

Environmental Management – Our Vision

Toward a Sustainable Society



Yoshinori Ida

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President and Representative Director

Appointed as director in 1994, managing director in 1999, and president in 2000. Personal motto: "Sekisei" (Sincerity Moves Heaven) by Kaishu Katsu.*

*Kaishu Katsu (1823-1899): A prominent statesman who made great contributions to the modernization of Japan by opening it up to the world and building a modern state.

● Responsibilities for Environmental Conservation

I enjoy hiking in the mountains and if the weather is good on weekends, I often hike in the Tanzawa Mountains or the Hakone Mountains, which are close to my home. It feels refreshing and I can get back in touch with myself. It reminds me of the magnanimity of nature. But sometimes, people find themselves in the midst of a fresh snowfall in Hakone, even in early May. This reminds me how much I should be in awe of nature. I feel the greatness of nature and appreciate once again how dependent we are upon it. We must never lose our sense of responsibility for protecting the integrity of our environment, which we will hand down to our descendants.

Today, this precious Earth carries everywhere the marks and wounds of damaging emissions and discharges from human's activities. Our activities exert unexpectedly broad and complex effects, including climate changes due to global warming. One cause of global warming is the anthropogenic release of greenhouse gases. To cope with these changes on a global basis, the Kyoto Protocol to control greenhouse gas emissions was adopted at the Third Conference of the Parties to the United Nations Framework Convention on Climate Change (COP3) held in Kyoto in December, 1997.

Unfortunately, as of July 2003, the Kyoto Protocol has yet to go into effect. However, I think companies that consume a great deal of energy in their business must be aware of their own responsibilities as members of society and work proactively to conserve the environment. I also think that suppliers of products that emit carbon dioxide during their operation, like vehicles, must be more aware about their responsibilities and endeavor to reduce exhaust emissions.

● Isuzu's ELF-KR Series Meets the New Short-term Regulations ahead of Schedule

In June 2002, Isuzu became Japan's first truck manufacturer to launch the sales of the ELF-KR series, a new generation of environmentally friendly light-duty trucks that meet Japan's exhaust emission regulations taking effect in 2003.

The ELF-KR series was developed by integrating technologies for combustion, aftertreatment and electronic control, based on Isuzu's accumulated expertise in the development of clean diesel engines. These trucks are installed with the oxidization catalytic converter, to reduce particulate matter, as standard equipment. Due to their environmental performance, the ELF-KR trucks have been designated as super low-emission vehicles by a number of local governments. They also meet the stricter regulatory levels set by the Tokyo Metropolitan Government to enter into force in 2005.

Commercial vehicles are essential to all stages of logistics, including what is called "arterial logistics," such as parts procurement and product supply, and "venous logistics," such as disposal and recycling. They are operated all over the world, in both developing and developed nations. It is no exaggeration to say that our comfortable modern lifestyle is made possible by trucks, whose characteristics differ from those of passenger cars in several ways.

It's our responsibility and pride to work for improved performance of environment, economy and safety that support the important base of social activity.

● Shifting to New Mode of Logistics

Another social responsibility for a manufacturer of commercial trucks is to cope with the modal shift*, the recent trend toward shifting to new modes of logistics. I expect commercial vehicle manufacturers to play parts in this, with their ideas for the modal shift. New vehicles will have lower environmental impact and offer the capability of high-efficiency, combined transport. Having compiled a great deal of know-how and technical information on combined transport between the Fujisawa Plant and Isuzu Engine Manufacturing Hokkaido Co., Ltd., we are confident that we will be able to significantly contribute to the modal shift. We will promote this for its lower global environmental impact and its meaning for the roles of trucks, railways and ships.

● Initiatives at the Manufacturing Phase

As a vehicle manufacturer, we have been working to reduce environmental impacts in our manufacturing processes and plants by various technical innovations, with the participation of all employees. However, our efforts remain yet to be improved, compared to those by other companies that are more advanced in environmental protection. Our experience demonstrates that technologies do not advance gradually but progress in distinct phases. There must be continual research and development. I believe we can catch up with the companies that are now ahead of us only by continuing our efforts and initiatives to develop technologies to reduce environmental impacts with unfailing enthusiasm and industry. We will do our best to accomplish the constantly advancing targets for zero emissions, energy conservation, and recyclability.



Monument in the Kawasaki Plant

● Going back to the Starting Point/ Isuzu's Vision

You can see in Isuzu's Kawasaki Plant a monument in honor of Rudolf Diesel, who invented the diesel engine. I think diesel engines are the key to the success of Isuzu in the future. Diesel engines are still developing as they have some drawbacks, as well as enormous potential and advantages. I see it as our mission to provide cleaner, further efficient diesel engines and diesel-powered trucks and contribute to create a sustainable society. We will make proactive efforts to protect the environment and welcome constructive criticism from other parts of society.

Isuzu's environmental management vision focuses on "providing the market with diesel trucks offering excellent environmental performance and economy."

● Message from Isuzu

This year's Isuzu Environmental Report primarily covers the environmental efforts conducted by Isuzu Motors Limited during the past year, describes our view of our social responsibilities as a manufacturer of commercial vehicles, and explains our approach to developing diesel engines. We value your comments and suggestions and seek to promote mutual communications in efforts to create a sustainable society.

* Modal shift: Shifting to new means of mass-transport such as railways and marine transport in place of deliveries by vehicles on main roads, in order to promote combined transport with trucks.

CONTENTS

Highlights

- Environmental Management – Our Vision1
- Summary of Environmental Initiatives in Fiscal 20023
- Environmental Goals and Accomplishments4
- Story of the Development of the ELF-KR Series Next Generation Environmentally Friendly Trucks5
- Isuzu's Clean Diesel Engines – At Work Around the World7
- Environment Committee Chairpersons' Policies9
- Outline of Isuzu's Environmental Activities11

Creating Environmentally Sound Products

- Development Approach/ Developing Eco-friendly Vehicles13
- Creating Environmental Technologies13
- Recycling Initiatives16
- New Products in 200218

Creating Environmentally Sound Plants

- Policy for Creating Environmentally Sound Plants/ Energy Conservation/Effective Use of Resources19
- Waste Reduction Initiatives20
- Reducing the Use of Substances with Environmental Impact/ Preventing Air and Water Pollution21
- Activities at Isuzu Engine Manufacturing Hokkaido Co., Ltd./ DMAX, Ltd. – A Model Site Overseas22

Environmental Management Systems/ Logistics

- Environmental Management Systems/ Green Procurement23
- Logistics24

Community/Social Relations

- Environmental Communications with Customers25
- Environmental Communications with Society26
- Workplace Safety and Health27
- Personnel Management/Employee Training28

Messages from Readers29

Corporate Outline and Environmental Accounting30

Summary of Environmental Initiatives in Fiscal 2002

The major achievements of Isuzu's fiscal 2002 initiatives to protect the environment are summarized below. For details, please refer to the pages indicated.

ELF-KR, The First Trucks that Meet the Toughest Emission Regulations

We introduced the ELF-KR series of trucks in June 2002, meeting the tougher 2003 exhaust emission regulations in Japan two years before they had been scheduled to go into effect. Since then, the ELF-KR trucks have earned high marks from our customers for their excellent environmental performance. They are running away at the top market share for their class of vehicles. An oxidization catalytic converter is installed as standard equipment to reduce particulate emissions. These trucks comply with the low-pollution vehicle regulations specifically set by eight Tokyo-area and six Kansai-area local governments. They will also meet the stricter regulatory levels set by the Tokyo Metropolitan Government to enter into force in 2005.

In addition to the improvement to achieve cleaner exhaust emissions, this new series is available with reduced external noise and sophisticated transmissions.

Pages 13, 14 and 18



ELF-KR

Clean Energy Vehicles

Following our ELF light-duty trucks, we introduced CNG-powered vehicles with further improved environmental performance in May 2003. These are the FORWARD medium-duty truck series, which emit almost no particulate matter or black smoke and dramatically reduced nitrogen oxide (NOx) emissions in their exhaust. The FORWARD series meet the exhaust emissions requirements equivalent to the "super-low exhaust emissions ☆☆☆ (in-house test values)," the strictest of the low exhaust emissions vehicle designation standards of Japan's Ministry of Land and Traffic. Since April 2003, Isuzu has been operating the "Shonandai Isuzu Eco-Station," a compressed natural gas filling station, at a site adjoining the Fujisawa Plant, in order to promote the spread of clean energy vehicles from the viewpoint of fuel supply.

Pages 15 and 18



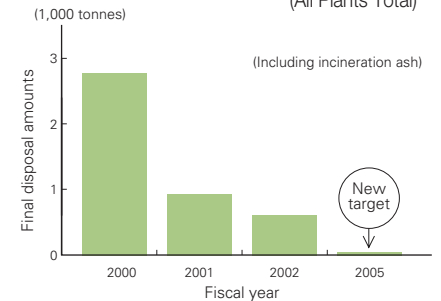
FORWARD CNG-powered Truck

Zero Emissions: Towards Further Improvements

In fiscal 2001, Isuzu accomplished the goal of reducing landfill disposal of industrial waste by 95% compared to the fiscal 1995 level (excluding incinerator ash); the actual reduction was 97.6%. In fiscal 2002, we began further activities to clear the newly established final numerical target to reduce landfill disposal to one tonne or less per month per plant (including incinerator ash) by the end of fiscal 2005. We were able to achieve a 40% reduction compared to fiscal 2001.

Page 20

Results and Targets in Reducing Final Disposal (All Plants Total)



GIGA Series Heavy-Duty Trucks Boost Fuel Efficiency

In June 2003, Isuzu launched the GIGA series heavy-duty trucks, equipped with the "Smoother-G" mechanical fully-automatic transmission as standard equipment to improve economic performance through fuel efficiency. With this transmission, fuel efficiency is improved significantly because the shifting is fully automatic at every speed to maintain a range of engine RPM for high fuel efficiency. This automation of the shifting task enables the same level of energy-efficiency in driving as would be achieved by a skillful driver using a manual transmission. The GIGA series heavy-duty trucks are also equipped with a speed limiter as standard equipment to further improve fuel efficiency. The speed limiter is also expected to reduce the number of serious traffic accidents.

Pages 14 and 18



GIGAMAX Truck equipped with "Smoother-G"

Reducing the Use of Substances with Environmental Impact

We are making proactive efforts to reduce the use of four heavy metals, lead, hexavalent chromium, mercury and cadmium. In compliance with the "Guidelines to Control the Four Heavy Metals" formulated in fiscal 2001, we are working toward a gradual phase-out, while calling for the cooperation of our suppliers at green procurement explanatory seminars and other occasions. Through these activities, we have complied with the European Union's ELV Directive, which bans the use of these metals from July 2003. We have also started operating the IMDS*, in order to build a database for materials and chemical substances used in vehicle components.

Pages 15, 16, 17, 21 and 23

* IMDS: International Material Data System



Working to Reduce Environmental Impacts While Maintaining Communication with Customers

Isuzu is working to reduce its environmental impacts while promoting communications with our customers. Our systems include the "Mimamori-kun" vehicle diagnostic tool, which analyzes a range of driving data from our customers in order to provide diagnostic information and recommend appropriate ways to reduce fuel consumption and drive more safely, and the "Eco-Solution Plan," which provides diagnostic information on the impact of new tough exhaust emissions regulations and countermeasures. We also encourage driver training to improve fuel efficiency. The "Mimamori-kun" system went into operation in January 2001 and was operating on about 600 trucks at the end of March 2003. Customers reported an average reduction of 15% in fuel consumption and highly appreciated this service.

Page 25



Driver training to improve fuel efficiency using the "Mimamori-kun"

Environmental Goals and Accomplishments

Creating Environmentally Sound Products

Environmental Goals in Fiscal 2002	Achievement in Fiscal 2002	Self-evaluation	Mid-term target	Refer to
Improve fuel efficiency to prevent global warming - Launch new products with improved fuel efficiency.	- A new model of the GIGA series heavy-duty truck was launched in June 2003 with improved fuel efficiency by 11%, by adopting the "Smoother-G" fully-automated 12-speed mechanical transmission.	Target Achieved	Highest fuel efficiency in its class	Page 14 Page 18
Clean exhaust emissions - Advance launch of low emission vehicles	- The ELF-KR light-duty truck was launched in June 2002 to meet the 2003 exhaust emission regulations. - Low-pollution vehicles with reduced particulate matter emissions of less than 0.18 g/kWh due to the standard oxidation catalytic converter were launched in December 2002 for medium-duty trucks and June 2003 for heavy-duty trucks.	Target Achieved	Develop next-generation aftertreatment equipment	Page 13 Page 14 Page 18
Reduce external noise - Meet noise regulations set in 2001.	- ELF series light-duty trucks were launched in June 2002. - FORWARD series medium-duty trucks were launched in December 2002. - GIGA series heavy-duty trucks were launched in June 2003.	Target Achieved	Reduce external noise while idling in towns	Page 15 Page 18
Low pollution alternative fuel vehicles - To promote the development and sales of low pollution alternative fuel vehicles	- 1,655 units of ELF CNG-powered light-duty trucks sold. - 984 units of ELF LPG-powered light-duty trucks sold. - 62 units of FORWARD CNG-powered medium-duty trucks sold. - A CNG filling station was opened in the Fujisawa Plant in April 2003.	Target Achieved	Develop electric-diesel hybrid vehicles.	Page 15 Page 18
Reduce use of substances with environmental impact - Reduce use of lead to one-third or less of fiscal 1996 levels by 2005. - Implement a plan for gradual reduction and eventual ban of lead, mercury, cadmium and hexavalent chromium.	- Reduced use of lead to one-third of fiscal 1996 levels in GIGA heavy-duty trucks - Complied with the EU-ELV Directive - IMDS chemical substances control system introduced in May 2003. - Green procurement explanatory seminars held in Japan and Thailand.	Target Achieved	- Reduce use of lead to one-fourth or less from 2006 (heavy-duty commercial vehicles). - Ban the use of mercury from January 2005, cadmium from January 2007, and hexavalent chromium from January 2008.	Page 15 Page 16 Page 17 Page 23

Creating Environmentally Sound Plants

Environmental Goals in Fiscal 2002	Achievement in Fiscal 2002	Self-evaluation	Mid-term target	Refer to
Energy saving to prevent global warming - Stabilize CO ₂ emissions for a 30% reduction compared to fiscal 1990 levels by 2010.	- Reduced 55% compared to fiscal 1990	Target Achieved	30% reduction of CO ₂ emissions compared to fiscal 1990 levels by 2010	Page 19
Waste Reduction - Further improvements for zero emissions Reduce landfill disposal of industrial waste to 615 tonnes (including incineration ashes) in fiscal 2002.	- 591 tonnes	Target Achieved	Reduce landfill disposal of industrial waste to 48 tonnes or less per year (including incineration ashes) by the end of fiscal 2005.	Page 20
Reduce substances with environmental impact - Reduce emissions of VOCs * (from painting processes) by 45 g/m ² by the end of fiscal 2005.	- 45.4 g/m ²	Target Achieved	45 g/m ² or less by the end of fiscal 2005	Page 21

* VOCs: Volatile Organic Compounds

Environmental Management Systems and Logistics

Environmental Goals in Fiscal 2002	Achievement in Fiscal 2002	Self-evaluation	Mid-term target	Refer to
ISO 14001 certification for environmental management systems - DMAX, Ltd. (US): Obtain certification - Kawasaki Plant: Pass review for certification renewal - Fujisawa Plant: Pass review for certification renewal - Tochigi Plant: Pass review for certification renewal	- Certified in July 2002 - Certification renewed in April 2002 - Certification renewed in July 2002 - Certification renewed in February 2003	Target Achieved	Consolidation of group companies	Page 23
Issuance of the Environmental Report (Japanese/English) in September/December 2002	Japanese version was issued in September 2002; the English version was issued in November.	Target Achieved	Further improvement of the contents	Page 26
Streamline Logistics - Improve vehicle delivery mode (percentage of deliveries by human-driven vehicle 22.9% or less) - Boost the use of returnable and steel containers to 65% or more.	- 22.0% usage of human-driven vehicles. - 68% returnable/re-usable containers.	Target Achieved	Percentage of deliveries by driving the vehicle 20% or less in fiscal 2003	Page 24

Community and Social Relations

Environmental Goals in Fiscal 2002	Achievement in Fiscal 2002	Self-evaluation	Mid-term target	Refer to
Improve transportation efficiency. - Support upgrading of energy efficiency of vehicles already in use.	- To help users improve fuel efficiency, the "Mimamori-kun" vehicle diagnostic system was brought into operation in January 2002. This system was loaded on GIGA series to the number of 598 trucks as of the end of March 2003. An average reduction of 15% in fuel consumption was achieved.	Target Achieved	—	Page 25
Assist customers in improving exhaust emissions - Provide assistance for users in developing vehicle replacement plans to meet the exhaust emission regulations, and to install equipment to reduce particulate matter	- Planning support program "Eco Solution Plan" was brought into operation in June 2002, and has been applied to more than 200,000 vehicles of 6,000 companies.	Target Achieved	—	Page 25