

## Toward the Formation of a Sustainable Society

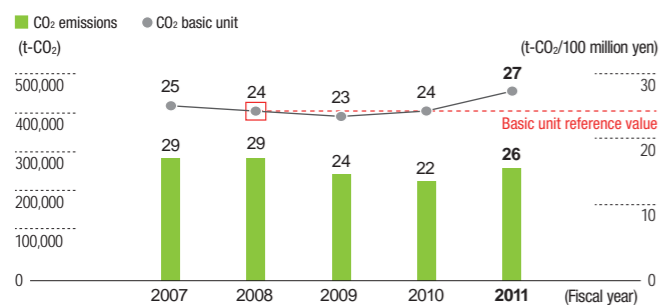
### Reducing Greenhouse Gas Emissions

It is our stated goal to contribute to the prevention of global warming through products and manufacturing that use energy without waste, and we undertake activities to reduce greenhouse gas emissions generated in our manufacturing processes.

Our greenhouse gas reduction target is to achieve an average 10% decrease between fiscal 2009 and fiscal 2013 in our CO<sub>2</sub> basic unit, compared with the fiscal 2008 reference value. The results for fiscal 2011, a turning point, showed a basic unit of 27t-CO<sub>2</sub>/¥100 million—against the benchmark 24t-CO<sub>2</sub>/¥100 million—indicating that it will be difficult to reach our target. It must be noted, however, that CO<sub>2</sub> emissions hovered around 260,000t-CO<sub>2</sub> in fiscal 2011, a significant year-on-year increase paralleling a recovery in capacity utilization at our facilities.

We also emphasize activities geared toward saving energy in manufacturing and will reinforce efforts to invest in energy-saving equipment, such as photovoltaic power generation equipment and high-efficiency lighting systems, at our factories.

Changes in CO<sub>2</sub> Emissions and Basic Unit at KHI



### Waste Reduction Activities

It is our stated goal to engage in manufacturing that uses resources without waste in order to recycle and fully utilize limited resources. We undertake various activities to achieve this goal.

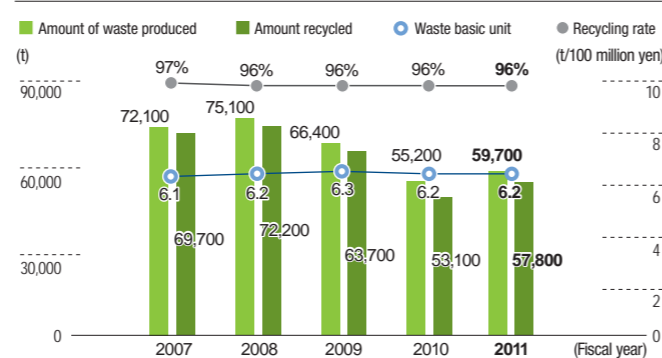
Among efforts to reduce waste, we promote the reuse and recycling of waste oil and constantly push zero-emission activities designed to recycle 100% of the waste emitted from our works without resorting to simple incineration or disposal as landfill.

#### Common activities at all works

- Activities to reduce three substances with greatest waste emissions (metal scrap, waste oil, wood scrap)
- Promote resource saving, 3Rs
- Maintain and enhance zero emissions status
- Promote implementation of electronic manifests

In addition, our basic unit was 6.2 points, the same as in fiscal 2010. We set fiscal 2003 as a reference year for the basic unit and are striving to achieve our target—a 12% decrease from the fiscal 2003 level by fiscal 2013. We analyze the success of common activities implemented throughout the Group and promote effective measures to achieve our target.

Amount of Waste Produced and Recycling Rate



### Reducing Chemical Substances

It is our stated goal to contribute to reduced environment impact and conservation of the ecosystem through manufacturing that is in harmony with global environment. We undertake various activities to achieve this goal.

Among efforts to reduce chemical substances throughout the Group, we have set targets in every business segment for major VOCs, dichloromethane, and hazardous heavy metals, and each segment has embraced the necessary approaches. Suitable measures have been implemented in nearly all areas, but efforts will continue on the study and consideration of additional measures to curb the amount of chemicals subject to reduction.

Amounts of Chemicals Subject to Reduction Handled and Emitted (t/year)

Substance		Fiscal 2011	Increase or decrease from fiscal 2010
Major VOCs	Toluene	321	+5.2%
	Xylene	633	-12.0%
	Ethylbenzene	326	+0.6%
	Total	1,280	-5.0%
Dichloromethane		45	-11.8%
Hazardous heavy metals	Hexavalent chromium	27	+22.7%
	Lead	1.7	-29.2%
	Cadmium	0.027	-77.5%

Notes: \*1 Amounts of major VOCs and dichloromethane are the amounts emitted, while that of hazardous heavy metals is the amount handled.

## Consideration for the Environment in Our Products



W800

### Key Activities for the KHI Group

#### Implementing Product Assessments

For newly developed and designed products, as well as for particularly important products, we assess products according to such criteria as resource- and energy-savings and recycling potential, with the goal of reducing the environmental impact of our products during their life cycles. Because specific evaluation techniques vary depending on the type of product, each business segment draws up product assessment rules appropriate to the characteristics of respective products.

#### Responding to the ELV Directive<sup>\*1</sup>, the RoHS Directive<sup>\*2</sup>, and the REACH Regulation<sup>\*3</sup>

Since 2000, laws and regulations related to chemical substances have been strengthened in the European Union by the establishment of such controls as the ELV Directive, the RoHS Directive, and the REACH Regulation. The RoHS Directive covers electric and electronic products, and some of the products made by the Precision Machinery Company and the Robot Division comply with this Directive. The ELV Directive focuses on automobiles, and while motorcycles are not subject to the content of this directive, the Motorcycle & Engine Company has embraced the voluntary actions espoused by the Japan Automobile Manufacturers Association. We also apply this directive to some Precision Machinery Company products. The REACH Regulation went into effect in June 2007 and applies to all chemical substances manufactured in and imported to the European Union. Businesses that manufacture or import chemical substances in quantities of one ton or more must register those substances. The products made by KHI are primarily articles and not all of them need to be registered. However, all substances that are released intentionally, and substances of very high concern, such as those with carcinogenic properties, require registration with or notification to the appropriate authorities. Regulations also exist for the evaluation, authorization, restriction, and communication of information regarding chemical substances, necessitating a system to identify information about the chemical substances in products throughout our entire supply chain. Each business segment identifies information on chemical substances in line with the green procurement practices outlined on page 24. Besides that, the Motorcycle & Engine Company has gone a step further with the creation of the Kawasaki Material Data System that responds to the REACH Regulation, as well as other chemical substance rules and legislation.

\*1 ELV Directive: End of Life Vehicles Directive

\*2 RoHS Directive: Directive on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment

\*3 REACH Regulation: Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals

### Efforts by the Motorcycle & Engine Company

#### Cleaner Exhaust Gas

In fiscal 2011, we maintained the focus from previous fiscal years—achieve cleaner exhaust from motorcycles sold in the domestic market—and launched the W800 with superior environmental performance and improved intake and exhaust systems that ensure levels conforming to 2007 domestic emissions regulations. The W800 is the result of a committed pursuit to recreate the riding feel and beauty of a vintage motorcycle.

Boasting precise fuel metering, thanks to an electronically controlled fuel injection system using throttle body with sub-throttle<sup>\*4</sup>, and a muffler with large honeycomb catalysers and optimized inner construction and shape, the W800 not only contributes to cleaner exhaust gas but also clears noise regulations as well.

\*4 Throttle body with sub-throttle: A device equipped with both a manually controlled throttle and an electronically controlled throttle for the purpose of optimizing the control of intake air mass.

#### Promoting the 3Rs

Since October 2004, we have operated an independent motorcycle recycling system in cooperation with three other motorcycle manufacturers and 12 importers in Japan. In fiscal 2011, we achieved a recycling rate of 89.1%. From October 2011, we plan to eliminate the user burden of recycling costs.

For new-model motorcycles, we emphasize environmentally conscious designs highlighting reduced materials and more recycling, right from the development phase. We conduct preliminary evaluations of efforts related to the three Rs—reduce, reuse and recycle—before commencing design, prototyping, and mass-production phases. In particular, we seek to increase recyclability through greater use of materials that are easy to recycle and have achieved a potential recycling rate exceeding 90% on every model, with most models exceeding 95%.

#### Reducing and Eliminating Environmental Substances of Concern

For new-model motorcycles sold in Japan, we already meet the voluntary targets of reduced environmental substances of concern (lead, mercury, hexavalent chromium and cadmium) set by the Japan Automobile Manufacturers Association, and we have also achieved voluntary targets for older models still being sold.