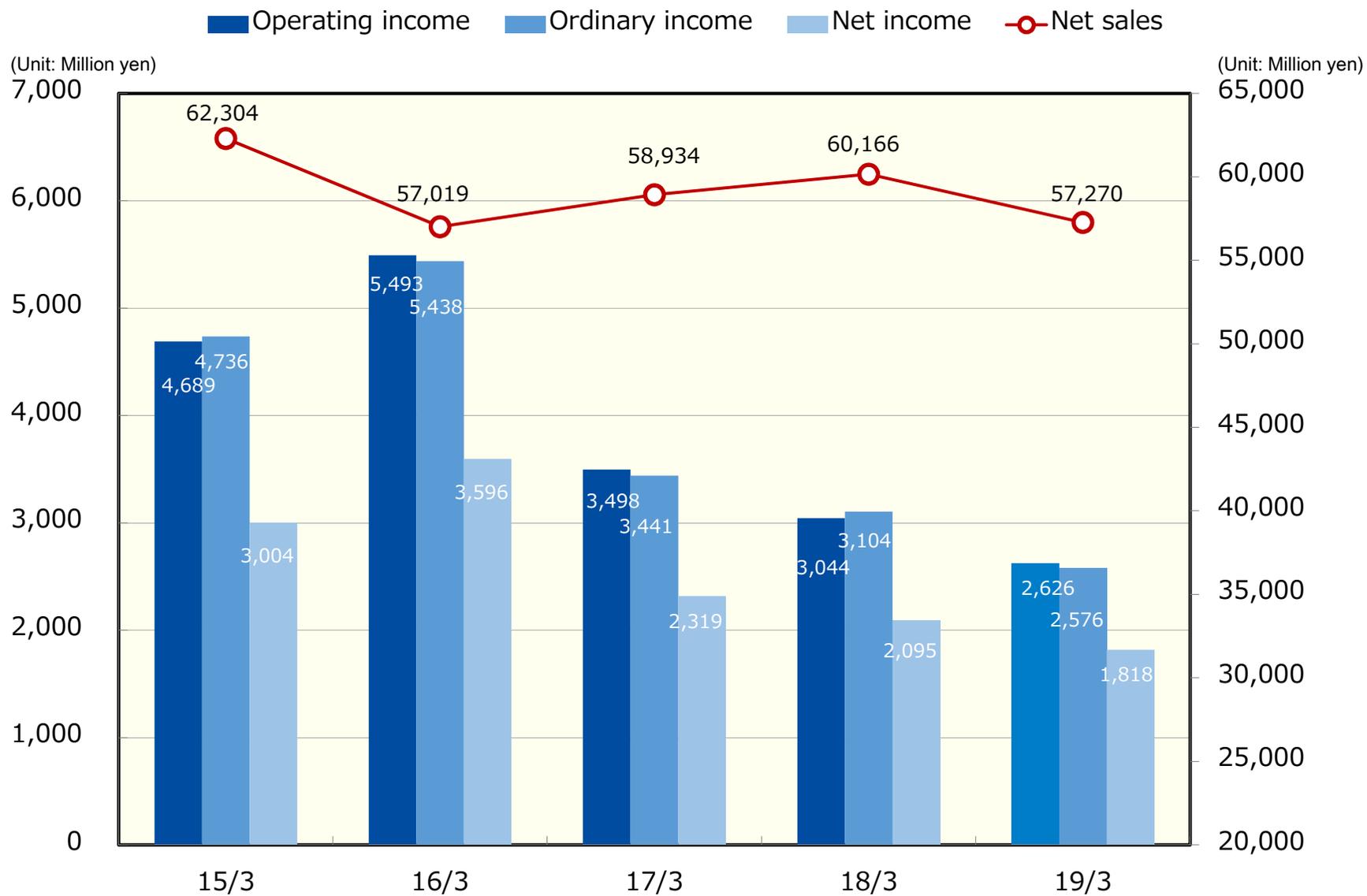
(Unit: Million yen)

	March 2017 Results	March 2018 Results	March 2019 Results	YoY difference	
				Increase/ decrease	(%)
Net sales	58,934	60,166	57,270	(2,896)	(4.8)%
Operating income	3,498	3,044	2,626	(418)	(13.7)%
Ordinary income	3,441	3,104	2,576	(528)	(17.0)%
Net income	2,319	2,095	1,818	(277)	(13.2)%
Basic earnings per share	72.87	65.83	57.11	(8.72)	(13.2)%
Total assets	78,981	80,969	82,450	1,481	1.8%
Equity ratio	46.1%	47.0%	47.6%	0.6%	—

## POINT

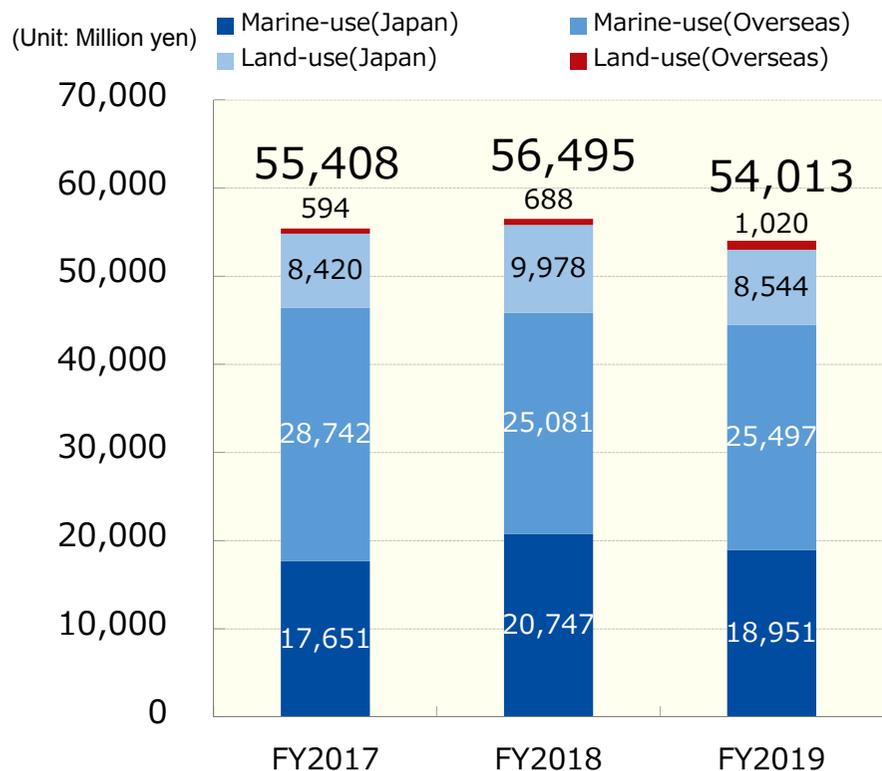
- Despite increased sales of engines, sales decreased due to smaller size of engines sold
- Continued profitability deterioration for engines had an impact on earnings
- Maintenance-related sales showed signs of recovery
- Depreciation increased in connection with upfront investment

# Trend of Sales and Earnings

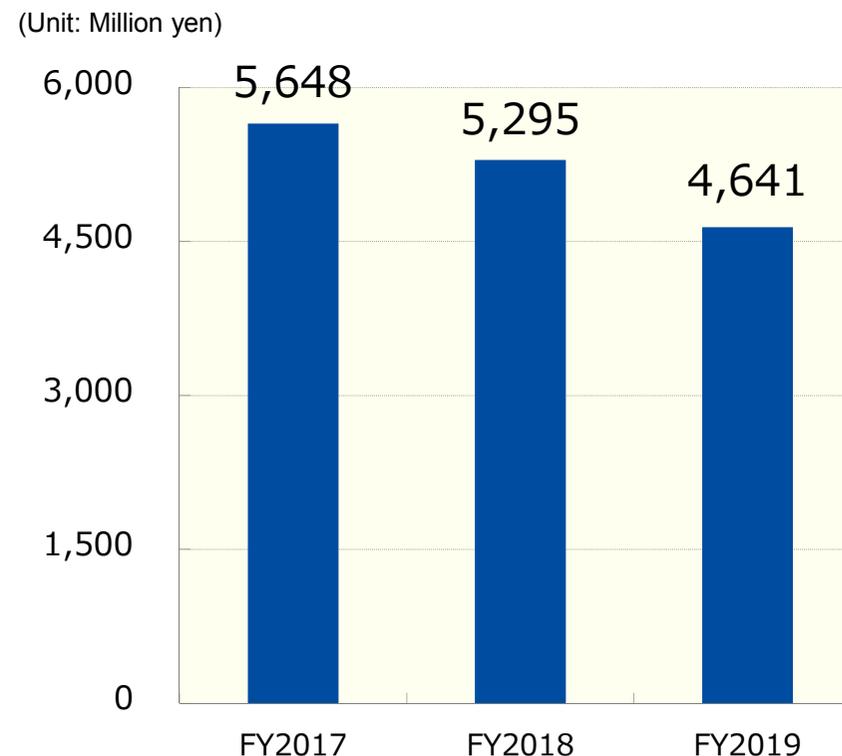


# Net Sales and Earnings for the Internal Combustion Engine Section

Net sales



Internal combustion engine section earnings

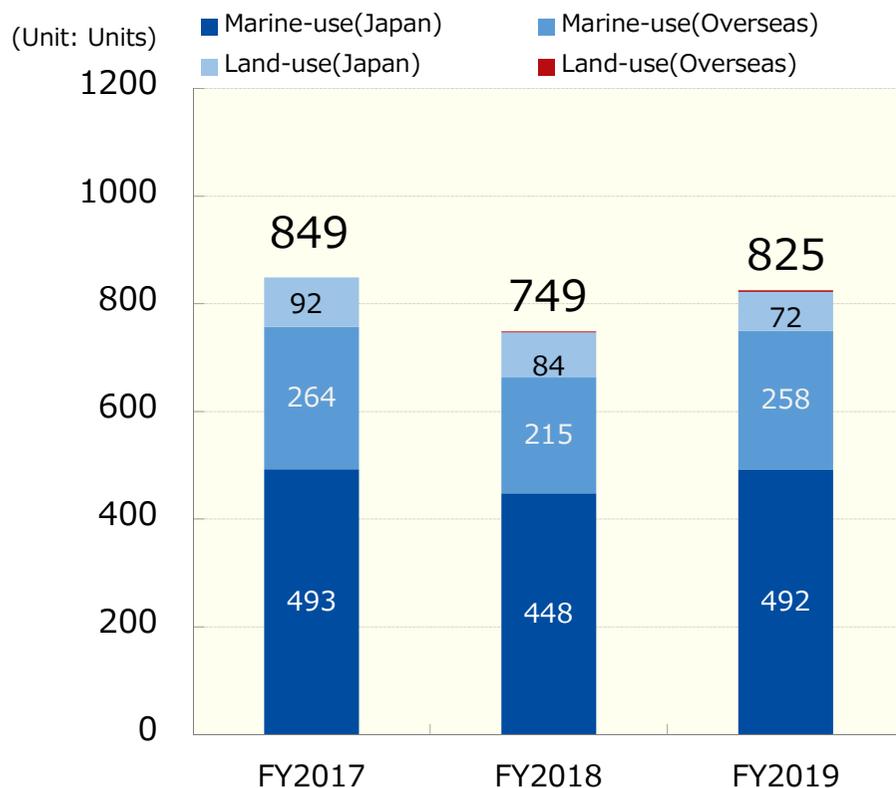


**POINT**

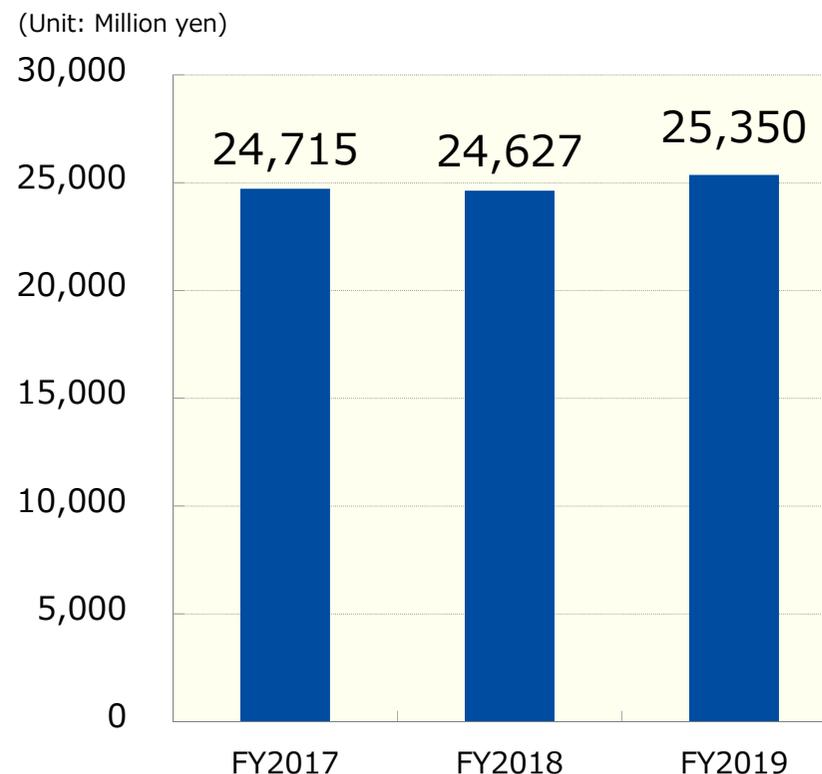
- Sales decreased due to lower proportion of larger engines for marine-use
- Profitability deterioration for sales of diesel engine units continued
- Maintenance-related sales showed signs of recovery

# Unit Sales and Maintenance-related Net Sales

Units sold



Maintenance-related net sales



**POINT**

- Total units sold increased
- Maintenance-related sales showed signs of improvement

# Earnings Forecasts

(Unit: Million yen)

	March 2019 Results	March 2020	
		Forecast	Increase/decrease (%)
Net sales	57,270	62,000	+8.3
Operating income	2,626	3,000	+14.2
Ordinary income	2,576	3,000	+16.4
Net income	1,818	2,100	+15.5
Basic earnings per share	57.11	65.93	+15.5

\*Exchange rates: March 2019 (Results): ¥109.95, March 2020 (Estimate): ¥105.00

## Forecast

- Unit sales of diesel engines for marine-use to increase
- Sales of diesel engine units to remain bleak in profitability
- Maintenance-related sales to be robust



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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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