# SUZUKI ENVIRONMENTAL & SOCIAL REPORT 2013

SUZUKI AIMS TO BECOME A COMPANY LOVED AND TRUSTED THROUGHOUT THE WORLD.



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- The period covered by this report is the fiscal 2012 (from April 1, 2012 through March 31, 2013). However, this report also contains descriptions on some activities taking place before or after that time period.
- This report covers information about not only Suzuki Motor Corporation, but also Suzuki Group companies. (Unless "related companies", "dealers", or "overseas" is indicated in each description, the information is related to Suzuki Motor Corporation.)
- This report was created in accordance with "Environmental Reporting Guidelines 2012" by the Ministry of the Environment.
- Please note that the website addresses indicated in this report may be changed without notice.

"Domestic plants" in this report refer to 6 plants in Japan: Kosai Plant, Iwata Plant, Sagara Plant, Takatsuka Plant, Toyokawa Plant, and Osuka Plant.

Introduction

Introduction

Since inauguration of business, we have been making best efforts to develop customer-oriented "valuable products", under the first paragraph of our mission statement "Develop products of superior value by focusing on the customer". Also, in line with our growth strategy, we have continuously reevaluated every field and improved our management practices under our basic policy "Think hard and make an extra effort to get over the status quo".

The management environment of the Group is in a worrying situation with slowdown of economy in Asia in addition to economic stagnation in Europe. On the other hand, there is a growing expectation for economic recovery against a background of sign of economic recovery in the United States, easing of extreme yen appreciation and effect of economic stimulus measures in Japan.

However, we still face a lot of challenges such as European financial instability, environmental issues, and disaster risks. In order to overcome those challenges, we are working altogether throughout the entire group under the Suzuki vision: "Create a Wow! Beyond customer expectations", which is based on the philosophy of our mission statement.

Especially for the environmental issue, the Group has been providing minivehicles in Japan and many fuelefficient compact cars mainly in India and Asia. We believe that the spread of compact cars is what can contribute to the environmental issue. In addition to the promotion of next-generation environmental technology with the SUZUKI GREEN Technology, we will work on the global environmental issue based on Suzuki 2015 Environmental Plan and Suzuki Biodiversity Protection Guideline, which were established last fiscal year.

At the same time, under the slogan "Small cars for a big future", we will work toward manufacture of "small cars" and "environmentally-friendly products" which are wanted by our customers. We will also work on lean, efficient and sound management by emphasizing the "Smaller, Fewer, Lighter, Shorter, and Neater" concept in terms of production, organization, facility, parts and environment.

We believe that it is important for every one of us to observe laws and regulations, social norms, in-house rules, etc. and behave fairly and faithfully, as well as it is indispensable to build and maintain reliable and good relationships with our stakeholders such as customers, business partners, shareholders/investors, local societies, and employees.

In this report, our CSR (Corporate Social Responsibility) activities carried out in fiscal 2012 are divided into three categories: "Efforts for Environment", "Efforts for Society", and "Efforts by Plants and Companies". We hope this report can provide an opportunity to understand our CSR activities.



(From the left in the back row) Executive Vice Presidents Yasuhito Harayama

Executive Vice Presidents Osamu Honda Executive Vice Presidents Minoru Tamura Executive Vice Presidents Toshihiro Suzuki

Osamu Suzuki

**Company Profile** 

### Company Profile (as of March 31, 2013)

Company Name	SUZUKI MOTOR CORPORATION
Establishment	March 1920
Address of headquarters	300 Takatsuka-cho, Minami-ku, Hamamatsu City, Shizuoka Prefecture 432-8611, JAPAN
Representative	Osamu Suzuki, Chairman & CEO (CEO & COO)
Major products	Motorcycle, automobile, outboard motor, electro vehicle, industrial equipment
Capital	138,014,760,000 yen
Number of employees	14,405 persons

### Net sales

### Automobile Production

2 8 7 8





%Production in Japan:CBU+complete knocked-down(CKD)units.%Overseas production:line-off units at overseas plants.

Corporate Philosophy and CSR / 01 CSR Policy

### **Corporate Philosophy and CSR**

**Efforts for** 

As a member of the society, corporation has a mission to fully consider the safety of our customer, take environmental conservation into consideration, obey all laws, regulations and social rules and maintain good relationships with our individual stakeholders.

This section describes the basic policy on CSR of Suzuki.

Corporate Philosophy and CSR CSR Policy

### Suzuki's basic policy for CSR

The "Mission Statement" established in 1962 which indicates the Corporate policy of Suzuki and the "Suzuki Activity Charter" which clarifies the rules to be followed by Suzuki employees contains the basic philosophy of Suzuki's basic concept of CSR.



- 1. Develop products of superior value by focusing on the customer
- 2. Establish a refreshing and innovative company through teamwork
- 3. Strive for individual excellence through continuous improvement

### Suzuki Activity Charter

- Develop and provide truly useful products and services by taking the opinions of our domestic and overseas customers and of society into consideration.
- 2. Take environmental conservation into full consideration when developing and providing products and services.
- Obey all laws and rules without yielding to anti-social groups or organizations that are a menace to peace and safety of civil society.
- Fully disclose accurate and fair information to the public and keep a proper relationship with society.
- 5. Achieve long and stable growth through fair, clear, and free competition.
- 6. Make positive social contributions as a corporate citizen.

### Basic policy for company management

Under the first paragraph of the mission statement "Develop products of superior value by focusing on the customer", the Group has been placing "valuable products" on the base of manufacturing since our inauguration. In order to accomplish this philosophy, we will work under the Suzuki vision: "Create a Wow! Beyond customer expectations".

At the same time, under the slogan "Small cars for a big future", we will work toward manufacture of "small cars" and "environmentally-friendly products" which are wanted by our customers. We will also work on lean, efficient and sound management by emphasizing the "Smaller, Fewer, Lighter, Shorter, and Neater" concept in terms of production, organization, facility, parts and environment



Corporate Philosophy and CSR / 03 CSR Management System

Corporate Philosophy and CSR

### **J** CSR Management System

### Strengthening Corporate Governance

Through fair and efficient corporate activities, Suzuki always intends to be trusted by our customers, partner companies, shareholders, investors, local communities and employees, and to be a continuously growing company, while making a further contribution to the international community.

In order to realize that intention, we consider that the enhancement of the corporate governance is one of the most important issues for proper corporate management and are aggressively taking various kinds of measures. Some of the ongoing activities are as follows.

### **①Directors and Meeting of the Board of Directors**

For the purpose of enabling the agile corporate management and operations and clarifying the individual responsibilities, we have reduced the number of Directors and introduced a Senior Managing Officer and Managing Officer system. In that system, all Directors (excluding Chairman & CEO and Outside Directors) also work as leaders for accomplishment of tasks such as Executive General Manager of each division or other functional units to allow for discussion based on site information at board meetings for making proper decisions in line with actual situations of each department.

At the Management Planning Committee which is a council-system organization involving four Executive Vice Presidents as members, important missions for management at each department are cross-functionally and comprehensively reviewed and basic concepts are adjusted and established. In order to embody the said basic concepts, we have the department in charge in the Management Planning Division. Furthermore, in order to enhance the management supervisory function, we selected two Outside Directors and reported them as Independent Directors based on the rules of Tokyo Stock Exchange.

In order to clarify managerial accountability for individual Directors and flexibly respond to the changing business environment, the term of each Director is set to one year.

### **2**Company Auditors and Auditors Meeting

We have adopted a Company Auditor system, and there are five members including three Outside Company Auditors, to enhance our auditing function. All three Outside Company Auditors are reported as Independent Directors based on the rules of Tokyo Stock Exchange.

In addition, we have a department that audits the Company as well as a department for auditing subsidiaries and affiliates. Thus, audits are conducted concerning compliance with laws, internal control and management efficiency from three different angles including independent auditor. They always exchange information to strengthen their mutual collaboration.

### **3**Compliance (Corporate Ethics) System

Suzuki established "Suzuki Rules of Corporate Ethics", which specify "Standards of Behavior", in order to make all Directors and employees at Suzuki strictly follow the laws, regulations, social rules, and in-house rules, as well as to act in good faith and fairness. In addition, we have established a "Corporate Ethics Committee" and hold corporate ethics seminars to check compliance with the Rules of Corporate Ethics. In addition, we determined a basic policy for the establishment of an internal control system on May 15, 2006 in accordance with Companies Act. And we are now making necessary arrangements for the system.

### "Suzuki Rules of Corporate Ethics" Standards of Behavior

- Suzuki's Directors and employees, etc. shall recognize social responsibility of the Company and soundly manage their business in good faith.
- Suzuki's Directors and employees, etc. shall comply with related regulations, guidelines and fair rules in performing their duties.
- Suzuki's Directors and employees, etc. shall, in every aspect, respect human rights, and shall not make any discrimination by race, creed, sex and social status.
- Suzuki's Directors and employees, etc. shall make a clear distinction between business and private matters, and shall not use the Company's property or business position for private interests.
- Suzuki's Directors and employees, etc. shall strictly protect confidentiality of the Company's information, unless it has been officially disclosed outside the Company. Also, they shall take meticulous care for handling personal information.
- Suzuki's Directors and employees, etc. shall take a firm position against antisocial groups, organizations, etc. and shall not have any relation with them.
- Suzuki's Directors and employees, etc. shall be conscious of being a member of the Company, and shall not interfere, even outside working hours, with the company operation by any conduct against regulations and social norms.
- Suzuki's Directors and employees, etc. shall act cautiously, recognizing that crises to the Company or the local community such as fraud, illegal activity or natural disaster could arise at any time, and should crisis occur, they shall act swiftly in accordance with rules prescribed in rules, procedures and manuals and try to block of the spread of damage.



Corporate Philosophy and CSR / 03 CSR Management System

### **Corporate Ethics System Organization**



### **Employee Consultation Service**

As a system established under the Suzuki Rules of Corporate Ethics, we provide the "Employee Consultation Service" throughout the Company. This service allows our employees to prevent illegal, unjust and unreasonable act in Suzuki and aims to achieve sustainable company development through the creation of a more comfortable workplace for our employees and establish ourselves as a trustworthy company.

Issues that are handled by this service include not only facts or suspected facts of law violation, but also matters on questions and worries regarding various affairs at work, and business improvement.

Moreover, in order to ensure fairness, this system allows employees to directly consult with outside attorneys other than the in-house consultation service section by telephone or e-mails.

### Crisis Management System

Crisis management procedures are laid down within the "Suzuki Rules of Corporate Ethics" as a countermeasure to crisis that may occur from illegalities and injustices inside/outside the company, or natural disasters or terrorism, which are impossible for the Company to prevent.

When the Corporate Ethics Committee finds risks that may cause urgent and serious damages to the corporate management and business operations, the committee immediately sets up a "Crisis Management Task Force" in line with the "Crisis Management Procedures" in order to deal with the crisis. This organization swiftly decides on the policies and measures to be taken against the risk occurred and gives instructions to the appropriate departments and divisions which are then able to communicate with each other to resolve the problem.

### **Crisis Management Procedures Chart**





**Efforts for** 

Corporate Philosophy and CSR / 03 CSR Management System

### Protecting Personal Information

We fully recognize that personal information (information regarding our customers, business partners, shareholders, investors, employees, etc.) is a valued asset that we receive from individuals, and it is our obligation under the law and our accountability to society, to handle this information properly and with care. In response to this, we established the "Suzuki Personal Information Protection Code" in April 2005, which sets the basic rules governing the proper handling of personal information.

To familiarize our employees with this code, the "Manual for Handling Personal Information (includes handling book)" was established for use in employee seminars and individual divisions. In addition we provide points to keep in mind when handling personal information through our in-house homepage, and the management office provides a reference service to respond to more detailed questions from individual sections. All employees come to fully understand the proper way to handle personal information through these activities.

Our sales distributors receive guidance along with the rules, manuals, and the "Manual for Handling Personal Information" for all employees, and are provided with reference services, etc., through the related sections in regard to detailed questions from individual companies. We also offer occasional employee seminars, etc. at each distributor office, to familiarize everyone with the personal information protection procedures. In the future, the Suzuki Group will continue to reexamine and improve the personal information protection system.

### Personal Information Protection System



For the details on the handling of personal information, refer to the following website. (http://www.suzuki.co.jp/privacy\_statement/index.html) (in Japanese language only)

Efforts for

Corporate Philosophy and CSR / 04 Disaster measures by Suzuki

Corporate Philosophy and CSR

### J4 Disaster measures by Suzuki

### • Contribution to construction of storm surge barrier in costal zone of Hamamatsu City

Suzuki has decided to contribute 500 million yen in total to "Hamamatsu City Tsunami Protection Measure Fund" that Hamamatsu City founded for constructing the storm surge barrier as a measure for tsunami caused by an earthquake. The Suzuki Suppliers Association organized by Suzuki's associated companies has also decided to contribute 39.06 million

yen in total for five years.

Suzuki's contribution of 500 million yen in total for five years is a participation to the fund-raising project announced by the Hamamatsu Chamber of Commerce and Industry to raise 5,000 million yen in total for five years from its member companies.

Suzuki has contributed 200 million yen in fiscal March 2013.

### Disaster measures

Our group had taken various preventive measures supposing a Tokai/Tonankai Earthquake. However, after the Great East Japan Earthquake, we acquired a site in Miyakoda District in the northern part of Hamamatsu City in order to move the facility in Ryuyo District in Iwata City, Shizuoka Prefecture, where we expect to have tsunami damage. Also, production of minivehicle engines, which used to be concentrated in the Sagara Plant, was partially shifted to the Kosai Plant, and expansion of research facility in India was promoted not only for researches but also as means to decentralize potential risks of the Sagara test course, which is the development base of automobiles. In this wise, we decentralized production and research bases both in Japan and overseas. We will continue to improve our ability to cope with disasters.

### Measures against earthquakes and tsunami taken by Suzuki for local residents

A part of Suzuki's facilities is registered as an emergency shelter for local residents when a disaster occurs. We have a system for an earthquake to deploy watchmen on the roof of the headquarters, let them check occurrence of Tsunami, and sound a siren to notify residents when tsunami is found. Manual and electric sirens are installed on the roof of the headquarters. The electric siren is designed to be operated even with the dedicated electricity generator in case of a power failure.

### Measures against earthquakes and tsunami taken by Suzuki for employees

Refuge areas and evacuation routes were reviewed at each office, giving top priority to protecting employees' lives from earthquakes and Tsunami damages. We introduced the Earthquake Early Warning system to offices expecting damage by tsunami and established the system to assure that all employees can evacuate safely to the place which water will not reach. We have a system to confirm safety of employees immediately when a disaster occurs via satellite telephones set at each plant and sales distributors all over in Japan as an emergency communication tool. We conduct a drill for satellite telephones every month to be ready for an emergency.

In addition, we introduced the relief method training by retired fire fighters so that we ourselves can arrest bleeding or treat injuries upon large-scale disasters.

Furthermore, in order to confirm safety of off-duty employees, we introduce the "safety information system" in case an earthquake or tsunami occurs. In order to confirm safety of employees and their family, this system automatically sends "safety inquiry mail" to mail addresses that each employee has registered and those who receive the mail send a reply about their own safety situation.







Corporate Philosophy and CSR / 04 Disaster measures by Suzuki

### Measures for disasters at plant

In preparation for disasters, an earthquake drill with all employees participated in is conducted at the headquarters and each plant.

A fire drill using fire extinguishers and fire hydrant is conducted at plants so that everyone in a worksite can perform firstaid fire fighting.

Also, water discharge drills by fire engine or small transportable pump are performed for promoting individual disaster prevention activities by the private fire brigade.

Above all, the premises of headquarters, Kosai Plant, Iwata Plant, Osuka Plan, and Toyotkawa Plant are certified as cooperative business entities for local fire brigades by Hamamatsu City, Kosai City, Iwata City, Kakegawa City, and Toyokawa City, respectively because of their contribution to reinforcement of local fire-fighting and disaster-prevention system etc.









# **Starting Suzuki Environmental Plan 2015**

### **Establishing Suzuki Environmental Plan 2015 and promoting environment activities**

In order to hand over the beautiful earth and affluent society to next generations, Suzuki established "Suzuki Environmental Plan 2015" in March 2013 that demonstrates the orientation and actions for Suzuki's environmental business activities from fiscal 2012 to fiscal 2015 based on "Suzuki Global Environment Charter"



We established "Suzuki Environmental Conservation Action Plan" in 1993 as a medium/long-term plan for environmental conservation, revised the plan in 2007 (fiscal 2007 edition), and newly created "Suzuki Environmental Plan 2015" in March 2013. "Suzuki Environmental Plan 2015" consists of four themes "Control of Global Warming", "Promotion of Environmental Conservation etc.", "Promotion of 3R (Reduce, Reuse, and Recycle)", and "Cooperation with Society". Its target missions are to reduce substance of concern generated from development, production, logistics, and offices, and to ensure environmental communication. Compared to "Suzuki Environmental Conservation Action Plan," the target missions are expanded globally (excluding a part of them) and objects for communication are expanded to suppliers.

In order to accomplish the goal of "Suzuki Environmental Plan 2015," Suzuki controls business through the PDCA cycle, conducts continuous improvement, and promotes activities to reduce influence to the environment.



 PDCA: Approach for activities that regards Plan, Do, Check, and Action as one cycle. Because this approach is not only to plan and implement but also to evaluate and review the action, activities can be conducted with constant improvement by feeding back effects or lessons learned. Efforts for Environment

Efforts for Society

**Environmental Data** 

ecial Article 2 Promotion of Manner Improvement Activity

# **Promotion of Manner Improvement Activity**

100th Manner Improvement Activity



Suzuki registered to "Hamamatsu City Road/River Foster-parent System"\* in September 2004 to improve manners and awareness of environmental beautification of our employees, and started volunteer activities for cleaning underground passages and public roads around the headquarters. We name this activity "Suzuki Manner Improvement Activity" and conduct it continuously on a monthly basis. It reached its 100th activity in January 2013, and burnable and non-burnable wastes we had collected in total reached 45 mini-truckloads.

 Bodies wishing to be foster parents determine the area and details of activities, proffer them to the mayor, and perform cleaning on the street etc.



1st Manner-up Activity



50th Manner-up Activity

Besides the Manner Improvement Activity, we participate in cleaning activities near plants, local environment events, etc., and try to communicate with the community in relation to environment. In addition, these activities were conducted in group companies in Japan. Suzuki Marine develops "Clean Up the World Campaign" and is promoting clean-up activities with 13 offices and sales distributors in Japan and overseas.





Received an official commendation as an "excellent road welfare body" from the Shizuoka Highway Users Conference on August 1, 2012

Special Article

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**Environmental Data** 

**Special Article 3** Manufacturing Automobiles Considering Safety and Environment

### Special Article 3

# **Manufacturing Automobiles Considering Safety and Environment**

### **Installing Advanced Safety Technologies**

Because minivehicles are used by many people, in order to reduce accidents due to careless mistakes such as looking aside just for a moment or unintentionally lacking concentration while in traffic or driving for a long time as much as possible, we pursue safety applicable to wider varieties of scenes.

We introduced advanced safety technologies such as the Radar Brake Support [collision mitigation brake] and unintended start control system to the Wagon R launched in July 2013 and the Spacia launched in September 2013 as charged maker option. We support safety of drivers.





### Installation of Radar Brake Support [collision mitigation brake]

The automatic braking system reduces damage by "rear-end collision" due to inattention to the ahead of the driver.

When driving slowly due to traffic congestion, the laser radar detects the vehicle running ahead and activates the automatic braking system if it recognizes that collision cannot be avoided. This avoids hazards such as rear-end collision or reduces damage if collision occurs.



The laser radar works even on rainy days because it is in the operating zone of the wiper.

Operating over the laser radar is detecting the vehicle running ahead while driving at approximately 5 km/h - 30 km/h (The radar does not normally detect pedestrians or motorcycles, but may activate the automatic braking system under some circumstances.)



- The laser radar installed in the cabin measures the distance to the vehicle running ahead. When the collision risk rises, the automatic brake is activated.
- Collision may be avoided when the difference in the speed to the vehicle running ahead is approximately 15 km/h or less, and collision is mitigated when the difference in speed is approximately 30 km/h or less.

When the automatic brake is activated, the indicator on the meter flashes and a buzzer goes off to warn the driver of hazard.

\* When the radar brake support is activated, the vehicle suddenly brakes. Check that all passengers wear seat belts properly to ensure safety. \* After the automatic brake is activated, the vehicle moves forward due to the creep phenomena. Be sure to step on the brake pedal.



### Unintended start control system

Contributes to avoidance of collision caused by misoperation of pedals or shifts.

The laser radar detects the frontal obstacle when the vehicle is parked or driving slowing at approximately 10 km/h or less. When the accelerator is strongly stepped on with the shift set in "forward" position, output from the engine is automatically controlled to suppress sudden start or acceleration. This contributes to avoidance of collision in a parking lot etc.



When the laser radar is detecting an obstacle within approximately 4 m ahead with the vehicle parked or driven slowly at approximately 10 km/h or less.

• The shift position is "forward (D, L)" (including S mode).

When it recognizes that the turning angle of the steering wheel is small and the accelerator pedal is strongly stepped on.



Suppress the engine output for up to 5 seconds to slacken startup and acceleration. At the same time, the indicator on the meter flashes and a buzzer goes off to warn the driver of hazard.

Indicator on Meter Flashes

Engine Output Control

\* This function does not activate the brake and stop the vehicle.

**Special Article** 

**Efforts for Efforts for Society** 

**Efforts by Plants** 

**Environmental Data** 

### Special Article 3 Manufacturing Automobiles Considering Safety and Environment



### **Emergency stop signal**

Notifies the following vehicle of sudden braking by a light signal.

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When the brake is hit while driving, the hazard lamp automatically starts flashing quickly. This notifies the following vehicle of sudden braking.

Operating When the sudden braking is detected at approximately 55 km/h or more. conditions



### ESP<sup>®</sup>[Electronic Stability Program] Improves stability at corners.

\* ESP is a registered trademark of Daimler AG.

When tires are about to slip at a corner, the vehicle automatically applies brakes on wheels as needed and controls the output from the engine. This contributes to stable driving of the vehicle together with the four-wheel ABS with EBD.

\* The reduction level of engine output, the wheel which the brake is applied to, and the strength of braking vary depending on driving status. ESP® is only a device to assist stable driving. When slip or sideslip occurs exceeding the limit of grip force between tires and road surface, the effect by EPS® may not be expected even if it is activated.



When front wheels cause sideslip When front wheels cause sideslip and the vehicle is about to get out of the curve, engine output is reduced and, at the same time, the brake acts on the inner rear wheel to correct the direction of the travel.



When rear wheels cause sideslip When rear wheels slip and the vehicle is about to spin, the brake acts on the outer front wheel to correct the direction of the travel.

### Installation of low fuel consumption technologies

A new variation equipped with technologies for reducing fuel consumption such as the newly developed "dual jet engine" and the deceleration energy regeneration mechanism "ENE-CHARGE" are introduced to the Swift released in July 2013, in order to improve the environmental performance.



The combustion chamber in the dual jet engine is designed to be smaller than the conventional ones to satisfy both the engine performance and the environmental performance at high dimensions. Thorough knocking suppression technologies (cooling technologies) are gathered while raising the compression ratio. By installing dual injection system that improves heat efficiency, cooled EGR system that increases the effects of knocking suppression, etc., we realized the optimum compression ratio "12.0" that converts fuel energy to power at maximum without lowering the output or torque. We also reduced various energy losses and pursued heat efficiency to the utmost limit. This contributed in realizing the lowest fuel consumption of gasoline vehicles in Japan<sup>\*1</sup> with the engine displacement of 1.2L or higher, while ensuring power required for dynamic driving.

\*1 Based on JC08 test cycle of XG-DJE, XL-DJE, and XS-DJE 2WD vehicles (verified by Japan's Ministry of Land, Infrastructure, Transport and Tourism). Excludes hybrid vehicles. Based on Suzuki research in July 2013.

### The lowest fuel consumption of gasoline vehicles in Japan\*1 with the engine displacement of 1.2L or highe

ENGINE

### <XG-DJE, XL-DJE, XS-DJE>

Measured in JC08 test cycle (verified by Japan's Ministry of Land, Infrastructure, Transport and Tourism)

JC08 mode 2WD CVT vehicle



\*2 Fuel consumption rate is a value tested under certain conditions. The rate may vary depending on actual use conditions (weather, traffic, etc.) and driving situations (sudden start, use of air conditioner, etc.).



Dual injection system that contributes to improvement in heat efficiency



Cooled EGR system that increase the effects of knocking suppression



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Special Article 4 Efforts by Suzuki Sales Distributors

### Special Article 4

# **Efforts by Suzuki Sales Distributors**

Suzuki sales distributors directly provide customers with Suzuki's products and services, and are closest to customers. Through such sales distributors, Suzuki is working on improving e customer satisfaction to have as many customers as possible to become Suzuki fans and have trust in Suzuki.

### **Fans Net Declaration**

Suzuki sales distributors have started "Fans Net Declaration" since 2008 in order to have as many customers as possible to become Suzuki fans. This is an activity of distributor staff, who always deals with customers, to think what they should do for customers by themselves and actually put their ideas into actions. At each activity base, Fans Net meetings are periodically held by selected promotion committee members.

### To be a shop which customers can visit casually

All staff members are set out to welcome customers with their best smiles so that both new and long-time customers can casually enter the shop and have comfortable time. In addition, we warmly give advice to customers about their car life such as maintenance and repair, and do our best to improve customer satisfaction.



お客様とお約束したことは さず守ります。

Hamamatsu Inc.

Suzuki Motor Sales

Hamamatsu Inc.



### **Providing information**

Suzuki sales distributors provide information such as launch of new model, event, explanation of recommended products and services, and regular inspection on the web page or via direct mail, e-mail, phone call, etc.\* in order to assure that our customers can use Suzuki cars safely and with satisfaction. When recalls occur, we promptly notify related customers of the outline of the countermeasure, details of repair/replacement, schedule, etc., and take appropriate actions.

\* The personal information used for direct mails, e-mails, and phone calls is limited to the contents that customers have agreed in advance.

### Improvement in service quality



We will continue activities to improve skills of sales and service staff through the said qualification system and to gain trust of customers.

### Suzuki sales person certification

We conduct test to check not only the knowledge of our products but also the proficiency level of ability to make proposals to customers, ability for negotiations with customers, and knowledge of after-sale services. This test is conducted at all sales distributors in Japan in order to improve skills to attend to customers.

### Suzuki Service Skill Qualification

This system is designed to promote volition for self-enlightenment of individual service staff members, while improving their technical skills and customer care performance.





**Efforts for Society** 

**Efforts by Plants Environmental Data** 

ecial Article 5 Suzuki Plaza - field trips of elementary school students

### Special Article 5

Introduction

## Suzuki Plaza field trips of elementary school students

**Efforts for** 

Environme

history and manufacturing spirit to the public. Visitors can see a lot of our products since our foundation as a loom maker including looms, motorcycles, and automobiles that had been developed with the times, and the current automobile manufacturing process from development to production.

The Suzuki Plaza is utilized by a number of local elementary schools as a good place for field study on the automobile industry. By experiencing the

"plant tour" where they can see Suzuki's manufacturing site and by also visiting the Suzuki Plaza that introduces the development phase before manufacturing automobiles, they can learn the manufacturing process of automobiles in details.

We had more than 15,000 students from 200 schools last fiscal year.

Engine Assembling / Disassembling

Experience

In addition, we hold events for children as an opportunity to enhance our relationship with the local community and to have them interested in "manufacturing." Those events are related to the history and manufacturing spirit of Suzuki, allowing children to enjoy learning through experiencing in a different

179

168

200

Fiscal 2010

Fiscal 2011

Fiscal 2012







Making New Year's Pine Tree Decoration

The Suzuki Plaza will continue to hold such events to stimulate children's interest in "manufacturing". We hope that we can help children deepen their knowledge of the automobile industry by accepting field trips of many elementary schools. And, we will continue to do our best to become the institution that makes local people happy.

Hand Loom Operation Experience





14,634

14,724

15,619

# Efforts for Environment

### **PROMOTION OF GLOBAL ENVIRONMENTAL EFFORTS**

Since the establishment of "Suzuki Global Environment Charter" in March 2002, Suzuki has been promoting efforts for environmental conservation, aiming to realize a society with sustainable development, as well as to ensure the company's existence. This section introduces our environmentally related activities.

Promotion of Environmental Management
Control of Global Warming 27
Promotion of Environmental Conservation etc. 41
Promoting the Three Rs (Reduce, Reuse, and Recycle)49
Cooperation with society 59

Efforts for Environment

Efforts for Society V

Efforts by Plants V Environmental Data

Promotion of Environmental Management / 01 Suzuki Global Environment Charter , 02 Suzuki Environmental Organizational Chart

**Special Article** 

### **Promotion of Environmental Management**

In order to hand over the beautiful earth and affluent society to next generations, Suzuki regards consideration to environmental issues such as global warming as one of the most important challenges for our business activities. Under such a concept, we aggressively promote reduction of environmental impact that may be generated through our R&D, production, physical distribution, marketing and office activities by establishing a group-wide environmental management system, while maintaining good communications with our individual stakeholders.

# 01 Promotion of Environmental Management Suzuki Global Environment Charter

### Suzuki Global Environment Charter (Established in 2002 and revised in 2006)

### [Environmental Concept]

Introduction

In order to hand over the beautiful earth and affluent society to next generations, we must all realize that the actions of each and every one of us have a great effect on our earth's future, so we must make every effort to preserve our environment.

### [Basic Environmental Policies]

- •Strictly observe environmental laws and also follow our own standards.
- •Reduce the pressure placed on the environment resulting from our business activities and products.
- •Maintain and improve upon our environmental management system.
- Promote environmental communication.

D2 Promotion of Environmental Management Suzuki Environmental Organizational Chart

In April, 2001, Suzuki established the Suzuki Environmental Committee as the top decisionmaking body in the environmental management system for the entire Group.

Meetings by Suzuki Environment Committee are held twice a year to determine our environmental policy and long-and mid-term environmental goals, check the progress in the existing issues, and discuss urgent problems.

### Environmental Organizational Chart of the Suzuki Group



AS OF OCTOBER 2013

環境への取り組み

Promotion of Environmental Management / 03 ENVIRONMENTAL PLAN

03
Promotion of Environmental Management
ENVIRONMENTAL PLAN

特集

### Suzuki Environmental Plan 2015

				Suzuki Environmental Plan 2015		
		Concrete implementati	on items and targets	Major results in fiscal 2012		
			Raise efficiency by improving the engine and/or drive system, and adopt new mechanism.	[Automobiles] -Introduced "ENE-CHARGE," "new idling stop system (Engine Auto Stop Start System)" and "ECO- COOL" to the new WAGON R. -Improved CVT with an auxiliary gearbox and adopted low-viscosity oil. -Developed technologies used for the new WAGON R to the new ALTO ECO and new SPACIA. [Motorcycles] -Reduced friction (frictional resistance) of the engine and improved heat efficiency of the engine by improving combustion. -Optimized CVT control for large scooters such as the new SKYWAVE 650LX (BURGMAN 650/Executive in overseas market).		
	incy	One of the lowest fuel	Reduce the vehicle body weight by reviewing structure, changing materials, and/or reviewing manufacturing methods.	[Marine & power products] •Adopted "Lean Burn Control System" for DF250AP. etc. [Automobiles] •Reduced weight of the new WAGON R by 70kg compared to the previous model by improving body, engine, suspension system, and interior parts. •Reduced weight of the new SPACIA by 90kg compared to the base model (PALETTE) by adopting high-tensile steel plate to 42% of the whole body weight.		
	fuel efficie	consumption by adopting SUZUKI GREEN Technologies.		[Motorcycles] -Reduced weight of the V-Strom 650 ABS by 6kg compared to the previous model (overseas specification) by downsizing the ABS unit and changing the material of the rear carrier from aluminum to resin. [Marine & power products]		
	Improvement in fuel efficiency		Reduce running resistance of the whole vehicle such as air resistance and rolling resistance.	-Reduced weight of the DF140A by 7kg compared to the previous DF140 by changing the material of the engine cover, etc. [Automobiles] -Reduced rotational resistance of the new WAGON R and the SPACIA by adopting low rolling resistance tires and improving the shaft bearing. -Adopted front bumper windshield molding with excellent aerodynamic characteristics for the new SPACIA. [Motorcycles] -Reduced air resistance of the V-Strom 650 ABS by 2.6% compared to the previous model by meticulously building the shape of cowling and windscreen. [Marine & power products]		
ning				-Realized fluid resistance of the DF250AP equivalent to the current DF250 by meticulously building part shape utilizing fluid analysis to meet its increased fluid resistance due to an enlarged gear case.		
bal warm		Improve global average fuel efficiency.	[Automobiles] Improve by 25% (compared to fiscal 2005).	[Automobiles] -Improved by 24%.		
Control of global warming			[Motorcycles] Improve by 25% (compared to fiscal 2005).	[Motorcycles] -Improved by 14%.		
Contro			[Outboard engines] Improve by 10% (compared to fiscal 2005).	[Outboard motors] -Improved by 0.5%.		
	xt- es	[Automobiles] Promote development of	Develop low-price hybrid car.	[Automobiles] •Developing an automobile equipped with a low-cost hybrid system suitable for small cars.		
	of ne ehiclo	next-generation models suitable for small cars.	Develop a small EV suitable for daily life.	[Automobiles] •Planned a social trial.		
	Development of next- generation vehicles	[Motorcycles] Develop electric vehicles for	global markets.	[Motorcycles] •A trial using the electric motorcycle e-Let's* "Let's make e-KUNI (ecological country) - Kamakura bike project" is being conducted. *Test to integrally operate the electric motorcycle and battery charging/replacing system.		
	Dev	[Hydrogen fuel cell] Develop a light, compact, and cell.	d low-cost air-cooled fuel	[Motorcycles] •Continued trial for the air-cooled hydrogen fuel cell motorcycle -"Burgman Fuel Cell Scooter"- and promoted development for utilization.		
	Energy-saving for business operations	Promote energy-saving activi such as by improving produc energy-saving equipment, an saving activities.	tion efficiency, introducing	<ul> <li>Posted on the in-house homepage, power consumption, quantity of printing paper used, and progress of other various activities of major offices and buildings in relation to behavior standards established in "Suzuki Rules of Corporate Ethics".</li> <li>Installed LED lights in offices.</li> <li>Implemented activities at the plants such as high-efficiency of pressure control air compressor, introduction of inverter pumps/fans, reduction of air leakage, and switching off lights during break time.</li> </ul>		
	Energy busines	Target reduction of total CO2 domestic offices: Cut by 15% Maintain the top level in Japa production quantity.	(compared to fiscal 2005)	-Cut by 12.6%		
	Energy-saving for distribution	<ul> <li>Improved transportation effit transportation routes and pa Improved fuel efficiency of t introducing eco-drive suppo employees economical drivi</li> </ul>	acking style. rransportation vehicles by ort equipment, teaching	<ul> <li>Promoted modal shift by newly establishing the pre-delivery inspection center.</li> <li>Shortened the distance to transport engines by building a new engine plant adjacent to the assembly plant.</li> </ul>		
	Ener for d	Target of CO <sub>2</sub> emission reduction destinations per sale: 25% (cor		-24% for destinations in Japan and 43% for overseas destinations		
Promotion of environment conservation etc.	uo			[Automobiles] •Conformance to emission gas regulations in Japan •Made all new models conform to the 2005 emission regulations (new long-term regulation).		
of envi	Air pollution	Introduce low-emission vehic circumstances in each count		Automobiles conforming to emission regulations Automobiles conforming to 2005 emission regulationsNo. of models and types 6 types of 6 models		
motion c conserv	Air po		.ı y.	☆☆☆ Low emission cars Cut 2005 emission regulations by 50% 4 types of 3 models ☆☆☆☆ Low emission cars		
Pro.				Cut 2005 emission regulations by 75% 15 types of 11 models		

Introduction	$\mathbf{i}$	Special Article	
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Efforts for Environment

Efforts for Society V Efforts by Plants

### Promotion of Environmental Management / 03 ENVIRONMENTAL PLAN

Suzuki Environmental Plan 2015						
		Conci	rete imple	ementation items and targets	Major results in fiscal 2012	
rvation etc.	Air pollution	Introduce low-emission vehicle appropriate for circumstances in each country.			[Motorcycles] •The SKYWAVE 650LX has realized reduction of emission gas by installing 02 sensor feedback control and metal honeycomb catalyst, and conformed to the 2007 regulations (WMTC*). *WMTC (Worldwide-harmonized Motorcycle Test Cycle mode): Worldwide standard emission gas test procedure for motorcycles [Outboard motors] •Achieved three-star level of CARB* regulations for all of four-stroke outboard motors. •Expanded 7 models (DF9.9B/15A/20A, DF100A/115A/140A, and DF250AP) as models conforming to local regulations. *California Air Resources Board	
ient consei	control of of concern 1 products	Conformance to local regulations concerning new chemical substances.			•Operate a management system that collects substance data used in automobiles in order to satisfy local regulations and reduce risks concerning new chemical substances.	
f environm	Reinforce control of substances of concern contained in products	Promote global reduction of use of substances of concern and replacement of SVHC (substances of very high concern).		uction of use of substances of ement of SVHC (substances of very	-Continued to promote global reduction of use/control of substances of concern contained in products and to replace SVHC.	
Promotion of environment conservation etc.	Reduction of VOC in car interior	[Automobiles] Globally promote use of alternative materials that generate less VOC in order to improve environment in car interior.			<ul> <li>Reduced generation of VOC (Volatile Organic Compounds) by reviewing materials of interior parts, adhesives, painting method, etc.</li> <li>Accomplished autonomous actions of the Japan Automobile Manufacturers' Association for the new SPACIA.</li> <li>Globally expanded reduction of VOC in car interior of new-model vehicles.</li> </ul>	
-	Reduce VOC in the painting process.				•Cut by 41.9%	
		ß	Increase	use of recyclable resin.	-Utilization rate of polypropylene for exterior resin parts of SKYWAVE 650LX has been increased, compared to the previous model, and its ease of recycling has been improved.	
		Consideration to recycling	parts to t [Japan]	design that eases disassembly of e recycled. 70% or higher ASR recycling rate.	•Optimized mating structure of resin parts of ADDRESS V125 series. •Disassembly of resin parts has been made easier for the BANDIT 1250F by integrating parts etc. •Accomplished (95.5%).	
		nsideratio	[Japan]	n and recycle of used bumper.	<ul> <li>Increase the quantity of collected used bumper by 11% compared to fiscal 2011.</li> <li>Recycled collected bumpers to make automobile parts such as battery holder, engine under cover, foot rest, etc.</li> </ul>	
cle).		Con	[Oversea: Conforma	s] ance to local automobile recycle law.	•Completed configuration of ELV (End-of-Life Vehicle) collection network in 27 countries in EU.	
lse, recy	sources	Packing materials	corrugate of returna	acking materials such as ed cardboard by Increasing the use able containers.	<ul> <li>Reduced corrugated cardboard of approximately 97t by using returnable containers for shipping.</li> <li>Reduced corrugated cardboard of approximately 168 t by using returnable containers for receiving.</li> </ul>	
e, reu	of re:		Promote cardboar	recycling of waste corrugated d.	<ul> <li>Re-used approximately 41t of waste corrugated cardboard from the plant for cushioning materials to prevent parts from being damaged.</li> </ul>	
R (reduc	Effective use of resources	Packi	Reduction target for use of packing materials and corrugated cardboard per output 10% (compared to fiscal 2005)		•Cut by 15.8%	
Promote 3R (reduce, reuse, recycle)		Waste materials	Maintain	al] the zero-level landfill waste. less than 1.0% ed to fiscal 1990).	-The zero level has been continued.	
đ		Waste m	[Group] Continue the zero-level landfill waste. Maintain less than 1.0% (compared to fiscal 2002).		•The zero level has been continued.	
		Water resources	Thorough	water saving at plants and offices	[Plants in Japan] •Adopted closed-type cooling tower, introduced air-cooling system for small air conditioner, adopted water-saving faucet, used rainwater, collected cooling water, etc. •Water consumption in fiscal 2012: 3.54 million m <sup>3</sup> (+6.3% compared to fiscal 2011) [Office] •Continued enlightenment activity such as putting up posters in washroom and restroom to	
					request saving water, etc. [Business operations, product development]	
	Expansion of environmental communication	Efforts for biodiversity protection		Promote the activity based on "Suzuki Biodiversity Protection Guidelines" to realize protection of biodiversity and its sustainable use.	<ul> <li>Implemented efforts to reduce influence to biodiversity, such as global warming countermeasures, resource circulation, reduction of substances of concern, and pollution control.</li> <li>[Cooperation with local society]</li> <li>Implemented forest conservation, environmental beautification, and environmental education.</li> <li>(ex. The Shimokawa Proving Grounds was registered as "FSC certification program.")</li> </ul>	
Cooperation with society		cooperation with		Promote environment conservation activity based on "Suzuki Green Procurement Guideline" and follow environmental laws/regulations.	<ul> <li>Promoted green procurement activity for parts, items, raw materials, secondary materials, packing materials, machinery, and equipment, considering human health and environment.</li> </ul>	
		Enhancement of environmental education		Promote environmental education for employees including new employees and overseas trainees.	<ul> <li>Adopted basic environmental workshops concerning environmental philosophy, policy, and issues into our new employee education program, and promoted change in awareness on environment.</li> <li>Implemented environmental education according to job functions, and internal environment auditor training for management level employees etc.</li> <li>Accepted trainees from overseas (plant managers, production engineers, R&amp;D staff, responsible persons) and provided them with our environmental education accordingly. (53 trainees had the training in fiscal 2012.)</li> </ul>	
U	pansion			Continue the in-house eco-drive education	<ul> <li>Implemented at the headquarters and other offices.</li> <li>2,349 employees had attended in total by fiscal 2012 (this seminar brought about an effect of improvement in fuel efficiency of in-house cars by 0.2 km/L).</li> </ul>	
		Disclosure of environmental information		Prepare "Suzuki Environmental and Social Report (in Japanese and English) to transmit the information about environment conservation activity to societies.	-Issued in November 2012	



### Topics

### Topics

### Environmental brand SUZUKI GREEN

In March 2013, we introduced the environmental brand "SUZUKI GREEN" that clarifies efforts concerning environment including policy, next-generation environmental technology, and activities, and widely shows them in and outside the company, in order to realize the "Suzuki Global Environment Charter" that defines the philosophy and basic policy related to environment. "SUZUKI GREEN" consists of three categories: "SUZUKI GREEN Policy" which means environmental policy, "SUZUKI GREEN Technology" which means next-generation environmental technologies, and "SUZUKI GREEN Activity" which means environmental activities.

### • SUZUKI GREEN Policy

Environmental plan, various guidelines, etc. that describe Suzuki's measures and policies concerning environment •Suzuki Environmental Plan 2015

http://www.globalsuzuki.com/corporate/environmental/green\_policy/index.html#envPlan

·Suzuki Biodiversity Protection Guidelines

http://www.globalsuzuki.com/corporate/environmental/green\_policy/index.html#guideline

### SUZUKI GREEN Technology

Next-generation environmental technologies that Suzuki has developed and used for products (including new technologies for improving fuel efficiency, weight reduction, etc.)



### • SUZUKI GREEN Activity

Efforts and activities conducted to realize Suzuki's environmental philosophy (including various activities performed by departments of development, production, logistics, etc. for suppressing global warming, promoting environmental conservation, etc.)

- •Suzuki's Forest Planting Project
- ·Suzuki Clean-up the World Campaign

•Various actions taken at development, production, logistics, and offices for suppressing global warming and promoting 3R, environmental conservation, etc.



Planting project



Cleaning project

Special Article

Efforts for Society

Promotion of Environmental Management / 04Introduction of Environmental Management System

Promotion of Environmental Management

### **U**<sup>4</sup> Introduction of Environmental Management System

Efforts for Environment

### Efforts by Manufacturing Department

### Introduction of Environmental Management System

As one of environmental conservation activities, Suzuki is promoting introduction of Environmental Management Systems including ISO14001.

The ISO14001 is an international standard of environmental management system. By obtaining the ISO14001 certificate, Suzuki intends to follow the relevant regulations and reduce the environmental impact substances. Also, through periodical environmental audits, we verify the effectiveness of our environmental management system.

### **Domestic Companies**

All domestic plants already acquired the ISO14001 certificate before March 2003. As for our Group manufacturing companies, four manufacturing companies and three plants of Suzuki Auto Parts Mfg. obtained the certificate as of April 1, 2013.



### Domestic plants and Group companies that acquired ISO 14001

### [Suzuki] Domestic plants

Company's name		ISO acquisition month
1	Kosai Plant	Jul-'98
2	Osuka Plant	Sep-'99
3	Sagara Plant	Sep-'99
4	Toyokawa Plant	Dec-'00
5	Takatsuka Plant	Mar-'03
6	lwata Plant	Mar-'03

### [Domestic Group Companies]

### Group manufacturing company

	Company's name	ISO acquisition month
7	Suzuki Toyama Auto Parts Mfg. Co., Ltd.	Mar-'01
8	Suzuki Auto Parts Hamamatsu Plant of Suzuki Auto Parts Mfg. Co., Ltd. (former Suzuki Hamamatsu Auto Parts Mfg. Co., Ltd.)	Jun-'01
9	Suzuki Seimitsu Plant of Suzuki Auto Parts Mfg. Co., Ltd., (former Suzuki Seimitsu Industries Co., Ltd.)	Oct-'01
10	Suzuki Akita Auto Parts Mfg. Co., Ltd.	Mar-'02
11	Snic Co., Ltd.	Mar-'05
12	Hamamatsu Pipe Co., Ltd.	May-'05
13	Enshu Seiko Plant of Suzuki Auto Parts Mfg. Co., Ltd. (former Enshu Seiko Co., Ltd.)	Jul-'05



### **Overseas Companies**

As for overseas manufacturing companies, MAGYAR SUZUKI Corporation Ltd. obtained the certification in April 1998 for the first time in our Group. As of the end of March 2013, 12 overseas manufacturing companies obtained the ISO14001 certificate. Other Group companies are also making best efforts to acquire the certificate.

### Acquisition of ISO14001 Certification Overseas Group manufacturing companies



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	Company's name	ISO acquisition month
1	MAGYAR SUZUKI Corporation (Hungary)	Apr-'98
2	MARUTI SUZUKI INDIA LIMITED (India)	Dec-'99
3	SUZUKI MOTOR DE COLOMBIA S.A. (Colombia)	Dec-'03
4	PAK SUZUKI MOTOR Co., Ltd.(Pakistan)	Aug-'05
5	THAI SUZUKI MOTOR Co., Ltd.(Thailand)	Aug-'05
6	PT.SIM Cakung Plant (Indonesia)	Apr-'06
7	Tambun I Plant (Indonesia)	Aug-'08
8	Tambun II Plant (Indonesia)	Jul-'09

10	JINAN QINGQI SUZUKI MOTORCYCLE Co., Ltd.(China)	Aug-'04
11	CHONGQING CHANGAN SUZUKI AUTOMOBILE Co., Ltd.(China)	Nov-'04
12	VIETNAM SUZUKI Corp.(Vietnam)	Mar-'05
13	SUZUKI ASSENBLERS MALAYSIA SDN. BHD. (Malaysia)	Oct-'06
14	JIANGXI CHANGHE SUZUKI AUTOMOBILE CO., LTD. Jiujiang Plant (China)	Dec-'06
14	CO., LTD. Jiujiang Plant (China)	Dec- 0

Company's name

CO., LTD. Jingdezhen Plant (China)

JIANGXI CHANGHE SUZUKI AUTOMOBILE

ISO acquisition

month

Dec-'03

#### Manufacturing: Maintenance, Environment, and Energy-saving Meeting

We hold the "Maintenance, Environment, and Energy-saving Meeting" once a month in order to improve environmental management at domestic plants, die plants, and Group manufacturing companies.

At this meeting, engineering managers of domestic plants, die plants, and Group manufacturing companies (six companies and eight plants) get together to discuss improvements for environment conservation plan and matters related to domestic plants, die plants, and Group manufacturing companies while seeing actual systems on actual sites.

Decisions made at the meetings are rolled out to domestic plants, die plants, and Group manufacturing companies, contributing to environmental management activities.



• 24 •



### Environmental Audit

At Suzuki, external audit is conducted once every year by an external auditing agent. In addition, an internal audit is conducted to double-check our environmental management system.



### **External Auditing**

Auditing of documents and on-site auditing are carried out by third party organization in regard to the validity and adequacy of our environmental management system, to determine whether or not measures are being properly implemented.

In fiscal 2012, renewal audit was conducted at five plants and surveillance at one plant, and no nonconformity\*1 to ISO14001 requirements was found. Also, there were 24 items to be monitored\*2 in total, on which we will implement continuous improvement.

\*1 "Nonconformity" indicates a defect that needs immediate correction but is not critical to the system operation.
 \*2 "Items to be monitored" indicate matters that need not be immediately corrected, but continuous improvement is preferable.

### **Internal Audit**

For internal audits, two kinds of audits are conducted: one is an overall audit, and the other is a local audit. We select auditors that have no direct association with the section being audited, and they examine whether environmental management is being properly carried out or not.

### **Overall Audit**

To determine whether or not environmental management is being properly implemented, document and on-site auditing are conducted. In fiscal 2012, three items were pointed out, and 65 items were advised, all of which have been improved.



### **Local Audit**

### Preventive Audit

Thorough on-site observations are carried out while auditing in areas that possess potential for accidents such as drainage disposal facilities, chemical use/storage, and waste disposal facilities. In fiscal 2012, no items were pointed out, and 16 items were advised, all of which have been improved.

### Environmental Patrol

Areas that possess potential for accidents undergo regular patrol by the plant manager to prevent environmental accidents.

### Measures for domestic sales distributors

Environmental management is promoted at affiliate sales distributors in Japan in order to roll out actions concerning environment in business operations to Group companies.

Affiliate sales distributors in Japan are requested to promote activities for reducing energy consumption and amount of wastes, and assuring compliance with laws. At the same time, we are examining to introduce environmental management system.

Promotion of Environmental Management /05 Emergency Training , 06 Environmental Accidents, etc. , 07 Environmental Accounting

Efforts for

Fnvironment

05 Promotion of Environmental Management
Emergency Training

**Special Article** 

Introduction

We look for locations and operations that have the potential of causing an environmental accident <sup>(\*)</sup> and hold emergency drills with employees and other related suppliers at domestic plants and die plants. In fiscal 2012, 171 times of emergency drills (including 35 times of night drills) were conducted. These drills were also held at our overseas Group manufacturing companies.

\*"Environmental accident" refers to accidents that may affect environment such as leakage of chemicals.

Promotion of Environmental Management Environmental Accidents, etc.

We had one "environmental accident" and two "complaints."

The "environmental accident" occurred at the Kosai Plant. A failure of the power source at the incinerator plant stopped the equipment operation and gas which hourly CO concentration is 105ppm (although the standard value is 100ppm) was released into the atmosphere.

We reported this problem to the government office and implemented the recurrence prevention measure.

As for "complaints," we had two of them at the Iwata Plant. We reconfirmed control on devices etc. to prevent recurrence.

Promotion of Environmental Management

### **Environmental Accounting**

### Cost of Environmental Conservation

Change Fiscal 2012 Fiscal 2009 Fiscal 2010 Fiscal 2011 Investment **Expenses** Total **Pollution Prevention** 4.5 5.7 2.7 1.5 29 4.4 Business **Environmental Conservation** 4.6 2.4 1.6 0.2 2.1 2.3 Area Costs: **Recycling of Resources** 7.8 5.6 4.6 0.7 5.1 5.8 Total 16.9 13.7 8.9 2.4 10.1 12.5 Upstream/downstream costs 0.1 0.1 0.1 \_ 0.1 0.1 3.5 3.3 3.9 3.9 **Managerial Costs:** 3.2 \_ **Research and Development Costs:** 407.8 357.5 409.1 0.1 460.2 460.3 **Social Activities Costs:** 2.0 17 \_ 1.7 17 2.0 **Environmental Damage Costs:** 0.2 0.1 0.1 0.1 0.1 \_ 430.2 376.9 476.1 478.6 Total 423.2 2.5

### Effectiveness of Environmental Conservation

Fiscal 2009 Fiscal 2011 Fiscal 2012 Item Fiscal 2010 **Energy Cost Reduction** 1.8 29 2.6 2.6 Waste Management Cost Reduction 0.2 0.1 0.1 0.1 Economical Effect **Resource Saving** 32.1 39.7 37.4 37.7 (including recycle and valuable resource disposal) 34.1 42.7 40.1 40.4 Total

(Note) These are non-consolidated environmental figures.

(Unit: ¥100 million)

(Unit: ¥100 million)

Efforts for Environment

Efforts for Society

Efforts by Plants V Environmental Data

Control of Global Warming / 01 [Product development] Improvement in fuel efficiency

### **Control of Global Warming**

We will promote development of vehicles with the top-class low fuel consumption and next-generation vehicles in order to reduce CO<sub>2</sub> emission, which is regarded as the cause for global warming. In addition, we will thoroughly conduct energy-saving in production and distribution, and promote efficient business operations.

# 01 Control of Global Warming Product development Improvement in fuel efficiency

### **Automobiles**

In order to reduce CO<sub>2</sub> emission, which is regarded as the cause for global warming, we are working on development and improvement of products with emphasis on improving fuel efficiency.

### Improving Fuel Efficiency

• Average Fuel Efficiency by Weight Class The data of fiscal 2012 shows the fuel efficiency measured in JC08 test cycle. In the conventional 10/15 test

cycle, fuel efficiency was measured while the engine is warmed up (hot start). However, in JC08 test cycle, measurement is taken when the engine is cold (cold start). The weight class has also been subdivided.

Fiscal 2015 fuel efficiency standards were achieved in the 800kg, 910kg, and 1,810kg classes.

Lighter vehicles tend to allow for better fuel efficiency. Suzuki contributes to improvement of fuel economy for the entire motorized society by providing lightweight automobiles (mini vehicles, compact cars, etc) to as many customers as possible.

### Fuel Efficiency of Representative Models Suzuki's representative model

the WAGON R achieves low fuel consumption of 30.0 km/L<sup>\*1</sup> (measured in JC08 test cycle) with its 2WD CVT variant equipped with idling stop system (Engine Auto Stop Start System).

\*1 Fuel consumption rates are values obtained under specific testing condition. Rates may vary depending on actual use conditions (weather, traffic, etc) and driving situations (sudden starting, use of air conditioner, etc). Average Fuel Efficiency of Gasoline Vehicles Produced by Suzuki (by Body Weight) (Figures after fiscal 2004 exclude OEM vehicles.)



### Trends in Fuel Efficiency of Suzuki's Representative Model (Trends in Average Fuel Efficiency of WAGON R 2WD-AT/CVT)





### Efforts for 2015 fuel efficiency standards

Considering the 2015 fuel efficiency standard, we have made a future plan for further improving fuel efficiency and will put efforts into it.

Of the models launched in fiscal 2012, 9 types of 10 models (WAGON R, ALTO, ALTO VAN, LAPIN, MR WAGON, SPACIA, EVERY VAN, SWIFT, and SOLIO) meet the 2015 Fuel Efficiency Standard.

The volume of shipments of the models that meet the standard reached 471,811 units in fiscal 2012, accounting for 69.4% of the total quantity of domestic delivery. These models are subject to Eco-Car Tax Reduction.

### Fuel Efficiency Improvement Technologies

### Major improvements in fuel efficiency



### Improvement of Transmission

• Improvement of fuel efficiency through adoption of CVT (Continuously Variable Transmission) with an auxiliary gearbox, and its expanded adoption CVT with an auxiliary gearbox, which covers a wide range of transmission gear ratio, was first adopted on the PALETTE launched in September 2009, is now installed on all of Suzuki's mini passenger vehicles and compact passenger vehicles of 1.2-L and 1.6-L classes.

Employing low viscosity CVT fluid and ball bearing for the CVT differential side bearing, the ALTO ECO greatly reduces CVT friction, resulting in further improvement of fuel efficiency. Then, we expanded adoption of this improvement to all of mini passenger vehicles.

Control of Global Warming / 01 [Product development] Improvement in fuel efficiency

**Special Article** 

Introduction

### Further improvement in idling stop system (Engine Auto Stop Start System)

**Efforts for** 

Environmen

We have upgraded the idling stop system (Engine Auto Stop Start System), which is one of the important technologies for improvement in fuel efficiency. By stopping the engine when the vehicle speed becomes 13 km/h or lower during its deceleration right before its complete stop, the idling stop system (Engine Auto

Stop Start System) has become a system that suppresses unnecessary fuel consumption as much as possible to further contribute to improvement of fuel efficiency and reduction of gas emission and noise. Thanks to this improvement, the WAGON R achieved low fuel consumption of 30.0 km/L<sup>\*1</sup>, the SPACIA achieved 29.0 km/L<sup>\*1</sup>, and the ALTO ECO achieved 33.0 km/L<sup>\*1</sup>.

\*1 Based on fuel consumption measured in JC08 test cycle (verified by Japan's Ministry of Land, Infrastructure, Transport and Tourism). Fuel consumption rates are values obtained under a specific testing condition. Rates vary depending on actual use conditions (weather, traffic, etc.) and driving situations (sudden starting, use of air conditioner, etc.).



### Adoption of deceleration energy regeneration system "ENE-CHARGE"

The WAGON R launched in September 2012, and the SPACIA and the ALTO ECO launched in March 2013 adopted the newly-developed, high-efficiency, high-output generator and high-efficiency lithium-ion battery, and have been equipped with advanced generation system "ENE-CHARGE" which effectively generates

electric power with energy during deceleration, without depending on power of the engine. Adding to the effect of engine shutdown during deceleration, these technologies have contributed to further improvement in fuel efficiency.

Because ENE-CHARGE generates and charges regeneration power intensively during deceleration, loads to the engine during driving is reduced and easy and smooth acceleration is also realized.





ene-charge

### Development of "ECO-COOL", an air-conditioning system with freezable substance

We developed "ECO-COOL", an air-conditioning system with freezable substance that realizes both comfort and improvement in practical fuel efficiency by freezing the substance with the cold air emitted from the air-conditioner, and blowing the fan air through the frozen substance during engine shutdown, and adopted on the

**Special Article** 

Control of Global Warming / 01 [Product development] Improvement in fuel efficiency

Introduction

**Efforts for** 

Environmen

WAGON R launched in September 2012. We are planning to expand adoption of "ECO-COOL" to more models equipped with the idling stop system (Engine Auto Stop Start System) to be launched.

Image of operation of ECO-COOL

Speed 4 Time Evaporator, with built-in freezable substance Evaporator with built-in freezable substance Freezes the substance Blower far Outlet Blower far Air-conditioner ON Blowing Air-conditioner ON Blowing through the frozen substance Blows the fan ai During driving: Freezes the substance

### Extension of duration of engine shutdown and improvement in comfort

We extended duration of engine shutdown from the point the engine shuts down under a comfortable condition up until the car cabin temperature reaches the limit of comfort, to approximately twice\* as much as the duration of vehicle without ECO-COOL.

### Improvement in practical fuel efficiency

Improve practical fuel efficiency by 2 - 3% under conditions from spring to summer. (Results of in-house test measured in JC08 test cycle)



### Topics

### Improvement in fuel efficiency of the mini commercial vehicle, EVERY (3AT)

We improved the mini commercial vehicle EVERY (3AT) and launched it on April 10, 2013. By improving engine control and adopting lowe rolling resistance tires (only 4WD vehicle), the EVERY (3AT) improved its fuel consumption rate by +0.4 km/L\*1 for 2WD vehicle and +0.8 km/L\*1 for 4WD vehicle to achieve fuel consumption rate of 15.4 km/L\*1 for both 2WD and 4WD. Furthermore, by changing the catalyst, certificate for 75% lower level of 2005

Emission Standard was obtained. Thanks to these changes, all types of the EVERY (3AT) conform to the "Criteria for the Designated Procurement Items of the Law on Promoting Green Purchasing \*2," as well as becoming the only\*3 vehicle in the mini cab-overengine van class (gasoline vehicles) to subject to Eco-Car Tax Reduction \*4.

- \*1 Fuel consumption rate measured in JC08 test cycle (verified by Japan's Ministry of Land, Infrastructure, Transport and Tourism)
- \*2 Law Concerning the Promotion of Procurement of Eco-Friendly Goods and Services by the State and Other Entities
- \*3 Mini cab-over-engine van with NA (natural aspiration) gasoline engine and 3AT. Based on Suzuki research in April 2013. \*4 Reduction of acquisition tax is applicable to cars newly registered by March 31, 2015, and that of tonnage tax is applicable to cars newly registered by April 30, 2015.



Topics





Control of Global Warming / 01 [Product development] Improvement in fuel efficiency

### Reduction of vehicle weight

### Use of tailored blanks

Tailored blank is a manufacturing method by which steel parts having different thicknesses or materials (high tensile steel plate, plated steel sheet, etc.) are welded in advance with laser welding, etc., and then pressed. By applying this method to various panel components, it is possible to partially reinforce specific portions of the same component, without adding any part, thus avoiding weight increase.



### Extensive Use of High-Tensile Steel Plate (to All Suzuki Vehicles)

By adopting high-tensile steel plate with excellent strength, the number of reinforcement parts and the entire weight are reduced, and the body strength is enhanced. By further increasing the tensile such as by adopting super high-tensile steel plate of TS\*:980 MPa to the WAGON R from its third generation model launched in September 2003 and TS\*:1180 MPa to the floor side member of the SPACIA, as well as expanding the use of high-tensile steel plate weight reduction has been realized, while ensuring the same or greater level of collision energy absorption capability than the conventional one.

\*TS: Tensile Strength

### Topics

### Launching the SPACIA that realized high fuel efficiency of 29.0 km/L\*1

On March 15, 2013, we launched the SPACIA, a new mini height wagon that fused the space, fuel efficiency, driving performance, safety performance, and usability unique to a mini vehicle. The vehicle weight of the SPACIA was reduced by 90 kg\*<sup>2</sup> while assuring large interior space. In addition to the powertrain which has been made lighter with high-efficiency, and reduction of running resistance, thanks to the adoption of SUZUKI GREEN Technologies such as ENE-CHARGE, new idling stop system (Engine Auto Stop Start System), ECO-COOL, and new lightweight impactabsorbing body TECT, it realized the lowest fuel consumption in the class at 29.0 km/L.

- \*1 Fuel consumption rate measured in JC08 testy cycle (verified by Japan's Ministry of Land, Infrastructure, Transport and Tourism) (for G and X variants of 2WD vehicle)
- \*2 Comparison between SPACIA X variant 2WD and PALETTE IS SELECTION 2WD

**SPACIA: Contribution ratio of weight reduction** 

Topics





### Efforts for weight reduction of the SPACIA Weight reduction of white body

Light and strong high-tensile steel plate is used for approximately 42% (weight ratio) of the body and additional welding effective in spot welding on the body is conducted. In addition, the thickness of the outer panel is reduced by contriving its shape etc. while assuring the strength. As a result, the weight of the white body was reduced by approximately 23 kg\*.



### Weight reduction of interior parts

We tried weight reduction even in detailed sections of the whole car interior by changing materials, manufacturing methods, etc., and realized weight reduction by approximately 9 kg\*. At the same time, we realized the car interior space with excellent comfort and silence.

**Instrument** panel

### **Interior trim**





### Weight reduction of seat

Super high-tensile steel plate of up to 980-MPa class was used for a large range of the seat frame. Furthermore, while ensuring sitting comfort and durability, we reduced the weight of the whole seat by approximately 13 kg\* by integrating, downsizing, and thinning parts.

### Weight reduction of suspension system

We worked on reducing weight of suspension and brake parts. We realized weight reduction of approximately 18 kg\* in total by reviewing the design (suspension frame), adopting high-tensile steel plate (coil spring, trailing arm, rear axle), downsizing brake parts (rear drum), etc.

\* Compared to the previous base vehicle PALETTE



Rear drum

Suspension frame



### Reduction of air resistance

Aerodynamic performance largely influence driving and fuel efficiency of a tall height wagon. As for the SPACIA, we conducted a wind-funnel test and aerodynamic CAE from the initial phase of development. We optimized the shape of the front bumper and windshield molding to create smooth air flow around the body. This accomplished one of the lowest air resistance in the mini height wagon class.



### Reduction of Rolling Resistance

During development of the SPACIA, we focused our attention on reduction of rolling resistance by using various kinds of testing equipment.

For the tires, we adopted newly developed tread rubber with the inner pressure increased, resulting in drastic reduction of the rolling resistance, while ride comfort and quiet interior environment are maintained.

Also, in order to reduce rolling resistance, we adopted a low compressive distortional pad for brake, unit type hub bearing and low torque sealing, low viscosity oil for transmission, and ball bearings on the differential side.



Tire Rolling Test Equipment



Installation of eco-drive supporting devices

### Installing Fuel Efficiency Indicator

Suzuki has been increasing the number of vehicles equipped with eco-drive supporting devices, such as a fuel efficiency indicator. In fiscal 2012, such devices were adopted on 13 out of 17 types of vehicles.



### Adoption of Eco-Drive Indicator

In fiscal 2012, the eco-drive indicator or eco-drive assisting light has been incorporated in eight types of vehicles. When the accelerator movement, etc. indicates proper driving state for fuel economy, the eco-drive indicator located in the meter panel lights up and stays on or the light on the meter turns from blue to green. The driver can recognize whether or not it's eco-driving or not at a glance and fuel efficiency can be improved.





Eco-drive assisting light



### Adoption of ECO-score

We adopted the ECO-score on two types of vehicles in fiscal 2012.

Operation when turning on the key and then off is marked out of 100 according to achievement level of eco-drive. This is effective in improving eco-drive skills as if playing a game.



Control of Global Warming / 01 [Product development] Improvement in fuel efficiency

**Special Article** 

### Life Cvcle Assessment (LCA)

Introduction

Suzuki employs Life Cycle Assessment (LCA) in order to make assessment of environmental impact in all stages of an entire life cycle of a product from manufacturing of raw materials to product disposal. In fiscal 2012, LCA was conducted on models such as the ALTO ECO and the SPACIA.

Because the amount of CO<sub>2</sub> emission generated during driving accounts for approximately 80% of the total amount of CO<sub>2</sub> emission to be generated throughout a vehicle life cycle, improvement in fuel efficiency such as by adopting new fuel efficiency technologies (SUZUKI GREEN Technology) resultantly contributed to sharp reduction of the total amount of CO2 emission.

For example, the ALTO ECO (33 km/L) equipped with the idling stop system (Engine Auto Stop Start System) with charge control improved fuel efficiency by approximately 45% compared to the ALTO (22.6 km/L) and reduced CO2 emission by approximately 25% throughout a life cycle.



Approx. 23%

5 ELV treatment

Transportation

2 Vehicle Manufacturing

1 Material Processing

4 Running

reduction



### CO<sub>2</sub> emission ratio of the ALTO ECO and the SPACIA

### **Motorcycles**

Suzuki is contributing for reduction of CO<sub>2</sub> emission which is regarded as the cause for global warming by working on development and improvement of products that focus on fuel efficiency improvement .

### Improving Fuel Efficiency

### Activity for All Models

We are promoting switch-over from the conventional carburetor to an electronically controlled fuel injection system that enables more optimum fuel injection control.

In addition, we are also making efforts to improve heat efficiency by reducing product weight, improving combustion mechanism, reducing friction loss, etc. These efforts improved the global average

fuel efficiency of Suzuki motorcycles in fiscal 2012 by 14% compared to fiscal 2005.

### Example of Applied Product

650cm<sup>3</sup> scooter SKYWAVE 650LX (BURGMAN 650/Executive in oversesas market) launched in January 2013 in Japan is designed to improve transmission efficiency by optimizing CVT control, and also to improve heat efficiency by optimizing fuel atomization, fuel injection, and ignition timing. Also, friction at moving parts is reduced to prevent mechanical loss.

Thanks to these thorough improvements in efficiency, fuel efficiency of the model was improved by approximately 15%\*1 compared to the conventional model and it realized one of the lowest fuel consumption in the class.



reduced by 6 kg compared to the previous model by downsizing the ABS unit and changing the rear carrier from aluminum to resin, and air resistance was improved by 2.6% by changing the shape of the cowl and windscreen. As a result, fuel efficiency was improved by 10%.

\*1 Fuel efficiency measured in WMTC. Fuel efficiency varies depending on actual conditions (weather, road, vehicle, driving, maintenance status, etc).



(BURGMAN 650/Executive in overseas market)

Special Article

Efforts for Environment

### Control of Global Warming / 01 [Product development] Improvement in fuel efficiency

**Outboard Motors** 

### Improving fuel efficiency

Suzuki made efforts to develop and improve products that focus on improvement in fuel efficiency in order to reduce CO<sub>2</sub> emission which is regarded as the cause for global warming.



We launched a total of seven types of outboard motors in 2012: DF9.9B/15A/20A, DF100A/115A/140A, and DF250AP which adopted lean burn (lean fuel) control. DF9.9B/15A/20A are the first outboard motors in the class to adopt fuel injection system, and DF15A realized improvement in fuel efficiency by as much as 12% compared to the previous model. DF100A/115A/140A and DF250AP adopted feedback control using O2 sensor in addition to lean burn control, which realized improvement in fuel efficiency by as much as 12% for DF250AP.

Improvement rate of fuel efficiency



### Fuel efficiency improvement technology

### Technology for improving fuel efficiency

Because small outboard motors are mostly used without connecting the battery, fuel injection system could not be used. Therefore, we developed fuel injection system of low power consumption that can start the engine without connecting to the battery, and installed it on DF9.9B/15A/20A.



### Topics

### Topics

### The solar boat team "Miyakoda Challenge" won the "All Japan Championship of Solar & Man-powered Boat Race 2012"\*1

"All Japan Championship of Solar & Man-powered Boat Race" sponsored by Japan Solar & Man-powered Boat Association was held at the Working Youth Water Sport Center in Hekinan City, Aichi Prefecture, on August 25 - 26, 2012. The solar boat team "Miyakoda Challenge" organized by interested persons in Suzuki competed in 480-W class\*<sup>2</sup>, and won the 1-hour slalom race and 1-cycle slalom race.

At the All Japan Championship of Solar & Man-powered Boat Race, participants make boats that sail by environmentfriendly solar energy or man power and compete in races. The purpose of this event is to raise skills for races by solar boats and man-powered boats and to pursue improvement in performance of boats.

In order to sail the boat faster with less water resistance as well as less electricity, the "Miyakoda Challenge" team adopted a "hydrofoil boat" equipped with the same wing as an aircraft at the bottom, which enables the boat to sail with its body completely separated from water due to lifting power during sailing. As a result, they captured 6th victory in the 1-hour slalom race and 1-cycle slalom race.

\*1 Annual event since the 1st Lake Hamana Solar Boat Race in 1989. Currently, there are four races: 200-m speed race, 1-cycle slalom race, 30-minute slalom race, and 1-hour slalom race.

The size of the solar boat should be within 6.0 m (L), 3.0 m (W), and 3.5 m (H) (2.0 m underwater) (it is prohibited to use a purchased boat as it is). \*2 Rated power generation of solar cell



Special Article

Efforts for Environment

Efforts by Plants

Control of Global Warming / 02 [Product development] Development and technologies of next-generation vehicles

Control of Global Warming

**Product development** Development and technologies of next-generation vehicles

**Efforts for Society** 

### Efforts for fuel cell vehicles

### Suzuki established a joint venture with Intelligent Energy Ltd. to develop and manufacture fuel cell systems, and started production of FC stack for experiment in small-quantity prototype line.

Suzuki and Intelligent Energy Holdings PLC which has a fuel cell system development company, Intelligent Energy Ltd. in England have established SMILE FC System Corporation (hereinafter referred to as SMILE FC) that develops and

manufactures fuel cell systems in February 2012. We built a small-quantity production line of air-cooled fuel cells in Yokohama Labo. and started trial production (see photograph) in January 2013, and are trying to acquire manufacturing technologies of the fuel cell. For full-scale development and manufacture of motorcycles and automobiles, we will develop

technologies for mass production of light, compact, and low-cost fuel cells and produce them, find a new global supply chain, and popularize fuel cells, regarding SMILE FC as the main axis.



Directors of SMILE FC and prototype stack



Concept drawing of Burgman Fuel Cell Scooter

### Demonstration test, ITS, and establishment of infrastructure

### Let's make e-KUNI (ecological country) - Kamakura bike project

Under cooperation with four companies including JTB Corporate Sales Inc., Suzuki started the experimental study (commonly recognized as "Let's make e-KUNI (ecological country) - Kamakura bike project") for "Ministry of Environment – Fiscal 2012 Technological Development and Experimental Study Projects for Global Warming Countermeasures – Experimental Study for Commercialization of Battery Replacement Station for Popularizing Electric Motorcycles" on January 24, 2013, regarding Kamakura City as an experiment area.

Electric motorcycles are very environment-friendly, have a small turning radius, and are expected to be popularized as useful transportation at the time of disaster. However, there are some problems such as that cruising range\* is small and battery charge is difficult outside because a quick charger or normal charger for electric vehicle cannot be used. Lately, we will conduct an experiment study to integrally operate electric motorcycles and battery charge/replacement system in Kamakura City.

In this study, we install a locker-type battery replacement/charge equipment within the expected scope of activities in order to improve convenience for users. In addition, we will develop "informational system" that allows users to recognize the replacement timing of battery, charging status, and availability and to make

reservation, and verify commercialization of the electric motorcycle battery replacement/sharing service.

\* In the case of e-Let's, approximately 30-km driving is possible after 4-hour full charge (Value from a level-ground driving test with one battery at 30 km/h. Different from actual driving distance.)



Departing ceremony of experimental study at Kamakura City Hall


	Introduction	$\mathbf{N}$	Special Article		Efforts for Environment		Efforts for Society	$\setminus$	Efforts by Plants	Environmental Data	
Control of G	lobal Warming / 03	[Product	tion, distribution] Energ	gy-savi	ng for business opera	tions					
09	Control of	Global	Warming								
UJ	Produ	ctior	, distributio	on	Energy	-S	aving fo	r	business	operatio	ns

#### **Manufacturing activity and Environmental impact**



# Reduction of CO<sub>2</sub> emission from domestic offices

We conducted energy-saving activities to reduce amount of CO<sub>2</sub> emissions such as controlling temperature setting of air conditioning equipment at each office, throughly turning off unnecessary lights, reducing energy loss by changing equipment to energy-saving type and frequently checking/repairing each plant equipment, improving operation method of equipment, upgrading to higher-efficient equipment. Thanks to these activities, the amount of CO<sub>2</sub> emissions from our domestic offices in fiscal 2012 was cut by 278,700 t-CO<sub>2</sub>, which means reduction by 12.6% compared to fiscal 2005.

# CO2 reduction at domestic plants, die plants, and Group manufacturing companies

The total emission of energy-derived CO<sub>2</sub> at domestic plants and die plants in fiscal 2012 was 330,000 tons (+/-0% compared to the previous year). Numerical conversion per sale (non-consolidated) – reduced by 20.3% compared to 1990 (down 2.9% compared to the previous year).

It was significantly effective in energy-saving activities to remodel processes according to production quantity (consolidation of heat processing furnace, abolishment

of intermediate drying furnace, etc.) and to stop unnecessary equipment by reviewing manufacturing procedures.

We have been systematically changing LP gas used at Kosai Plant to city gas which generates less CO<sub>2</sub> since fiscal 2011.

We still have plans such as changing the fuel type to the one with less CO<sub>2</sub> emission and using natural energy.

The total emission of energy-derived CO<sub>2</sub> at overseas Group manufacturing companies (18 companies) was 416,000 t in fiscal 2012.

**CO2 Emission by Plant** 

	CO2 emission (1,000 t-CO2)		CO2 emission (1,000 t-CO2)
Takatsuka Plant	5.7	Osuka Plant	42.9
Iwata Plant	41.4	Sagara Plant	67.7
Kosai Plant	82.0	Die plant	2.0
Toyokawa Plant	7.0		

\*Calculated by electric power conversion coefficient 0.371 kg-CO2/kWh \*The resultant data (non-consolidated) was collected at die plants in addition to conventional six plants according to the Suzuki Environmental Plan 2015.



### Trends in CO<sub>2</sub> emissions



#### Control of Global Warming / 03 [Production, distribution] Energy-saving for business operations

# Energy Saving Activities at Plants

Introduction

Energy saving efforts at individual plants range from large-scale efforts such as increase of efficiency of pressure control for air compressors and use of inverters for fans and pumps which require capital investment, to steady efforts including reduction of air leakage\* and light-out during recess time. Such activities have been conducted throughout the entire plant and have brought successful results every year.

Reduced amount of CO2 and individual items of efforts are as follows.

		Domestic plants	Overseas Group manufacturing companies
Reduced	amount of CO2 from the previous year [tons of CO2 per year]	10,162	39,528
	Stopping power supply when each line does not work and light-out when unnecessary	3,524	1,000
Malax	Performing proper facility operations and optimizing operating conditions	2,091	5,969
Major activities	Employing inverters and higher efficiency equipment	729	27,744
activities	Consolidating and downsizing facilities	1,697	4,815
	Changing the type of fuel (Kosai Plant)	2,121	-

\*"Reduction of air leakage" is an activity to reduce leakage of compressed air from hose etc. used in the plant by appropriate maintenance etc.

# In-Plant Parts and Products Transfer

For transfer of components and completed vehicles in each plant, Suzuki employs battery-operated automated guided vehicles (AGV). Battery-operated AGVs that do not generate CO<sub>2</sub>, are working at every Suzuki plant.

# Promoting the Use of Alternative Energy

As a part of global warming countermeasure, Suzuki is promoting the use of alternative energy by installing two wind force power generation systems and a small-scale hydraulic power generation system using industrial water receiving pressure at the Kosai Plant, as well as one wind forced power generation system at the training center.

#### **Electric Power Generated by Alternative Energies**

	Electric power [kWh]
Wind power (Kosai Plant & Training Center)	1,908,995
Small-scale water power (Kosai Plant)	36,774



# CO2 Reduced by Alternative Energies

# Promotion of CO2 emission reduction at offices

We determined the standard of employee behavior in fiscal 2008, and all of our employees are getting together to promote energy saving at offices and reduction of CO<sub>2</sub> emissions. In addition, we put the progress of each activity in relation to the standard of employee behavior on the in-house homepage so that individual employee can check the result of their activities. Although we are promoting efforts for energy saving and CO<sub>2</sub> reduction, as we need additional information processing equipment for reinforcing development, energy consumption per employee in fiscal 2012 increased by 1.0% compared to the previous year.

#### Standard of Employee Behavior

We have established a standard of employee behavior (for In-house Cost Cutting Activities), which covers a wide range of activities, for the purpose of promoting energy saving and CO<sub>2</sub> reduction by individual employees.

#### [Standard of Behavior for In-house Cost Cutting Activities (Excerpt)]

	①Follow the predetermined temperature settings of air conditioner (cooling at 28°C and warming at 20°C).	④Implement eco-drive. ⑤Computerize documentary forms and minimize
I	②Turn off unnecessary electric lights	printout of electronic data.
I	<sup>3</sup> Save electricity of electric appliances.	



Control of Global Warming / 03 [Production, distribution] Energy-saving for business operations , 04 [Production, distribution] Energy saving for distribution

#### Visualization of various activities in relation to the standard of employee behavior

To allow individual employees to check the effect of energy saving activities, we put the changes in electric consumption at each of major offices and plant buildings, consumption of printing paper, and progress of each activity specified in the standard of behavior on our in-house homepage.

#### Introduction of Energy Saving Facilities

We have introduced LED lighting step by step since June 2012 to promote energy saving at offices.

Control of Global Warming

# Production, distribution Energy saving for distribution

# Reduction of CO2 Emission

Since the revised Energy Conservation Law came into effect in April 2006, Suzuki has promoted reorganization of inhouse environmental system. We will further promote improvement of transportation efficiency and energy saving.

#### Trends in CO2 emissions from domestic transportation

We are trying to reduce transportation distance, improving transportation efficiency, modal shift, increasing fuel efficiency of transportation vehicles, etc. in order to reduce CO<sub>2</sub> emissions in domestic transportation.

As a result, CO<sub>2</sub> emissions during fiscal 2012 achieved a 28% reduction compared to fiscal 2006. CO<sub>2</sub> emission basic unit (per sales) was improved by 24% in destinations in Japan and 39% in overseas destinations compared to fiscal 2006.

We will make efforts to further reduce CO<sub>2</sub> emission and improve CO<sub>2</sub> emission basic unit in fiscal 2013.



# Improvement of Transportation Efficiency

#### Reduction of Transportation Distance (for automobile engines and exported automobiles)

Automobile engines were all manufactured at the Sagara Plant and transported to the Kosai Plant for assembling by July 2012. However, since August 2012, the Kosai Plant performs engine production and vehicle assembling for some models to shorten the transportation distance.



#### Enhancement of Transportation Efficiency (Motorcycle)

For efficient product transportation from production plants to dealers, distribution bases have been centralized in a large consuming region. Also, for transportation from the distribution bases to dealers, cooperative transport with other companies is conducted to increase transportation efficiency.



#### Reduction of Transportation Distance (for imported parts to plants)

In the process of importing parts, they are once stored at warehouses and then delivered to plants. By requesting plants to store parts, we are now reducing the use of warehouses to avoid temporary storage of parts\*. Also for delivery of tires, some of our plants directly receive tires from tire manufacturers to eliminate the need for temporary storage.

\* Temporary storage of parts: Parts to be used for production are temporarily stored at warehouses, and then delivered to the relevant plants as necessary.

#### Efforts for transportation of completed automobiles in Japan

For domestic transportation of automobiles, Suzuki uses two types of transportation methods: by land and by sea. For land transportation, we are working on improving average fuel consumption by promoting eco-drive at consigned transportation companies and switching to new trailer. Also currently, more than 1/3 of transportation of completed automobiles are conducted by sea, and we are continuously performing "promotion of modal shift" that considers reduction of CO<sub>2</sub> emission and economic efficiency.



# Improvement in packing materials

For transporting repair bumpers, we changed the packaging style from cardboard boxes to air cushion materials, resulting in reduction of the packaging material weight by 50% and the average cubic volume by approximately 75%.

Moreover, lowering the height of transfer pallets has enabled two-tier loading on a truck box, greatly improving the transportation efficiency of trucks between plants. The packaging style for bumper transportation was changed at the Kosai Plant in fiscal 2008, and then at the Sagara Plant in fiscal 2009.

Efforts for Society

**Environmental Data** 

Promotion of Environmental Conservation etc. / 01 [Design, development] Air pollution

# **Promotion of Environmental Conservation etc.**

Efforts for

Fnvironment

For exhaust gas, substances of concern, etc., we will not only make efforts for conformance to laws, regulations, and industrial self-regulations but also set target values higher than the regulation to further reduce the said substances.

Promotion of Environmental Conservation etc.

# Design, development Air pollution

# Automobiles

### Reducing Exhaust Gas

#### Compliance with domestic emission control regulations

At Suzuki, all of new vehicles are designed to meet the 2005 exhaust emissions standards (new long-term standards). Among vehicles launched in fiscal 2012, the numbers of types of models that were certified as " $\stackrel{}{\not\sim} \stackrel{}{\not\sim} \stackrel{}{\not\sim}$  low-emission vehicles" were 11 types of 15 models in total as of the end of March 2013.

We will further promote activities to reduce exhaust gas in order to increase the types of models that will be certified as "AAAAA low-emission vehicles".

#### **Vehicles Conforming to Emission Control Regulations**

	Number of types and models
Equal to 2005 Emission Standard	6 types 6 models
☆☆☆Low-emission vehicle: 50% lower than 2005 Emission Standard	3 types 3 models
☆☆☆☆Low-emission vehicle: 75% lower than 2005 Emission Standard	11 types 15 models

# Trends of No. of low-emission vehicles among gasoline vehicles produced by Suzuki



#### Topics

#### Suzuki won the victory at the Soap Box Derby

The "Soap Box Derby," a race of vehicles without power sources, was held at the "Odaiba Campus Festival" sponsored by Japan Automobile Manufacturers' Association in October 2012. Time trials were conducted by soap box cars assembled and adjusted by automobile manufacturers, and Suzuki's soap box won the victory at the adult race in which seven teams participated.



\* A soap box car is a name derived from the U.S. in the 1930's where children attached tires to a box used for shipping soap from a soap factory and played with it. Today, a soap box car refers to a vehicle that does not have a motor (engine) and runs by using only gravity such as slope. Soap box cars are still popular in the U.S. and relevant events such as races are frequently held.

Topics

Efforts for Environment

Efforts for Society V Efforts by Plants

Promotion of Environmental Conservation etc. / 01 [Design, development] Air pollution

# Motorcycles

## Reducing Exhaust Gas

#### Activity for All Models

Suzuki is working to conform to the Euro3 regulations in Europe and other countries' various emission regulations to reduce emissions from its motorcycles. We developed and launched the following models conforming to each region's or country's emission regulations such as AN650 for Europe, Address V125, GSR250, V-Strom650, SKYWAVE 650LX, and GSR750 for Japan, GE110 for India, and UF110, FV110 for Indonesia.

#### Example of Applied Product

We installed the O<sub>2</sub> sensor feedback control and metal honeycomb catalyst to SKYWAVE 650LX released in January 2013 (in Japan) to reduce emission and conformed to the 2007 regulations (WMTC).



## **Outboard Motors**

## Reducing Exhaust Gas

Suzuki outboard motors satisfy the requirements of the 2008 emission regulation values set by California Air Resources Board (CARB), the secondary regulation values set by the U.S. Environmental Protection Agency (EPA), and the 2011 marine engine emission voluntary regulation values (secondary regulation) by Japan Marine Industry Association.

#### EPA Secondary Regulation Values and Suzuki Model's Emission Values



# Control of SOx and NOx emissions (domestic plants + die plants)

In order to prevent air pollution, we are reducing SOx (sulfur oxides) and NOx (nitrogen oxides) emission amounts that are emitted from boilers, etc. by applying higher voluntary standards and maintaining and controlling them.



#### SOx exhaust amount\*



\* SOx emission amount is calculated according to fuel consumption from January to December.

Efforts for Society

Promotion of Environmental Conservation etc. / 02 [Design, development] Reinforcement of management of substances of concern contained in products

Efforts for Environment

Promotion of Environmental Conservation etc.

**Design, development** Reinforcement of management of substances of concern contained in products

## Management of substances of concern

In 2003 we introduced IMDS (International Material Data System), which is a material data collection system focused on automobile industries. And based on it, we established an in-house management system for substances of concern (see the chart below). This system allows us to control not only the four heavy-metal substances (lead, mercury, hexavalent chromium, and cadmium) targeted by European ELV Directive, but also substances of very high concern (SVHC) specified in the REACH regulation (Registration, Evaluation, Authorization and Restriction of Chemicals). In fiscal 2012, we identified 34 types of automobiles, motorcycles and outboard motors in total to be in compliance with laws and regulations related to substances of concern.

So far, using this system, we have identified compliance with laws and regulations related to substances of concern on products produced by domestic plants and Magyar Suzuki (Hungary), and some products produced by Maruti Suzuki (India). In fiscal 2012, we have made this system available also for products produced by Suzuki Motor Thailand, which is our new automobile production base. We will try to apply this system for some motorcycles produced by P.T. Suzuki Indomobile Motor in Indonesia.



## Reduction of substances of concern

Suzuki not only strictly follows the goals set by Japan Automobile Manufacturers' Association and European ELV Directives, but also aggressively promotes reduction of the four kinds of heavy-metal substances of concern for all models of automobiles, motorcycles, and outboard motors even in business areas where specific regulations do not apply. Following the non-chrome treatment technique (white) on galvanization, which was put into practical use in fiscal 2009 aimed for further reduction of substances of concern, we have developed the black non-chrome treatment technique on

galvanization in fiscal 2010. This new technique is currently evaluated for practical use. In many countries, various regulations related to substances of concern have been tightened, such as REACH regulation, which became effective in June 2007 to control chemical substances in Europe. Under such circumstance, Suzuki is working on reducing substances of concern and carrying out activities to reduce hexavalent chrome globally, including Asia such as India. For outboard motors, which is said that reduction of hexavalent chrome is difficult, we achieved complete abolishment of such substance from all outboard motors manufactured in the domestic plant by July 2011. Also, we are promoting plan to abolish hexavalent chrome in outboard motors manufactured in Thailand by the end of 2013.

#### Reduction target set by Japan Automobile Manufacturers' Association, Inc. (new vehicles)

Materials to be reduced	Reduction target			
Lead Automobiles: 1/10 or less in and after Jan. 2006 (compared with 1996) Motorcycles: 60 g or less in and after Jan. 2006 210kg vehicles)				
Mercury	Prohibition of use in and after Jan. 2005 excluding: -LC display for navigation system, etc. -Combination meter, discharge head lamp, room lamp			
Hexavalent chromium Prohibition of use in and after Jan. 2008				
Cadmium	Prohibition of use in and after Jan. 2007			

# Compliance with European Chemical Control Regulation (REACH · CLP)

In June 2007, REACH (Regulation concerning the Registration, Evaluation, Authorization and Restriction of Chemicals), a regulation which is aimed to protect human health and environments from chemical substance hazards, became effective in Europe. Concerning chemical substances to be manufactured / imported, REACH requires companies to register, evaluate, certify, and disclose them to customers. For compliance with REACH, cooperation throughout the supply chain is crucial. In order to prevent turmoil in the world's automobile industry, appropriate countermeasures are taken by organizing a task force in cooperation with European, U.S., Korean, and Japanese automobile and parts manufacturers. While keeping in step with the task force, Suzuki has promoted compliance with REACH by cooperating with our European plants, distributors and partners, and completed the necessary preliminary registry before December 2008. In addition, we have completed the necessary report on Substances of Very High Concern (SVHC) by June 1, 2011. In December 2008, CLP, a new regulation for classification, labeling, and packing of chemical substances and compounding, became effective in Europe. Similarly to the action for REACH, Suzuki has promoted compliance with CLP while cooperating with our local European plants, distributors, and partners, and completed the necessary report on hazardous substances (listed in the CLP) contained in substances and compounds to ECHA (European Chemicals Agency) by December 2010. Also, we are submitting the report, which will be required after 2011, on hazardous substances contained in new chemical products and compounds.

We will keep close relations with our partners to have communication of information between the supply chain which is necessary for registration of REACH, as well as to comply with certificate on Substances of Very High Concern (SVHC) and restricted substances, and to additionally submit for CLP.

Efforts for Environment Eff

Promotion of Environmental Conservation etc. / 03 [Design, development] Noise reduction

Promotion of Environmental Conservation etc.

# **Design, development** Noise reduction

# Automobiles

# Reducing Noise

#### Vehicle exterior noise

We are reducing various kinds of noises from the engine, transmission, air-intake and exhaust systems, and tires. At the same time, we are optimizing the design of the sound insulation cover that is used to prevent the inside noises from being released to the outside of vehicle.

As a result, we made all automobiles manufactured by Suzuki and sold in Japan conform to the vehicle exterior noise regulations in Japan.

In addition, for the acceleration noise regulations for mufflers which became newly effective in December 2008, we made all optional mufflers sold by Suzuki conform to the said regulations.



#### Vehicle Interior Noise

Also, to provide comfort and quiet interior environment to users, we are promoting reduction of vehicle interior noise by improving noise sources and taking sound absorption, sound insulation, and vibration damping measures.

#### Examples of noise reduction measures for the new SPACIA

- •Adoption of a new-type engine.
- •Change of engine mount supporting method and adoption of a hydraulic engine mount.
- -Improvement of body structure to assure both weight reduction and noise/vibration prevention.
- Reduction of steering vibration by employing the high-rigid steering support.
- •Adoption of sound absorption type ceiling.
- Adoption of noise absorption pad in the dashboard side panel.
   Adoption of noise absorption materials on the back of the carpet and damping materials on the floor panel.
- Install of sound insulation cover in the fender.



SPACIA



Promotion of Environmental Conservation etc. / 03 [Design, development] Noise reduction , 04 [Design, development] Reduction of Freon

# Motorcycles

# Reducing Noise

#### Example of Applied Product

The following describes our noise reduction efforts, taking an example of V-Strom 650ABS.

V-Strom 650 ABS is designed to minimize the weight increase, while employing many noise reduction structures in order to satisfy the local noise requirements.



•As for mufflers that reduce exhaust sound, the inner structure is optimized by CAE analysis to assure both damping performance and weight reduction.

②A cover is installed on the left side of the engine to reduce sound radiation from the engine.

3 The clutch cover is designed to clamp a rubber damper to reduce resonant sound.

Promotion of Environmental Conservation etc.

Design, development Reduction of Freon

# Reduction of Freon (HFC) (By reducing air conditioner refrigerant and using alternative refrigerant)

#### Reducing Air Conditioner Refrigerant

For the purpose of reducing the usage of air conditioner refrigerant (HFC-134a) that is one of the factors causing global warming, we have optimized the design of air conditioning systems, and at the same time, are making efforts for downsizing the heat exchanger and introducing a sub-cooling system. The air conditioner system of the refrigerant saving type is adopted in all models by domestic production car and adopts it to an oversea production car sequentially.

#### Use of Alternative Refrigerant

We are now conducting research and development of a next-generation air-conditioning system using an environmentally friendly refrigerant (HFO-1234yf) that can replace the current air conditioner refrigerant (HFC134a) to minimize the effects of global warming.

**Efforts for Society** 

 $\vee$  Environmental Data

**Efforts by Plants** 

Promotion of Environmental Conservation etc. / 05 [Design, development] Reduction of VOC in car interior , 06 [Production, product] VOC reduction in the painting process

Efforts for

Fnvironment

Promotion of Environmental Conservation etc.

**Design, development** Reduction of VOC in car interior

# Reducing VOCs (Volatile Organic Compounds \*1) in Car Interior

In order to further improve interior environment, we will continue to make efforts to reduce the amount of VOC by reviewing the materials, bonding agents, painting methods for interior parts, etc. For all new domestic automobile models sold since January 2006, we have successfully achieved lower cabin VOC levels than the target set by the Ministry of Health, Labor and Welfare, which is deemed as the automobile industry's voluntary goal\*<sup>2</sup>. We intend to further reduce the VOC value for all models to be sold in Japan. In addition, we are making efforts for reduction of cabin VOC for vehicles to be sold in global markets including China and Europe.

Also, we have added the target for TVOC (Total Volatile Organic Compounds) in the in-house regulation, and are promoting further improvement in interior environment by reducing other VOC not specified by the Ministry of Health, Labor and Welfare.

#### Example of models that satisfy the cabin VOC concentration equal to or lower than the governmental target in fiscal 2012



**SPACIA** 

#### Vehicle cabin VOC concentration analysis



- \*1 VOC is deemed as a cause of sick building syndrome (bringing about a headache and/or sore throat) and is known as a danger substance to public health.
- \*2 JAMA ( Japan Automobile Manufacturers' Association, Inc.) takes a voluntary approach to reducing the vehicle cabin VOCs of 13 different substances defined by Japan's Ministry of Health, Labor and Welfare to lower levels than the governmental target by imposing the voluntary targets on new passenger car models to be marketed in and after April 2007 and new commercial vehicle models to be sold in and after April 2008.

Promotion of Environmental Conservation etc.

**Production, product** VOC reduction in the painting process

# VOC (Volatile Organic Compounds)

VOC is a chemical contained in solvents mainly used in the painting process.

Suzuki worked to reduce the amount of VOC emission in the painting process. In fiscal 2012, the average amount of VOC emissions from the automobile body, bumper and motorcycle paints was 43.9 g/m<sup>2</sup>, which indicates a reduction of 1.0 g/m<sup>2</sup> from the previous year.

The target defined in the "Suzuki Environmental Plan 2015" is to "Keep 40% reduction against fiscal 2000." Reduction from fiscal 2000 is 41.9% and we accomplished the target.

In fiscal 2012, we improved the painting method so that paint adheres to products more efficiently and the equipment to reduce paint to be disposed of when changing colors.

We will continue to improve the painting method etc. to reduce VOC emissions.





# Purchasing New Substances

When the purchase of materials such as paints, oil, detergents, etc. is necessary, our environmental management section discusses the substance's toxicity, how much of it will be used, how it will be used, how it will be stored, etc., then decides whether the substance should be purchased or not. Data gained from these investigations is used and managed as PRTR data, which is then utilized when working to reduce the volume of these materials. Also, the most up-to-date data and information is used to manage SDS\* for raw materials.

\* SDS (Safety Data Sheet): Sheet listing names, physical chemistry behavior, hazards, and handling cautions, etc. of chemical substances

# PRTR (Pollutant Release and Transfer Register) Targeted Substances

To reduce materials with environmental impact, we are working to reduce PRTR targeted substances. As a result of the efforts to reduce PRTR-related substances contained in paints and cleaning thinners, the amount of emissions of them was 1,178 tons in fiscal 2012.



#### Amount of PRTR Materials that are Used and Emitted

# Soil and Groundwater Protection

After organic chlorine compounds (trichloroethylene and cis-1, 2-dichloroethylen) were discovered in the groundwater at the Takatsuka Plant in January of 1999, we initiated a continuous cleanup effort of the groundwater and took measurements along the site boundaries.

# Preventing the Leakage of Sewage

Our analysis department periodically analyzes plant effluent, groundwater, water used in factory processes, and industrial water from individual plants and related companies for the purpose of water quality management and maintenance to prevent sewage from leaking from them. In addition to water quality, we also investigate components in soil and inspect industrial wastes.

If any abnormality should be found in water quality or soil, the related section will be immediately informed and suitable measures will be systematically carried out.



Analysis



Promotion of Environmental Conservation etc. / 07 [Production, product] Control of chemical substances , 08 [Production, product] Reduction of odor and noise

# Controlling PCB: Polychlorinated Biphenyl

We have properly stored PCB and reported to the authorities on the storing condition of PCB according to the Act on Special Measures concerning Promotion of Proper Treatment of PCB Waste which came into force in July 2001. We started the treatment in fiscal 2011, and as of March 2013, a total of 1,619 units of transformers, condensers, stabilizers, etc. which contain PCB (polychlorinated biphenyl) are stored and controlled at five plants.

Promotion of Environmental Conservation etc.

# Production, product Reduction of odor and noise

# Reduction of Odor and Noise

Although we strictly follow the relevant regulations or laws, the odor and noise released from our plants may make local residents uncomfortable. Compliance with the laws and regulations is the minimum required CSR (corporate social responsibility). Aiming to be fully trusted by the local community, we will continuously promote necessary measures for prevention of noise and odor and elimination of the potential sources of them.



**Special Article** Environmen

**Efforts for** 

**Efforts for Society** 

**Efforts by Plants Environmental Data** 

Promoting the Three Rs (Reduce, Reuse, and Recycle) / 01 Consideration to recycling

# Promoting the Three Rs (Reduce, Reuse, and Recycle)

We will contribute to realization of sustainable recycling-oriented society by carefully using resources throughout the process from wasteless development/production phase to effective recycling of the used.

# Promoting the Three Rs (Reduce, Reuse, and Recycle) Consideration to recycling

# **Automobiles**

# Reducing

Among 3Rs\*, the first priority should be "Reducing (emission reduction)". Under the policy of making parts Smaller, Fewer, Lighter, Shorter, and (Neater), Suzuki is promoting reduction of emission by thoroughly reducing materials to be used and weight saving. For example, the front bumper of SPACIA has been slimmed through reduction of the wall thickness of bumper body and reverse face of the license plate and radiator grill.

Thinner reverse face of radiator grill Thinner reverse face of license plate Reduction of bumper body thickness

Efforts for Reducing (example: front bumper of SPACIA)

# Recyclable design

#### Recyclable Design (Automobiles)

Recyclable vehicle design is an important factor to allow for easy recycling of end-of-life cars. To produce environmentally-friendly vehicles, Suzuki uses easy-to-recycle materials in exterior and interior resinous parts.



#### Major Components Using Recyclable Resinous Materials (example: exterior of SPACIA)



**Efforts for Society Efforts by Plants**  **Environmental Data** 

## Promoting the Three Rs (Reduce, Reuse, and Recycle) / 01 Consideration to recycling

#### **Use of Easily Recyclable Resinous Materials**

Plastic is roughly divided into two types: "Thermoset resin"\*1 and "Thermoplastic resin"\*2. By applying the thermoplastic resin to almost all plastic parts, Suzuki is promoting environmentally-friendly vehicle manufacturing.



#### **Component Names**

	Housing	Assist Grip	Door Handle				
Room mirror & lamp	Stay	Glove Box	Box			Front	Board
	Lens	GIOVE DOX	Lid			FIOIIC	Armrest
Center Pillar Inner Trim	Upper	Lower box	ver box			Rear	Board
Center Pinar inner Trim	Lower	Instrument Cluster Pane				Back	Cover skin
Ouarter Trim	Upper	Instrument Panel				DACK	Base
Quarter mill	Lower	Front Pillar Inner Trim		Tail End Trim			

\*1 Thermoset resin This type of resin material will not soften or melt after being hardened by heat or pressure. It is like a biscuit or ceramic.
 \*2 Thermoplastic resin

Even after being formed, this type of resin material can be softened or melted by reheating and will be solidified by cooling. It is reusable through repetitive melting and solidifying. It is like a chocolate or candy.



#### Promoting the Three Rs (Reduce, Reuse, and Recycle) / 01 Consideration to recycling

## Motorcycles

Consideration to design for improving recyclability among other 3R designs is explained here using efforts for domestic models (SKYWAVE 650LX, Address V125 series, and Bandit 1250F) and small models for ASEAN (nex and SHOOTER).



# Recyclable design

#### Use of Colored PP\* Resin Materials and Recyclable PP Materials

Materials that can be recycled easily or recycled materials are used for motorcycle parts in order to improve recyclability. We used more colored PP parts with high recyclability for exterior components of SKYWAVE 650LX than older models to improve recyclability. For nex and SHOOTER, we try recycling by using recycled PP materials for the bottom plate of the seat.

\* PP:Polypropylene

#### Easy disassembly of parts

We are pursuing ease of disassembly of parts for promoting recyclable design. For Address V125 series, the claw structure has been optimized to enable easy disassembly of the exterior parts without using any special tool. For Bandit 1250F, on the other hand, the number of resin parts is reduced approximately by 30% compared to the conventional full cowl model by integrating parts of the body cowl, under cowl, meter panel, etc. so that these components can be disassembled more easily.

# **Outboard Motors**

# Recyclable design

Recyclable design is an important factor to allow for easy recycling of end-of-life outboard motors. Suzuki is constantly making efforts to produce environmentally-friendly outboard motors by using easy-to-recycle materials for covers etc.



Efforts for Environment

#### Promoting the Three Rs (Reduce, Reuse, and Recycle) / 01 Consideration to recycling

Automobiles

## Domestic Recycling Promotion

#### Efforts for Automobile Recycling Law

Suzuki exercises our duty to collect and recycling of ASR\*1, airbags, and CFC of end-of-life vehicles according to the Automobile Recycling Law\*<sup>2</sup> executed in January 2005. We conducted the following in fiscal 2012 (from April 2012 to March 2013).

#### Collection and Recycle of ASR

In fiscal 2012, we achieved the ASR recycling rate of 95.5% and, since fiscal 2008, have continuously satisfied the legal requirement for the year 2015 "70% or higher."

We are promoting collection and recycling of ASR through the ART\*3 that we organized in cooperation with other 13 automobile manufacturers (as of March 31, 2013), such as Nissan Motor Co., Ltd., Mazda Motor Corporation, and Mitsubishi Motors Corporation in order to work together with recycling companies throughout the nation for conforming to the relevant regulations, properly disposing of waste, increasing the recycling rate, and reducing the disposal cost.

#### Collection and Recycle of Air Bags and Freon

In fiscal 2012, the airbag recycling rate at Suzuki was as high as 93.3%, and we have maintained the level higher than the legal standard "85% or higher" since 2004. Also, we collected and disposed 84,755 kg of CFC materials.

For collection and recycle of air bags and collection and disposal of Freon (HFC) materials, we organized Japan Auto Recycling Partnership with other automobile manufacturers to cooperate with recycling companies throughout the nation. We will make continuous efforts to promote the recycling activities, while designing easy-to-recycle products, saving and effectively using resources, reducing the amount of wastes, reducing the cost of recycling, and establishing a stable recycling system.

\*1 Automobile Shredder Residue

- \*2 Automobile Recycling Law: Formal name "Act on Recycling, etc. of End-of-Life Vehicles"
- \*3 Abbreviation for Automobile shredder residue Recycling promotion Team

#### **Result of recycling in fiscal 2012**

<	Results of r	recycling of treatment specified th	<balance of="" payments=""></balance>	(Unit: yen)	
	ASR	Total weight of ASR taken back / Total number of ELVs taken back	45,656 t/379,102 units	Amount of official credit deposit received	2,557,481,709
	ASK	Weight of ASR taken back	44,064 t		
		ASR recycling ratio	95.5%	Amount of recycling cost	2,335,081,565
		Total weight / Total number of ELVs	31,435 kg/118,512 units		
	Airbags	Total weight of recycled airbags	29,313 kg	Balance of payments	222,400,144
		Airbag recycling ratio	93.3%		
	CFCs/	Weight of CFC / Number of ELVs	84,755 kg/308,583 units		

## Promotion of Recycling Abroad

In Europe, End-of-life Vehicle Directive (ELV Directive: 2000/53/EC) came into effect in 2000, requiring automobile manufacturers and importers to establish a proper system for collecting and disposing of disused automobiles. Suzuki is creating ELV collection network systems suitable for respective conditions of individual countries. In addition, we are obliged to provide disposal companies with the dismantling information of new model automobiles and give such information through the international information system IDIS (International Dismantling Information System) organized by automobile manufacturers.

Also, under the RRR (Reusability, Recyclability, Recoverability) Directive 2005/64/EC, which came into force in 2005, we were audited by an authorized auditing agency on our systems for collecting material data and verifying environmental impact substances, and acquired the certificate of conformance (COCom) in August 2008. We obtained the RRR Directive approval for all of our vehicles sold in Europe. Then, we had an audit by an authorized organization and obtained a new COCom based on the revised European RRR Directive (2009/1/EC) in October 2011, and our new models since January 2012 are certified by the revised European RRR Directive.

In China, an automobile recycling law is now under consideration, so we are conducting the regulatory trend survey by keeping close contacts with our local subsidiary to prepare for conformance to the new regulation.

Promoting the Three Rs (Reduce, Reuse, and Recycle) / 01 Consideration to recycling

# Promotion of Voluntary Recycling Efforts

**Special Article** 

#### Efforts for Recycling of Bumpers

Introduction

In an effort to use resources more effectively, we have been collecting and recycling used bumpers that have been removed from automobiles by distributors at the time of repair or replacement.

**Efforts for** 

Environmen

Initially, used bumpers were collected from distributors in the original form. Since 2000, however, they have been collected after being shredded by a shredding machine, which has been installed in almost all of our distributors (with some exception). Additional bumper shredding machine were introduced or added in fiscal 2012. As a result, the cubic volume of the (shredded) bumpers for transportation was reduced to 1/6 of the previous volume, allowing for reduction of CO<sub>2</sub> emission during transportation due to efficient transfer and handling of the downsized materials.

The collected bumpers are recycled and reused to produce such automotive parts as battery holder, engine undercover, foot rest, etc.

#### **Examples of parts using recycled materials**





Battery Holder

Engine Undercover

Foot Rest

## Recycling of batteries

#### Voluntary collection and recycling of "used lithium-ion battery" dedicated for ENE-CHARGE

"Lithium-ion batteries" are used for the low fuel consumption technology ENE-CHARGE employed in WAGON R launched in September 2012. Suzuki started the voluntary collection system in September 2012 to collect and appropriately process "used lithium-ion batteries" dedicated for ENE-CHARGE when disposing end-of-life vehicles.

Refer to the following HP for details of voluntary collection and recycling of "used lithium-ion batteries" dedicated for ENE-CHARGE. (In Japanese language only)

http://www.suzuki.co.jp/about/csr/recycle/battery/index.html

## Rebuilt Parts (Reused Parts) for Repair \*

For effective use of natural resources and reduction of customers' economic burden, Suzuki deals in rebuilt parts for automatic transmission (including CVT). In fiscal 2012, the sales of rebuilt parts accounted for 45% of the total sales quantity of target parts.

<sup>\*</sup> Rebuilt parts are the aftermarket parts that are removed and collected at the time of repair, reproduced with the damaged or worn portions replaced, and finally inspected.



Automatic Transmission

Efforts for Environment

Efforts for Society V Efforts by Plants

Promoting the Three Rs (Reduce, Reuse, and Recycle) / 01 Consideration to recycling

# Motorcycles

# Regarding Voluntary Recycling of Motorcycles

We have autonomously operated the "motorcycle recycling system" together with three other domestic motorcycle manufacturing companies and 12 import business operators since October 2004 in order to ensure proper disposition and recycling of discarded motorcycles. We started the freeof-charge service to taken back end-of-life motorcycles in October 2011.

End-of-life motorcycles are taken back at "EL motorcycle dealers" and "designated collection centers" throughout the nation for convenience of our customers. These discarded motorcycles are then collected at 14 scrapping/recycling facilities, and disassembled, shredded, and sorted. Those that can be used as recycled materials are reused, while other waste materials are properly disposed of.

The recycling rate in fiscal 2012 is 95.2% of the weight basis.

For more details, access the following websites. (In Japanese language only)

For more details on Voluntary Motorcycle Recycling Efforts by Suzuki, access the following website.

http://www1.suzuki.co.jp/motor/recycle/index.html

For the details of Japan Automobile Recycling Promotion Center, access the following website.

(for motorcycle recycle)

http://www.jarc.or.jp/motorcycle/



# FRP boat

# Voluntary Efforts for Recycling FRP\* Boats

Suzuki aggressively participates in a program called the "FRP Boat Recycling System" autonomously promoted by the Japan Marine Industry Association together with other six major manufacturing companies.

The "FRP Boat Recycling System" started in ten prefectures in west Japan in 2005 and was developed to the whole country in 2007 in order to prevent inappropriate scrapping of boats due to product characteristics (such as high strength, long durability, and widely and shallowly used) and to facilitate such scrapping for users. Discarded FRP boats are collected to 38 designated scrapping business companies through registered centers at approximately 450 locations all over Japan, and finally recycled by cement combustion.

Suzuki has participated in this system certified by verification tests of the Ministry of Land, Infrastructure, and Transport since its foundation, and widely accomplishes the responsibility for appropriate scrapping and recycling of FRP boats.

\* FRP (fiber-reinforced plastic)

For more details, access the following websites. (In Japanese language only)

Suzuki Voluntary Actions for FRP Boat Recycling System (Details) http://www1.suzuki.co.jp/marine/info/index\_002.html

Japan Marine Industry Association (Guide for FRP Boat Recycling System)

http://www.marine-jbia.or.jp/recycle/index.html



**Efforts for Special Article** Environment

**Efforts for Society** 

#### Promoting the Three Rs (Reduce, Reuse, and Recycle) / 02 Packing materials

Promoting the Three Rs (Reduce, Reuse, and Recycle) Z Packing materials

# Efforts through Reducing and Reusing

#### Using Returnable Containers

We are actively pursuing the use of returnable containers in our domestic transportation and delivery activities. Cardboard had been previously used domestically but we started using returnable containers from fiscal 2003 to reduce paper and improve operating efficiency.

In fiscal 2012, returnable containers accounted for 23% of the total number of containers used in shipments out of our plants, reducing the use of cardboard by approximately 97 tons. Also, returnable containers used for receiving shipments accounted for 64% of all receiving containers used during the fiscal year, resulting in reduction of approximately 168 tons of cardboard.

#### Promotion of using returnable containers for packaging materials

Suzuki encourages employees to use returnable racks instead of steel cases, which used to be discarded at local plants, in order to reduce the amount of packing and packaging materials used.

In fiscal 2012, we began to use returnable racks for Egypt. In addition, we have already used returnable racks in Hungary, India, Indonesia, Taiwan, Pakistan, U.S.A, China, Ecuador, Malaysia, and Thailand. As a result, approximately 77% of the total parts and materials were transported with the use of returnable racks.

# Efforts through Recycling

#### Reusing Cardboard

We reuse cardboard materials already used in factories as cushioning materials. Since a machine that produces cushioning materials was introduced in 2003, we have promoted reuse of waste cardboards. In fiscal 2012, we reused approximately 41 tons of them.



production machine

**Cushioning material** 



# Waste Reduction

, etc.

135

\* Waste, etc.: Wastes and recyclable materials

15

6

Plastic waste. sludge, paper waste, oil waste, wood waste

Waste

#### Reduction of waste and landfill

At our six domestic plants and die plants, the zero-level landfill waste (landfill waste is less than 1% of the amount recorded in 1990 (24,675 tons)) was achieved in fiscal 2001 through reduction of waste and promotion of recycling. Our Group companies in Japan also accomplished the zero-level landfill waste (landfill waste is less than 1% of the

Intermediate

disposal

Note: Data is collected for non-consolidated Suzuki only

Plastic waste, sludge, scrap metal, oil waste, ash (dust), wood waste, metal tailings, glass, pottery waste, waste acid, waste alkali

amount recorded in 2002 (1,370 tons)) in fiscal 2008. We will promote further reduction of waste, while maintaining the zero-level of landfill waste.

Incineration

disposal

Heat collection

At overseas Group manufacturing companies, the total waste discharge amount and landfill waste amount data are now being collected.



#### Total waste discharge amount and the amount of landfill waste at domestic plants and die plants

The total waste discharge amount was 110,000 tons (down 3.5% from the previous fiscal year).

\* Asbestos collected as a result of an investigation was disposed of by sanitary landfill because it is difficult to recycle it.



Promoting the Three Rs (Reduce, Reuse, and Recycle) / 03 Wastes

Total waste discharge amount and the amount of landfill waste at domestic Group manufacturing companies (6 companies and 8 plants)



The total waste discharge amount was 20,000 tons (down 9.0% from the previous fiscal year).

# Activities for the Law for the Promotion of Effective Utilization of Resources

Based on the Law for the Promotion of Effective Utilization of Resources, which went into effect in April 2001, we created a "Plan for Controlling the Occurrence of Byproducts" and reported the plan's results. The purpose of this plan is to control the occurrence of byproducts, such as scrap metal and waste casting sand. In fiscal 2012, we reduced those byproducts to 7.0 tons per 100 million yen of sales. We will continue to make efforts to reduce them.



#### Amount of byproducts produced per sales

\* Byproducts: Scrap metal, waste casting sand (designated by the Ministry of Economy, Trade and Industry)

#### Promoting the Three Rs (Reduce, Reuse, and Recycle) / 03 Wastes , 04 Water resources

# Reduction of wastes from offices

Under the policy of making parts Smaller, Fewer, Lighter, Shorter, and Neater, Suzuki is making efforts for paper reduction and material recycling.

#### Paper Reduction

Introduction

For the purpose of reducing the amount of paper used, Suzuki has been aggressively conducting company-wide paperless and paper reduction activities by promoting computerization of various documentary forms, use of backing paper, and reduction of documents used at meetings.

#### Promotion of Material Recycling of Paper Waste

At Suzuki head office, paper wastes were previously burnt for thermal recycling (reused as heat energy). Since July 2005, however, material recycling has been conducted, instead of the thermal recycling, through separate collection of office documents, newspapers and magazines, cardboard boxes, etc. In fiscal 2012, 853 tons of paper wastes were recycled.

#### Suzuki's end-of-life vehicle collection and recycle network

	Outsourci	ng	In-house D	Disp	osal at Suzul	ki				(	Outsourcing	5			
Type of Waste	Collection & Transportation		Intermediate Treatment		After Treatment		Collection Transportat						Reuse or Disposal		
			Burning at		Particulates				Melting		Shredding		Used as Roadbed Materials		
Waste Paper	Collection & Transportation	→	Incineration Site of Kosai Plant	→	Burnt Residue	→			Sorting		Firing	]	Used as Cement Raw Materials		
Office Documents						Collection &						Used as Recycled Paper			
Corrugated paper	]						Transportation	)	Compression	<b>→</b>	Melting	<b>→</b>	Recycled into corrugated paper Recycling		
Newspaper, Magazines, Catalogs, etc.	<b>→</b>														Used as Recycled Paper
Specific Waste Paper									Burning		Landfill		Landfilling of Incinerated Ash		

Promoting the Three Rs (Reduce, Reuse, and Recycle)
Water resources

# Water usage measures

We are working on ways to conserve water and reuse wastewater in order to reduce the amount of water used in our plants. For this purpose, we are utilizing airtight cooling towers, air cooled compact air conditioners, water conserving faucets, rain water collection, and collection of water from coolers.

In fiscal 2012, the amount of water used in domestic plants and die plants increased by 6.3% from the previous fiscal year to 3.54 million m<sup>3</sup>.



\* Data was collected in domestic plants and die plants according to the Suzuki Environmental Plan 2015.

# Amount of Water Used

Ŀ	nt	10	n	d	 e	6ŝ	n	11
					Ŀ			

Efforts for Society

Efforts by Plants

**Environmental Data** 

Cooperation with society / 01 Expansion of environmental communication

# **Cooperation with society**

We, as a member of a society, will develop the society harmonized with natural environment by promoting environmental communications with various stakeholders.

# Cooperation with society

# **U L** Expansion of environmental communication

Efforts for

Fnvironmen

# **Efforts for biodiversity**

Suzuki introduced the environmental brand "SUZUKI GREEN" to realize the philosophy of "Suzuki Global Environment Charter" and announced the "Suzuki Biodiversity Protection Guidelines" as the environmental policy in the Charter.

"Suzuki Biodiversity Protection Guidelines" will be the guiding principle for us to recognize the possibility that our business activities etc. give influences to "biodiversity" which has provided our life with enormous natural blessings (ecosystem service) since the birth of human, try to reduce such influences, and make efforts to ensure sustainable usage.

Suzuki has conducted many actions to reduce influences to biodiversity in our business or social contribution activities, and participated in "Japan Business & Biodiversity Partnership"\*.

Through releasing the Guidelines, we will further promote active business operations etc. considering natural environment by making recognition of biodiversity to penetrate in the company. In addition, while communicating with our customers and the local communities, the whole Suzuki Group will raise a sustainable society that coexists with the nature.

\* Partnership that wide varieties of companies mainly from the economic world make efforts autonomously for conservation and sustainable usage of biodiversity and share related information in order to accomplish the purpose of the Convention of Biological Diversity

Suzuki Biodiversity Protection Guidelines <u>http://www.suzuki.co.jp/about/csr/index.html</u> (In Japanese language only)

#### [Basic concept]

Under the slogan of "Smaller, Fewer, Lighter, Shorter, and Neater," Suzuki Group thoroughly conducts wasteless, efficient business operations and promotes production of small cars by pursuing environmental technologies in order to reduce influences to "biodiversity" and contribute to sustainable usage of resources in future. Based on such activity philosophy, Suzuki Group will try to cooperate with various stakeholders as a member of the society and to develop the society harmonized with beautiful natural environment.

#### [Emphasized efforts for biodiversity]

Reduction of environmental loads generated through business operations and products.

- ①Promote energy saving, resource saving, and 3R at business steps from "product development" to "recycling."
- ②Promote improvement in fuel efficiency and R&D of next-generation automobiles in order to reduce greenhouse effect gas.
   ③Work on reducing the use of substances of concern through the supply chain.

#### •Expansion of environmental communication

- ①Promote environmental beautification and environment conservation activities under cooperation with local communities.
- ②Work on making appropriate recognition and behavior for biodiversity to penetrate into all employees.
- ③Work on announcing environmental information and self-conservation activities widely to the society.

Efforts for Environment

# Cooperation with society / 01 Expansion of environmental communication

#### [Concrete actions]

	Reduction of environmental loads generated through business operations and products.		Expansion of environmental communication				
1	Reduction of CO <sub>2</sub> emission from each office Reduction of wastes and water usage Improvement in transportation efficiency and reduction of packing materials Promotion of recyclable design Appropriate disposal ofend-of-life products Increase of recycling rate	1	Participation in local community cleanup activities Cleanup activities around plants Expansion of green procurement ratio "Suzuki's Forest" volunteer planting project Silviculture by utilizing "Corporate Forest Preservation Program" Shimokawa Proving Grounds: Continuation of FSC certification program				
2	Global improvement in fuel efficiency Development of HEV, EV, and FC suitable to small cars Compliance with various countries' emission regulations	2	Continuation of the environmental education program in the introductory education and on-the-job training for new employees and trainees from overseas Releasing information of biodiversity on the internal homepage Promotion of eco-driving concept Participation in and cooperation for local community environmental workshops				
3	Compliance to various countries' regulations for usage of substances of concern VOC reduction in painting process and car cabin Promotion of green procurement Close cooperation with suppliers Environmental consideration for plant location	3	Disclosure of environmental and social reports Publication of various environmental information about production and products Participation in environment-related fairs Introduction of production process by plant tour Installation of environmental section in Suzuki Plaza				

# Forest Conservation Activities Suzuki Forest (Hamamatsu City)

Suzuki concluded a "Volunteer Forest" agreement with Tenryu Forest Administration Department of Forestry Agency and started the forestry preservation activities in 2006 at "Suzuki Forest" located in Inasa-cho, Kita-ku, Hamamatsu City.

Since fiscal 2008, our employees and their family members have participated in tree planting and underbrush cutting activities. Also, children enjoy experiencing inoculation of Shiitake mushroom in spring, and picking them in autumn. We are promoting forest conservation activities while having these participants enjoy such activities.





Cooperation with society / 01 Expansion of environmental communication

#### Suzuki Shimokawa Proving Grounds

Introduction

Suzuki Proving Grounds is located in Shimokawa Town (Kamikawa County) on the north of Hokkaido, with the forest accounting for approximately 90% of the total land area.

**Special Article** 

Key industries of Shimokawa Town are the forest and agricultural industries. Therefore, they promote proper forest management in order to maintain such valuable natural assets to the future. Shimokawa Town acquired the international FSC® Forest Group Certificate for the first time in Hokkaido in 2003. (FSC® C015134)

The 303-ha forest in the Suzuki Shimokawa Proving Grounds was also recognized to conform to the strict management standard of the FSC certification program, so it has been additionally registered in the FSC Forest Group Certificate for Shimokawa Town since 2006. Also, under an agreement of "Corporate Forest Preservation Program" with the government (Forestry Agency) since 1997, we also support silviculture of approximately 4.3-ha national forest (containing approximately 3,200 trees) in Shimokawa Town. Our environmental contribution in 2012 through forest conservation activity is evaluated as shown in the table.

Residents in Shimokawa Town hold a regional community meeting with Suzuki's employees in February of severe winter every year since 1993. Suzuki will continue to perform business activities, considering coexistence with natural environment and local communities.



Shimokawa Proving Ground (Hokkaido)

#### Suzuki's environmental contribution through forest conservation (fiscal 2012)

Measurement item	Shimokawa Proving Grounds: FSC Forest Group Certificate	"Corporate Forest Preservation Program" Regional Forest Office of Forestry Agency
①Contribution to water yield	158,069 m <sup>3</sup> /year	1,409 m <sup>3</sup> /year
<b>2</b> Contribution to prevention of sediment discharge	5,645 m <sup>3</sup> /year	51 m³/year
<b>3</b> Contribution to absorption/fixation of carbon dioxide	1,604.19 CO2 tons/year	17 CO2 tons/year

\* Calculated by the project evaluation method employed by the Forestry Agency

The above  $1 \sim 2$  equal to the below units:

- ① 79.74 million bottles of 2-L PET bottles
- ② 1,035 truckloads of 10-t dump truck (5.5 m<sup>3</sup>/truck)

3 5,067 persons of annual CO2 emission from one person

In July 2008, Shimokawa Town was certified, together with Yokohama City and Toyama City, as an "Environmental Model Town" that is aggressively promoting CO<sub>2</sub> reduction. And it is actively promoting development of environmentally friendly regions through recycle-based forest management, biomass town concept, and construction of environmental type model houses using local materials.

In December 2011, it was also designated as "Environmental Future City"\*<sup>1</sup> and "District for Promotion of Regional Revitalization"\*<sup>2</sup>, and it now aims to become "a town where residents can earn from, and learn, play, sustain health, and make happy lives in forests."

\*1 "Environmental Future City" program is a government support system to create the world's most ideal city where everybody wishes to live and residents are vibrant. Under this program, high potential regions are selected and financially supported for realizing such an ideal city.

\*2 "District for Promotion of Regional Revitalization" program is also a government support system to promotion care local revitalization. Under this program, pioneer districts which have potentiality for revitalization are selected and financially supported, with preferential measures applied.

Efforts for Environment

Cooperation with society / 01 Expansion of environmental communication

**Special Article** 

# Promoting Green Procurement

We have established "Suzuki Green Procurement Guideline" as our policy to purchase eco-friendly parts and materials from suppliers that are aggressively conducting environmental conservation activities. Suppliers who agree to this Guideline submit "Suzuki Green Procurement Promotion Agreement" to us.

In May 2011, we partially revised this Guideline by changing the expression "parts, raw materials, etc" to "parts, accessories, raw materials, and sub materials" to clarify applicable items, and adding the words "packing materials, machines and equipment" to expand the scope of application. According to the revised guideline, we will implement the green procurement activities with consideration for both environment and people concerning not only Suzuki's products, but also packaging materials used for transportation of purchased parts etc., as well as machines and equipment used for production and development.

Moreover, to the "Suzuki List of Controlled Chemical Substances", we have added some substances that are not listed in the GADSL\* but covered by Japan's Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. and Labor Safety and Sanitation Law as prohibited materials so that overseas suppliers can understand prohibited substances regulated by the Japanese laws.

Also, we are going hand in hand with suppliers to conform to conventional regulations, such as "European ELV Directive" and "European Regulation concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)", and other various environment-related laws and regulations to be established in future.

\* GADSL: Global Automobile Declarable Substance List

\* "Green Procurement Guideline": http://www.suzuki.co.jp/about/csr/green/guideline/index.html (In Japanese language only)

# Environmental education

#### Education according to Managerial Hierarchy

As part of our employee education program, we provide new employees with awareness-raising workshops concerning such basic environmental subjects as Suzuki's environmental philosophy, policy, issues, and eco-drive concept. Also, we provide other employees with environmental training according to their job functions. In addition, internal auditor training is provided to management level employees. In fiscal 2012, environmental education was provided to 19,900 persons throughout the entire Suzuki Group. In individual plants, special educational programs to prevent environmental accidents were carried out especially for employees working in environmentally-important processes. Also various educational programs were provided to new employees, management level employees, and all factory employees.

#### Education to Obtain Special Qualifications

We also encourage employees to obtain special qualifications relating to the environment management. So far, 153 employees have been qualified as pollution prevention managers, 37 as energy managers, and 648 as internal environment system auditors.

#### Education for Overseas Trainees

Every year we accept many trainees (mainly among plant managers, production engineers, or R&D staff) from overseas plants, and provide them with our environmental education. In fiscal 2012, we accepted 53 overseas trainees, and provided them with the environmental education on "Suzuki's Environmental Policy", "Measures against Global Warming", "Resources Recycling", and "Reduction of Environmental Impact Substances" to promote the environment conservation activities on a global scale.

# Promotion of Eco-Driving

#### Eco-drive education for employees

Previously, we provided eco-drive education as a part of environmental education. In fiscal 2009, we started a special seminar focusing on ecodrive at the headquarters and each plant/office. This seminar has been attended by 2,349 persons so far, and it has brought about an effect of improvement in fuel efficiency of in-house cars by 0.2 km/L.



Eco & Safety Kobe Car Life Festa 2012

Electric Vehicle Development Technology Exhibition (EVEX) 2012



• 63 •

Automotive Engineering Exposition 2012

Future Car Exhibition 2012

Participating	in Envir	onment-r	elated	Fairs

Suzuki participated in the following environment-related fairs in fiscal 2012.

Events / Reports	Period	Location	Major organizer
79th Meeting of the Electrochemical Society	March 29 - 31, 2012	ACT CITY Hamamatsu	The Electrochemical Society of Japan
Orientation of Charger Certification System by JARI	April 26, 2012	Automobile Business Association	Japan Automobile Research Institute
Eco & Safety Kobe Car Life Festa 2012	May 19 - 20, 2012	Kobe Meriken Park	Ministry of the Environment, Kobe City
Automotive Engineering Exposition 2012	May 23 - 25, 2012	Pacifico Yokohama	Society of Automotive Engineers of Japan
Electric Vehicle Development Technology Exhibition (EVEX) 2012	September 19 - 21, 2012	Tokyo Big Sight	EVEX Organizing Committee
Future Car Exhibition 2012	November 16 - 18, 2012	Expo2005 Aichi Commemorative Park(Morikoro Park)	Aichi Prefecture

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Communication with Local Communities

Cooperation with society / 01 Expansion of environmental communication

# Communication with Local Communities

#### Community Information Exchange Meeting

We regularly carry out information exchange meetings with local residents to ask their views and opinions for further environmental improvement. In fiscal 2012, such meetings and events took place seven times at seven plants. Also, 354 plant tours were conducted at domestic plants.

Plant-and-community information exchange meeting

**Efforts for Society** 

# Efforts for Society

Suzuki, For the Benefit of All

Our Corporate Social Responsibility is based on "Compliance" through which we desire to establish credibility and build good relations with our customers, business partners, employees, shareholders, investors, local communities, etc. This section introduces some activities in relation to individual Suzuki stakeholders.

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With our Customers / 01 Customer Relations Office

# With our Customers

Listening to the customer's voice and looking at things from the customer's perspective has allowed us to develop products and provide services that have won the trust and support of our customers. We constantly strive to fulfill their expectations.

01 With our Customers Customer Relations Office

Suzuki's Customer Relations Office receives more than 120,000 calls of customer inquiries for one year (based on the data of fiscal 2012). The Customer Relations Office, as a "window allowing for direct contact with customers," always keeps in mind to put ourselves in our customers' place and to provide quick, correct, and generous actions for various customer inquiries, and constantly makes efforts to improve customer services that assure customer satisfaction.

## Improving correspondence quality

With environmental technologies such as ENE-CHARGE and idling stop system (Engine Auto Stop Start System), information network system connected with smart phones, etc., automobile structures and applications are getting more and more complex. The Customer Relations Office responds to various kinds of inquiries ranging from obvious questions from beginner drivers to questions about advanced technologies, and always tries to give clear and concise explanations. In addition, we are enhancing the customer support system to assure quick and appropriate actions for customers. In the case where on-the-spot customer services are required for purchase, maintenance, etc. of our products, we use the nationwide Suzuki Network to provide appropriate supports.

## Improving customer-friendliness

In order to smoothly respond to many customer inquiries and requests, our customer relation service is easily accessible even on nonbusiness days, while organizing the environment applicable to wide varieties of media such as cellular or hard line phones at our toll free phone numbers or our website via e-mails.

## Improving products and service quality

We recognize that "the voices of customers are very important information to improve the quality and services," and distribute those opinions and suggestions to related departments in order to develop better products and improve manufacturing, quality, sales, and after-sales services. That important information is carefully handled and collected into a data integration system for efficient information management and posted on our Intranet system, with the personal data carefully protected. Also, we have established a system enabling such information to be promptly fed back to the relevant persons in charge depending on the criticality of the information. While not only responding to users' requests

and opinions, but also fully examining the collected information, we often summarize potential customer needs and inform the relevant departments.

For providing more reliable and convenient services, the Customer Relations Office will continuously make efforts for further improvement of operations.





With our Customers / 01 Customer Relations Office , 02 Welfare Vehicles ("With" Series)

**Trends in Access to the Customer Relations Office** 



# 02 With Our Customers Welfare Vehicles ("With" Series)

Sales of our "With" series welfare vehicles began in 1996. These vehicles are designed to provide seniors and the disabled with greater ease of entry and exit of the vehicle. At present, four models each with two types, "Courtesy Type" and "Lifting Seat Type" are available. We are working to develop a lineup of welfare vehicles so that customer can select a vehicle suitable for specific needs and situations.





"With" Series Sales



# Wheelchair Courtesy Vehicle

Wheelchair courtesy vehicles make it easy for persons requiring special care to get into and out of the rear of the vehicle while seated in the wheelchair. The low floor vehicle allows the helper to easily support the passengers who require special care during getting on and off. This vehicle can accommodate either a manual or electric wheelchair. The EVERY WAGON , the EVERY, and the SPACIA has a wheelchair courtesy variant.

# Lifting Seat Type Vehicle

This type of vehicle enables the passenger seat for the person requiring nursing care to be moved up, rotated and moved down by remote control. Since the seat can be brought into a position that makes it easy for the person requiring nursing care to get in and out of, the stress on the assistant is reduced. The WAGON R has a variant equipped with the lifting passenger seat.





Efforts for

Introduction
With Our Customers / 03 Electric Vehicles

# 03 With Our Customers Electric Vehicles

Our line of electric wheelchairs and welfare vehicles are designed to meet the purpose and needs of seniors and the disabled. We will actively develop new vehicles that take users, driving conditions, etc. into consideration, and contribute to society.

## Electric Wheelchairs\*1

We have been producing electric wheelchairs since 1974 to provide seniors and disabled persons with greater mobility.

\*1 Electric Wheelchairs (Suzuki Senior Car and Motor Chair) are regarded as pedestrian traffic. A driver's license is not needed.

#### **Senior Car**

The electric wheelchair equipped with a user-controlling steering wheel began to be sold in 1985. This electric wheelchair is designed to enable senior citizens to easily go out. It is capable of moving at adjustable speeds ranging from 2 km/h to 6 km/h.

#### **Town Cart**

Introduced in 2005 on the market, the compact type of the senior car, "Town Cart", is designed to allow the user to travel in public facilities, housing complexes, shopping malls and metropolitan areas. It is capable of moving at adjustable speeds ranging from 1 km/h to 6 km/h. With the turning radius of 1.1 meters, it can provide small turns. It is permitted to be used in the Tokaido, Sanyo, and Khushu Shinkansen bullet train N700 between Tokyo and Kagoshima Chuo. (A specific preliminary procedure is required.)



#### Motor Chair

This is a standard user-controlling type electric wheelchair, which began to be sold in 1974. Specially designed for the persons with impairment, this electric wheelchair is controlled by means of a joystick for direction and speed and is propelled by the two rear wheels, which enables 360-degree turning without moving back and forth. Since it can be used both indoors and outdoors, it expands the user's field of activities.



#### Topics

#### Topics

Suzuki Senior Car has acquired a JIS certificate JIS T 9208:2009 based on a new standard that considers safety and convenience of the steering wheel-type electric wheelchair. In this standard, the product performance is shown in three levels by the number of stars ( $\bigstar$ ) so that users can select and use products appropriate for their usage style. Suzuki Senior Car "ET4D" and "ET4E" acquire the permission to display three stars for "turning stability" and "capability for getting over steps," and one star for "rotation performance." In addition, the city-type Senior Car "Town Cart" acquires the permission to display three stars for all of these categories.



#### Safe Driving Training Program "For Preventing Accidents"

In order for people to enjoy using our electric wheelchair in a safe manner, Suzuki is making efforts to promote better understanding of operation method by conducting face-to-face sales through full-time sales persons and showing potential customers how to operate an actual wheelchair. Furthermore, we conduct the "Suzuki Electric Wheelchair Safe Driving Program," which is a training session for the people who are currently using our electric wheelchair, working in conjunction with local police departments, traffic safety committee, etc. At the same time, we are making efforts to foster trainers for that program. We try to improve the trainee's awareness of traffic safety and prevention of traffic accidents etc. through seminars and practical training.



#### Electric Wheelchair Association Safety Activities

The Electric Wheelchair Safety Promotion Association was established by manufacturers and dealers to promote safe and proper use of electric wheelchairs for the disabled and senior citizens. Program workshops contribute to smoother and safer traffic flow and help putting the electric wheelchairs to practical use. As a member of the association, and as an organizer, Suzuki works with authorities and other related groups to educate the public on the safe use of these devices, and create a society in which wheelchairs can be used safely.

#### Electric Wheelchair Safety Instruction Commendation System

Sponsored by the Traffic Bureau of the National Police Agency, the Electric Wheelchair Safety Instruction Commendation System promotes traffic safety public education and recognizes and commends concerned parties that take an active role in the prevention of wheelchair related traffic accidents. Suzuki takes an active part in this commendation system as an organizer of the Electric Wheelchair Safety Promotion Association. With Our Customers / 04 Activities for Motorcycles

Introduction

With Our Customers

# Activities for Motorcycles

**Special Article** 

# Activities on safety and crime-prevention in cooperation with motorcycle industry

As a member of Japan Motorcycle Safety Association, Suzuki sends some instructors to various motorcycle safe riding schools and holds safe driving seminars such as "Good Rider Meeting," in cooperation with Motorcycle Safe Riding Promotion Committee. Also, we are promoting the "Good Rider Anti-theft Registration" activity for registration of motorcycles to prevent theft.

We cooperate for the promotion of "Motorcycle Safe Riding Trainer Training Session" and "Centralized Training Workshop" organized by JTSA (Japan Traffic Safety Association) by sending instructors. In addition, we are also involved in the annual "National Motorcycle Safe Riding Competition" organized by JTSA by sending judges and motorcycles for the competition in order to widely enlighten safety for motorcycles.

On August 19 determined as "the Day of Motorcycle" according to the way of reading "819 (bike)" in Japanese, we hold events for appealing enjoyment of riding motorcycles and traffic safety in cooperation with motorcycle industry such as Japan Automobile Manufacturers Association, Inc. (JAMA).

# ABS Test-Ride Event

Suzuki collaborates with designated driver's schools etc. all over Japan and holds an "ABS-equipped motorcycle test-ride" for promotion of ABS-equipped motorcycles. In 2012, more than 1,600 customers experienced the test-ride for activation of ABS at 40 event locations.

# Suzuki Safety School

Since fiscal 2008, we hold Suzuki Safety School periodically at the motorcycle school area in Ryuyo Proving Ground to teach users of Suzuki motorcycles how to enjoy riding safely. We accept a broad range of participants including beginners, return riders (who didn't ride their motorcycles for a long time), and veteran riders (who want to learn new traffic rules). We hold this school as a practical event enabling people to learn, with fun, not only such basic techniques as how to run, turn and stop, but also such safety techniques as "hazard anticipation" and "riding with ABS".











**Efforts by Plants** 



**Efforts for Society** 

With Our Customers / 04 Activities for Motorcycles

Introduction

# Cooperation with "Hamamatsu, the hometown of the Motorcycle".

SUZUK

**Efforts for** 

"Hamamatsu, the hometown of the Motorcycle" is an event to spread information, attractions, and the culture of

Hamamatsu, where the domestic motorcycle industry was born, nationwide. This event started in 2003 and the year 2012 was its 10th anniversary.

**Special Article** 

Suzuki is contributing to foster personnel resources to those who have dreams on motorcycle and take the lead in manufacturing in new generation, and to create the town where motorcycle lovers get together through touring project and industrial tourism by cooperating this event.

# In-House Safe Driving Seminars

As a manufacturer and distributor of motorcycles, we regularly hold motorcycle driving safety seminars for our new employees, motorcycle commuters, and employees of related companies and distributors.

In fiscal 2012, we held "Motorcycle Safe Riding Seminars" six times for our new employees, motorcycle commuters, and employees of related companies and distributors.

We will continue to conduct such seminars to train them to improve their safe riding awareness, basic motorcycle operation, and riding manner, as well as to follow the traffic rules, as employees working for motorcycle companies, who must be the role models for other riders.

# Sunday SRF in Ryuyo Off-Road Seminar

To promote off-road motor sports, a technical riding school for a broad range of motocross riders, from beginners to experienced riders, who purchased Suzuki's competition model "RM series" motorcycles, is held at the Ryuyo Off-Road Course every year. A rider with International A License is invited as an instructor to provide one-on-one coaching session.

We had the school ten times in 2012 and 334 participants in total.

Many Suzuki customers have taken part in this event and learned basic and high-level motocross riding techniques. This event will be held on a regular basis.

\* SRF (Suzuki Riding Forum) is a club organization aiming to upgrade the off-road riding technique of users of Suzuki competition model motorcycles for safe and proper use of them, as well as to familiarize the off-road motor sports in Japan through not only lessons in riding technique, but also mental training.







Special Article  $\vee$ 

Efforts for Society

With Our Business Partners / 01 Sustainable Relationships , 02 Global Procurement , 03 Business Continuity Plan

# With Our Business Partners

**Efforts for** 

Suzuki intends to make a social contribution under the primary motto: "Create products really valuable to customers". In creating such valuable products, we believe that the procurement section's role is to work in mutual cooperation with our business partners so that both parties may prosper. Those business partners are selected through an impartial procedure based on quality, cost, deadline delivery, and technical development capabilities. And we have an open door policy, which offers the chance of teaming up with Suzuki regardless of size or track record.

With Our Business Partners

# **J** Sustainable Relationships

In creating trusting relationships with our business partners we aim to establish sustainable relationships. For that purpose, we regard the mutual communications as the most important factor, so that we encourage the sharing of ideas not only between the top and middle managements, but also between managements and individuals responsible for daily business operations.

02 With Our Business Partners
Global Procurement

We will accelerate global procurement activities by working with worldwide manufacturing bases. Previously, procurement activities were carried out mainly on individual local bases, but we have shifted to a more global-basis approach to obtain the most suitable parts at competitive prices. That benefits not only Suzuki, but also our business partners who can stably receive orders and accumulate various technologies. By sharing those merits we can build more confident relationships.

With Our Business Partners

# **U** Business Continuity Plan

In addition to earthquake-proof reinforcing of individual office buildings, we have started compilation of a business continuity plan (BCP). We regard the preparation for earthquakes, tsunami and other wide-scale disasters as part of our responsibility to customers and local community. We also recognize our responsibility to local communities, our business partners and customers for being prepared for large-scale disasters, including earthquakes, and recommend disaster measures such as quakeproofing to our partners located in areas that are likely to experience heavy damage. We are also prepared to aid our business partners in their recovery if they should fall victim to such disaster.

Efforts for

Suzuki Foundation Activities / 01 The Suzuki Foundation

# **Suzuki Foundation Activities**

01 Suzuki Foundation Activities The Suzuki Foundation

Supporting scientific and technological research through the Suzuki Foundation since 1980.

# Policy

Coupled with today's worsening problems with energy, global warming, etc., the need for automobiles that save energy and reduce environmental loads is growing. Accordingly, the compact car industry is at the stage of further progress by satisfying such need of the time. In such situation, we believe that the compact car industry must make more efforts to quickly respond to the public need. For that purpose, further development of the related mechanical industries and cultivation of engineers are very important. The Suzuki Foundation was established with collaboration from Ministry of Economy, Trade and Industry and other various organizations to continuously support and finance those mechanical industries related to compact cars for promoting technological development and attracting young people to this industry. (The Suzuki Foundation was established in 1980, commemorating the 60th anniversary of Suzuki's founding, with the funds deposited with affiliated companies, and made new start as a public interest incorporated foundation on April 1, 2011.)

# **Foundation Activities**

#### Grants for Basic and Original Project

The Suzuki Foundation offers grants for basic and creative projects related to environmental, information, control, material and medical technologies, which are the framework of social development. We have contributed to the basic research for development of technologies by providing grants totaling 1,152,270,000 yen to 849 researchers (as of April 1, 2013) at universities, junior colleges, and research institutes.

#### Grants for Theme-Based Project Assignments

We also finance projects that concentrate the combined intellect of researchers in finding solutions of high priority concerns such as global environmental conservation and natural energy resource saving. Since the start of our financial aid in 2003, we have financed 14 projects including the "Research on environmental recognition and avoidance control system to avoid/reduce accidents" which amount to 113,610,000 yen to date (as of April 1, 2013).

#### Grants for further development of findings and for overseas training of researchers

The foundation partially provides grants to symposiums and conferences held in Japan and other countries for the purpose of further development of findings from basic or creative scientific researches. So far (as of April 1, 2013), it has provided grants totaling 130,570,000 yen for 384 symposiums and conferences.

#### Grants for Joint Project with Foreign Researchers

Based on the researchers exchange agreement between Shizuoka University and Budapest University of Technology and Economics (Hungary), the two universities tied up with the Suzuki Foundation in 1999 and have been working



on this project. We have funded eleven researchers who came from Budapest University of Technology and Economics. The projects they have been working on include those for international collaborative research development.

#### Supporting Inter Academia

For international exchange activity, Shizuoka University and eight European universities hold international conferences (Inter Academia) for the purpose of mainly announcing the results from the researches conducted by students and instructors under social programs. Suzuki Foundation also actively supports those activities.
Introduction	Special Article	Efforts for Environment	Efforts for Society	Efforts by Plants	Environmental Data	
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Suzuki Foundation Activities / 01 The Suzuki Foundation , 02 Suzuki Education and Culture Foundation , 03 Management Assistance for the Mundo de Alegria School for Japanese-South Americans

### Number and amount of grants

- •Number of grants in fiscal 2012: 56 (Accumulated total: 1,258 as of April 1, 2013)
- •Total amount of grants in fiscal 2012: 48,680,000 yen (Accumulated total: 1,424,640,000 yen as of April 1, 2013)

### Supporting Public Interest "Motoo Kimura Evolutionary Studies Fund"

It is our wish to find causes of disease and pursue good health so that we may all live pleasant and plentiful lives. In admiration of the efforts of Motoo Kimura who was nominated for a Nobel Prize for his research in evolutionary studies, the Motoo Kimura Evolutionary Studies Fund was established in December 2004 with the funds from Suzuki. This fund rewards those who have made a great contribution to the genetic science research.

Suzuki Foundation Activities

# Suzuki Education and Culture Foundation

Commemorating the 80th anniversary of Suzuki's founding, the Suzuki Education and Culture Foundation was established in 2000 through funds received from the Suzuki Group.

The foundation offers scholarships to high school students living in Shizuoka Prefecture or university students who are graduates of high schools in Shizuoka Prefecture who, due to economic hardship, are unable to continue their studies,

or students of universities in Shizuoka who have a strong desire to learn. We also support sports and educational programs for children and students, and schools for foreigners to make contributions to nurturing of healthy youths and international exchanges.

-Gross assets: 2,158,680,000 yen

•Total amount of grants (Accumulated total: as of April 1, 2013): 219,440,000 yen

-Scholarships (Fiscal 2012): 66 scholarships (20,880,000 yen)

- •Number of grants to schools for foreigners in fiscal 2012: 1 (15,000,000 yen)
- -Grants to Shizuoka University of Art and Culture for scholarship in fiscal 2012: (1,500,000 yen)



A ceremony of receiving scholarship certificates

### Suzuki Foundation Activities

# Management Assistance for the Mundo de Alegria School for Japanese-South Americans

The Mundo de Alegria School located in Yuto-cho, Nishiku, Hamamatsu City is a school for Japanese-South American children. The school was established to accept children who cannot attend Japanese schools due to the language barrier or international schools due to the economic hardship so that they can experience the joys of learning and adjust to the Japanese society.

The school was established in February 2003 with private donations, however it was difficult to manage the school privately. Thus, local companies including Suzuki cooperate to encourage collaboration from the local industries in Hamamatsu. And approximately 60 local companies joined the supportive action. In August 2005, the school became the first domestically incorporated school for the Japanese-South American students, receiving subsidies from the prefectural and municipal governments. With the consistent efforts gradually recognized, the number of supporters and collaborators is increasing. And people from the local industrial community take part as board members (founder, trustee, whip, and councilor) of the school. Now, the number of students has exceeded 200 persons.

We hope to nurture admirable second- and third generation Japanese-South American youths living in Hamamatsu City.



With Our Employees / 01 Safety, Health and Traffic Safety Related Activities

# With Our Employees

At Suzuki we believe that the foundation of our business activities lies in employees cooperating to manufacture products of value, and communication through which opinions are freely exchanged regardless of rank or division to keep company vitality high.

In regard to employee relationships, we strive to create systems and environments that promote development of a group that works in good faith and look to the future rather than rely past methods. In this we place emphasis on the following points.

- **1** Create a safe and healthy workplace for our employees.
- **2** Create a system that fairly evaluates and supports those who want to take the initiative in advancing their careers.
- **3** Create good and stable relationships between the employer and employees.

01 With Our Employees Safety, Health and Traffic Safety Related Activities

### Safety and Health

Safety and health management are promoted through our basic safety concept.

Basic Safety Concept ·· Make safety a priority ·All accidents are preventable ·Safety is our responsibility

If any accident occurs, it is specified without exception, regardless of seriousness, in a relevant report that is circulated in the company (for horizontal deployment) to prevent recurrence of the same accident or occurrence of similar ones. We will continue to raise employees' safety awareness to sense potential risks, review or revise our safety operation manual, and improve any risk factor in our workplaces.

As the saying goes, "For every accident that causes a major injury, there are 29 accidents that cause minor injuries, 300 accidents that cause no injuries".\* In order to prevent accidents from occurring, we need to implement activities that eliminate no-injury accidents.

Since 2001, we have relied on risk assessment, which looks at case examples of no-injury accidents in order to counter and improve them.

\* Heinrich's Law



### Health Management

Starting 12 years ago, we require that all employees 40 years and older have medical and dental checkups for early detection and rapid cure of illness. As a follow up to health checks, we regularly carry out health education, nutrition instruction, etc.

We also provide the following programs as measurements for stress and mental health problems, which have been on the rise in recent years.

- Provide health information on mental health and others through the corporate intranet and seminars to allow employees to perform effective self-care.
- •Provide mental health seminars by external industrial physicians mainly to supervisors and managers in order for them to take care of mental health of workers at each workplace.
- •To make consultation easier, we opened a mental counseling corner by psychiatrists and clinical psychotherapists in our company medical clinic.



With Our Employees / 01 Safety, Health and Traffic Safety Related Activities , 02 Activities for Career Advancement

# Traffic Safety

To encourage each and every employee to set an example in their driving that befits that of a member of an automobile and motorcycle manufacturer, we have implemented a number of programs like those described below, that are aimed at preventing traffic accidents that could occur on the job.

- •Create commuting route accident maps
- •Training in traffic carelessness and risk prediction by small group.
- Instruction on and strict control of traffic rules not only on public roads, but also within the plant site
- •Traffic safety education at the jurisdictional police stations
- •Individual instruction with driving simulators and proper driving checks
- •Alert employees to traffic safety before long holidays

02 With Our Employees Activities for Career Advancement

It is our belief that career advancement through self-development is a source of job satisfaction. For this reason, we offer activities that allow employees to advance depending upon their qualifications or abilities. We pursue the development of human resources by supporting those who wish to challenge and achieve higher goals.

### **Goal Challenge System**

Rather than setting easy goals that are soon achieved, we feel that setting high goals is an excellent way to improve one's self. Our Goal Challenge System allows employees to set and achieve high standards. Every half period, employees confer with their supervisors and set specific goals to be achieved over the course of six months, and everyone in the company works to achieve their goal. The implementation of this system has produced the following results:

- •Specifying goals has improved motivation.
- •Supervisors can appropriately appraise the individual's achievements and offer specific guidance and development.

Suzuki's personnel system places greater emphasis on occupational ability than seniority. Intended to develop professional human resources, it is based on an objective and fair personnel evaluation system according to abilities, roles, and responsibilities of individual employees. The performance-based personnel system and the goal setting system motivate employees' intentions to step up each rung of the corporate ladder.

### Self-Actualization Systems

We are pursuing a standard that can be used to accurately evaluate employee performance and a corporate culture that enables employees to maximize their abilities. A self-actualization system has been implemented as a support system that lets employees fully exercise their abilities in jobs that they choose to do and that allows employees to request transfers.

Special Article Efforts for

**Efforts for Society** 

**Environmental Data** 

With Our Employees / 03 Secure and Comfortable Working Environment

# 03 With Our Employees Secure and Comfortable Working Environment

We are pursuing a working environment where employees who bear business activities can maximize their motivations and abilities in a mentally and physically fulfilling condition. Various assistant systems are employed to help employees work actively through positive adaptation as a company to diversify the working environment. Also, a comfortable working environment will improve employee's motivation to increase productivity.

### Child-Care Shortening Hours System

We have adopted a system to shorten daily working hours based on self application by employees who need child-care for children in the third grade or younger.

The employees applying for this system may be exempted from overtime work in principle. Also, they can use the dedicated company's parking area, allowing them to use cars for easy pick-up of their children.

This system enabling employees with small children to choose from various working styles creates a working environment where employees with motivation and ability can keep working. This short-time working system enhances awareness of child-care support in the entire workplace and promotes "employee-friendly working atmosphere" which can support those short-time workers.

### Childcare, Caring of an Aged Family Member System

We provide baby breaks and breaks for caring for an aged family member to employees, regardless of gender, who, due to personal reasons such as child-care, nursing care, etc., have difficulty in working even though they have the will and ability to work. This system is used by many employees.

### **Re-employment System**

Since July 1991, far earlier than the revision of the Law concerning Stabilization of Employment of the Older Persons in April 2006, we have adopted a re-employment system for hiring people after the mandatory retirement age of 60 years old. This system offers employment to the people who are willing and able to work after retirement age of 60 years old. Now, they are using their abundant experience and acquired skills in each working place.

### **Employee Consultation Service**

Since 2002, we have rolled out the "Employees Consultation Service" throughout the company as part of CSR Management System. In April 2007, the coverage of this service was expanded to include not only Suzuki's regular employees, but also all persons working in the business locations (including regular, apprentice, probationary, dispatched, temporary, part time, seasonal, and seconded workers and Suzuki's employees working in other companies' locations). In addition, the consultation service is also available to employees of other Suzuki Group companies. It provides a broad range of consultation from trouble in the workplace, such as sexual harassment or power abuse, to questions, problems, and improvements related to their individual jobs, casually via e-mail or phone service. In addition, consultation with an outside lawyer is possible to maintain fairness. Quick and fair solutions to individual problems can maintain a comfortable working environment. Also, it is ensured that any report or consultation request will not cause any disadvantage to the reporting person.

In addition to the consultation service, an "Improvement Proposal Box" is located at worksite cafeterias and offices, allowing every employee to easily make a proposal on work improvement or request for consultation.

### Acquiring the accreditation mark "KURUMIN" based on the Law for Measures to Support the Development of the Next-Generation from the Ministry of Health, Labor and Welfare

Suzuki was accredited by the Ministry of Health, Labor and Welfare according to the Law for Measures to Support the Development of the Next-Generation as a company that supports child care. The Law for Measures to Support the Development of the Next-Generation was established to oblige companies that have 101 or more full-time employees to prepare and submit the action plan to build employment environments that support balancing of childbirth/child care and work, etc. in order to create the society with health upbringing of children who bear the next-generation society. Suzuki will further promote building of working environments where our employees can work comfortably and keep balancing the work and child care.



Special Article Efforts for

With Our Employees / 04 In-House Education System

# 04 With Our Employees In-House Education System

To promote continuous development, based on the policy of our mission statement, we have installed an in-house education system to improve employee capabilities, develop talent that can adapt to environmental changes.

# Group Training (Off the Job Training (Off- JT))

Group Training, also known as "Off the Job Training" consists of seminars given in our inhouse school, training center, etc. and out of company training seminars, etc. Seminars are generally given according to management hierarchy\* and cover basic knowledge, technology and skills necessary to pursue tasks in accordance with the job position.

\* Seminars according to management hierarchy: Carried out according to corporate rank such as General Manager Seminars, Section Chief Seminars, Chief Seminars, Annual Seminars, Foreman Seminars, Section Leader Seminars, etc.

Number of Seminar	<b>Darticinants</b>	(Overall Suzuki Group	n)
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Fiscal 2003	17,700 persons	Fiscal 2008	19,000 persons
Fiscal 2004	14,400 persons	Fiscal 2009	17,300 persons
Fiscal 2005	14,500 persons	Fiscal 2010	16,300 persons
Fiscal 2006	15,500 persons	Fiscal 2011	19,600 persons
Fiscal 2007	18,200 persons	Fiscal 2012	19,900 persons





### In-House Training (On the Job Training (OJT))

In-house training refers to supervisors or senior employees teaching junior employees through the course of daily work. What is taught varies from employee to employee and has a direct effect on their work. For this reason, it is considered the first step in the education process, and is regarded as the most important aspect of our in-house training system. The professional education that is required in each section within the company is mainly given through in-house training.

### Voluntary Skill Development

### Self-Development

Scholarships are available to support those employees who actively work to improve vocational skills on their own through correspondence courses or language seminars. Providing our employees with support so that our employees can gain further knowledge and skills, we provide support so that they can attend seminars held by groups outside of the company.

### **Small Group Activities**

We also promote such in-house group activities as proposed activities, quality control circles, etc., in order to create a more cheerful work environment or increase self-development.

Special Article Efforts for

With Our Employees / 05 Employee Relations , 06 Deployment of an Affiliate "Suzuki Support"

# 05 With Our Employees Employee Relations

Through mutual confidence, we have developed a good relationship with the Suzuki Labor Union, which represents Suzuki Employees.

Among the labor union's goals are stable employment and maintaining and improvement of work conditions. In order to meet these conditions, stable development of the company is required. When negotiating salaries, bonuses, labor hours, etc., our opinions sometimes differ, however we do share the same basic vector, which aims to stable development of the company.

### **Employee Communication**

We arrange frequent labor-management consultations to ensure that employee ideas are reflected in all of our departments, such as research and development, design, manufacturing, sales, etc.

In addition to discussing requirements (salaries, bonuses, labor hours, etc.) we hold monthly discussions that regularly cover a wide range of issues such as business policies, production planning, business hours, welfare, safety and health, etc., and seriously exchange ideas on what Suzuki and the labor union can do to deliver quality products to the customer.

### Building a Stable Relationship with the Labor Union in the Suzuki Group

The Suzuki group has 135 member companies (manufacturers, non-manufacturers, sales companies) at home and abroad. It is our hope that those 135 member companies are individually trusted by the local residents, society, and customers. At Suzuki, seminars are given to union officials and labor union leaders of overseas companies to make them understand the importance of cooperative relationship and smooth communication between labor and management, as well as the need for a fair, equal and clear personnel management system, etc. We also work with the labor union to promote global personnel exchanges both domestically and abroad, and we strive to establish a work climate which allows our 56,000 employees in 135 companies to enjoy working with a highly creative and stable labor-management relationship.

# 06 With Our Employees Deployment of an Affiliate "Suzuki Support"

Suzuki Support Co., Ltd, a special affiliate company established in February 2005, has been conducting business activities for nine years. As of the end of May 2013, 46 disabled employees including those having severe intellectual disabilities are brightly and vigorously performing janitorial service and stationery management service at Suzuki's main office, employee dormitories and related facilities.

Their sincere and cheerful attitude toward work greatly encourages all the people in Suzuki.

In line with the corporate philosophy, which is intended to make a contribution to society, Suzuki Support will further provide job assistance for people with disabilities in order for them to feel happy through working and to build their experience through social participation.

### [Summary of Suzuki Support]

Suzuki Support Co., Ltd.
10 million yen
Suzuki Motor Corporation
300 Takatsuka-cho, Minami-ku,
Hamamatsu City, Shizuoka Prefecture
February 2005
Janitorial services, etc.
Hiroyasu Uchida, President
(also Managing Executive Officer,
Administration Executive General
Manager, Suzuki Motor Corp.)
66 (46 employees with disabilities)



Our Shareholders and Investors / 01 Improving Corporate Value

# **Our Shareholders and Investors**

Our Shareholders and Investors

# Improving Corporate Value

The Suzuki Group has been holding up the phrase "Develop products of superior value by focusing on the customer" as the first statement in the Mission Statement, and has placed "valuable products" on the base of manufacturing since our inauguration.

Under this philosophy, Suzuki has made the best efforts to improve the corporate value to live up to expectations from shareholders and investors and in line with our growth strategy, we have continuously reevaluated every field and improved our management practices under our basic policy "Think hard and make an extra effort to challenge the status quo."

For the medium-term sales target, we have constantly recovered the consolidated sales which had been dropped to 246.91 billion yen in March of fiscal 2010 after the Lehman Shock, and are now working to reach 3 trillion yen by March of fiscal 2015. For the consolidated profits, we accomplished the target ordinary income rate of 6% in this term, and the operating profit ratio and current net income ratio are the best ever.

However, on the other hand, we also have nonprofitable businesses and unsuccessful markets. We will make efforts to improve profits also of such business and regions. To this purpose, we will put our efforts toward realizing the philosophy of the mission statement by holding up "Create a Wow! - Beyond customer expectations -" as Suzuki's vision. Also, we will select and centralize management resources to continue investment to important fields including environmental technologies, small cars, and growing markets, and establish the revenue base and develop human resources that support such fields.



### Changes in consolidated results





Introduction

Special Article Efforts for

Our Shareholders and Investors / 02 For Our Shareholders and Investors

Our Shareholders and Investors

# **U** For Our Shareholders and Investors

Suzuki's basic profit sharing policy is focused on maintaining a continuous and stable dividend. At the same time, however, from a medium- and long-term perspective, we always consider how to improve business performance, dividend payout ratio, and internal reserves as a basis for enhancement of our corporate structure to prepare to expand our business operations in the future.

The Suzuki Group's business performance largely depends on overseas production plants, mainly in developing countries, and is subject to exchange rate fluctuations. Therefore, for further stable growth of Suzuki Group, it is important to enhance corporate strength and prepare for any contingency.

In this accounting period of consolidation (fiscal year 2012), we could compensate profit declines due to impact of foreign exchange rates or cutdown in sales in Europe with profit increase realized by increase in sales of automobiles in Japan and other Asian countries and cost reduction. As a result, the current consolidated net profit became the best ever.

The business environment still shows a grim outlook, but we have set the year-end dividend of this business year to 10 yen per share. The ordinary dividend including an interim dividend was 18 yen, increased by three yen per share from the previous fiscal year.

In line with our basic policy, the surplus is distributed twice a year in the forms of the interim dividend and the year-end dividend. According to the resolution of our board of directors, the interim dividend is available for the shareholders as of September 30 every year as the record date, which is stipulated in our company contract. The decision-making meetings for the dividends are the board of directors for the interim dividend, and the shareholder meeting for the year-end dividend.



### Cash dividends per share

Efforts for

Our Shareholders and Investors / 03 Shareholder Benefit Program

03 Our Shareholders and Investors
Shareholder Benefit Program

As a token of appreciation for the shareholders' continuous support for Suzuki and in hope of further patronage of Suzuki's products, we offer a shareholder benefit program.

This program was established in December 2005 in commemoration of winning two awards: "RJC Car of The Year" and "2005-2006 Japanese Car of The Year" ("Most Fun" Prize) for the Suzuki's world strategic model "SWIFT" in hope of further patronage of Suzuki's products.

The number of shareholders has been changing as shown below.



### Changes in the number of shareholders at fiscal year ends

### Eligible shareholders

Shareholders who hold a minimum unit of shares (100 shares) as of March 31 every year

### Gift content

The gift consists of a set of acacia honey, which is a specialty product of Hungary where our European production base MAGYAR SUZUKI CORPORATION is located, and a pack of German-made rock salt that contains lots of well-balanced natural mineral. Both of them are imported and sold by Suzuki Group.



Shareholder benefit program (a gift set of Hungarian Acacia honey and rock salt)

This product is also available by mail from our related company Suzuki Business Co., Ltd.

l	oduction Special Article Efforts for Environment Efforts for Society Efforts by Plants Environmental Data	
Our Shareholde	and Investors / 04 Investor Relations	
01	Dur Shareholders and Investors	
<b>U4</b>	Investor Relations*	

We address disclosure of information to all of our shareholders and investors based on the spirit of our charter "Fully disclose accurate and fair information to the public and build a proper relationship with society".

### **IR** materials on Homepage

In particular, we provide investor relations information such as briefings, corporate information and data, which are required in making investment decisions, through the Global Suzuki homepage (<u>http://www.globalsuzuki.com/ir/index.html</u>)



\* IR (investor relations) means activities of a company to offer the company information necessary for investment for shareholders and investors in a timely, fair and continuous manner.



### > Open periodical seminar for analysts and corporate investors.

The settlement briefing for analysts is held every quarter of the year. In addition, investors' conference and other presentation meetings, domestic/international IR meetings, new model announcement shows (to invite analysts), and plant tour events for analysts are held as well.

### Set-up of department for IR

For IR-related sections, we have IR Group under Corporate Planning Office as an IR contact in the headquarters, Tokyo IR Group as an IR contact in Tokyo, and Consolidated Accounting Group of Finance under Finance Department for materials to be disclosed, such as brief note on the settlement of accounts.

### **IR for foreign investors**

The following IR activities are conducted for foreign investors.

- •Providing IR information for foreign investors on the website
- Almost the same information as that on the Japanese IR page for domestic investors is disclosed in English, such as the brief note on the settlement of accounts, presentation documents for explanatory meeting for investors, proxy statement, resolution notice of shareholders' meeting, timely disclosure by the Tokyo Stock Exchange, and IR news.
- •Attending domestic IR conferences for foreign investors
- •Implementation of IR overseas

We hold IR meetings or individual meetings for foreign investors in Europe, North America, etc.

•Providing English data on brief note on the settlement of accounts to TDnet (Timely Disclosure Network) Database Service of the Tokyo Stock Exchange

### IR event for individuals

Since the 142nd annual meeting of shareholders held on June 27, 2008, we have made it a rule to invite shareholders to the Suzuki Plaza, after the meeting, for better understanding of Suzuki.

The Suzuki Plaza is a facility, which has been open to the public since April 2009, for showing the history of Suzuki, introducing its worldwide business activities, and comprehensively explaining the automobile production process under the theme of Suzuki's way of manufacturing.



Suzuki Plaza outline



Visit to the Suzuki Plaza

With Local Communities / 01 Cleanup Activities

# With Local Communities

With Local Communities

# **UL** Cleanup Activities

### Participation and cooperation to the Lake Hamana Environmental Network

The Lake Hamana Environmental Network established in 2005 receives entrustment from the government of Shizuoka Prefecture, and conducts constant and aggressive activities including an education program in relation to environmental conservation of Lake Hamana, eco-workshop, local conservation research, and information transmission. As of April 2013, 78 groups and bodies such as local civic groups, schools, NPO corporations, and various trade associations and companies are registered in this Network, which is now the largest "place for gathering" for environmental conservation of Lake Hamana.

Since its inauguration, Suzuki has had an active involvement and cooperation as part of environmental education and volunteer activities by employees.

In fiscal 2012, Suzuki's employees and their family members (79 person in total) participated in "Lake Hamana Eco-Kids Experimental Learning Activity" which is a kind of environmental learning for children, "Lake Hamana Eco-Workshop" where various local environmental conservation activities are mutually introduced for cooperation, panel discussions to searching for usage of sea lettuce, etc.

Through lectures and experiential learning such as observation and cleaning of waterside, we will continue to encourage as many people as possible to learn the nature, history, and culture of the brackish water lake, Lake Hamana, and re-recognize conservation of a valuable asset for the community.

### "Lake Hamana Eco-Kids Experimental Learning Activity in Benten Island" (June 30)

•Short lecture about eelgrass and sea lettuce •Observation of eelgrass field and creatures •Seafood experience



### "Lake Hamana Eco-Kids Experimental Learning Activity in Kanzanji" (July 14)

•Short lecture about eelgrass and sea lettuce •Sea lettuce recovery efforts at the lakeside beach •Beach seine experience and observation of creatures



### "Lake Hamana Eco-Kids Experimental Learning Activity in Murakushi" (September 8)

Introduction of local circumstances and vegetable culture
 Farming activities using compost made from sea lettuce
 Local production foods exchange
 Canal cruise



(Japanese white radish harvested later)

### With Local Communities /02 Supporting Disaster Struck Areas , 03 Promoting sports

# With Local Communities Z Supporting Disaster Struck Areas

We donated one million yen each to Oita and Kumamoto prefectures (two million yen in total) via each branch of the Japanese Red Cross Society as a support to areas damaged by heavy rain in the northern part of Kyushu in July 2012.

### Presentation of a letter of thanks from Iwate prefecture

On August 8, 2012, Mr. Yoshiharu Ueno, the Deputy Governor of Iwate Prefecture visited the headquarters of Suzuki and we received a letter of thanks for our donation to the Great East Japan Earthquake. Suzuki donated 30 million ven via Japanese Red Cross Society as a support to areas damaged by the great earthquake last year. In addition, we sent the light truck "CARRY" (50 units), scooter "Let's 4" (100 units), and other relief supplies including drinking water and medical supplies to each selfgoverning body.



# With Local Communities **Promoting sports**

### Donation to Shizuoka Athletic Association

Suzuki donated 20 million yen to this association to strengthen the financial basis and to raise players.



### Track and field training program

The Suzuki Hamamatsu Athlete Club holds the track and field training program in various regions in order to popularize athletic sports and improve physical strength of children. Top athletes who participated in the London Olympic Games, such as Mr. Yukifumi Murakami (javelin throw), Ms. Yuki Ebihara (javelin throw), and Mr. Keisuke Ushiro (decathlon athlete) coach children. The Athlete Club will continue the activities to awaken children's emotions through the athletic sports.



May 2012: Track and field training program at Johoku Kindergarten

June 2012: Track and field training program in Haruno



June 2012: Track and field training program at Isami Kindergarten



October 2012: Track and field training program at Irino Elementary School



October 2012: Track and field training program October 2012: Track and field training for elementary schools in Nerima, Tokyo



program at Mundo de Alegria School

Efforts for

### Efforts for Society

With Local Communities / 04 Educational supports

# 04 With Local Communities Educational supports

### Introduction of Suzuki's Monozukuri (production) to local students

For the purposes of cultivation of human resources and activation of researches, we give "Suzuki Endowment Lectures" at a local university by sending lecturers from Suzuki. Also, we create an endowed chair to inform students on what are happening in the industrial world.

### Endowment lectures

Suzuki reformed the lectures which had been presented to Shizuoka University (Engineering Dept.) for nine years since 2003, and has started the new three-year lecture course from 2012 to 2014.

This course is on research of element technologies to use energy of fuel (gasoline etc.) more effectively. The current internal-combustion engine disposes approximately 50% of fuel energy as thermal energy. Thus, we are trying to study and develop new technologies to use regeneration energy and to realize an advanced vehicle with high environmental performance.

The study is conducted at the laboratory by integrating "production," "experiment," and "analysis." At the lecture of "automotive engineering," we provide unique education which only a company can present; for example, teaching functions, materials, manufacturing methods, etc. of parts while looking at actual parts.

New lecture course:

"Advanced vehicle energy engineering" presented by Suzuki Study theme:

①Development of exhaust heat recovering unit for early warm-up of engine

(2)Development of thermoelectric power generation using thermal energy of exhaust gas

Lectures:

Two employees were sent from Suzuki as a special assistant professor.

Term:

Three years from April 2012 to March 2014 (12 consecutive years in total since 2003)

### Endowment Lectures

We contribute with endowment lectures that introduce current industrial status and activities for problems at two universities; Shizuoka Sangyo University and Tokoha University (Hamamatsu campus).

•Theme :

- Fiscal 2012 Suzuki's approach to growing into a global company •Lectures:
- Corporate board members or executives depending upon the theme  $\ensuremath{\cdot}\ensuremath{\mathsf{Term}}\xspace$ 
  - One lecture- 90 minutes, 15 times per year





### Introducing enjoyment of manufacturing to children

Suzuki cooperates on exhibition at "What? Why? Science Avenue" sponsored by Hamamatsu Science Museum in Hamamatsu City. This event is held every year to make children more interested in science and manufacturing.

We let children assemble a pull-back car of Suzuki JIMNY in our exhibition booth and they experienced "making things" with fun.

We will continue activities to teach enjoyment of manufacturing to children who will take part important roles in future in "Hamamatsu," the city of manufacturing.







### Supports for Student Formula Japan

The Student Formula Japan sponsored by the Society of Automotive Engineers of Japan is a competition by vehicles planned, designed, and manufactured by students themselves, and a "place to cultivate manufacturing" for students. This event started in 2003 as a public interest activity to cultivate comprehensive capabilities for autonomous manufacturing of students and develop human resources that will play important roles in future automobile industry.

Suzuki participates in operation, and provides supports to and has exchanges with many universities and teams.

At the 10th competition last year (82 teams from Japan and overseas participated), Kyoto Inst. of Technology that employed Suzuki's engine gained the overall win.



### Participation in Kids Engineer

The Kids Engineer is an experimental learning event for elementary school students in order to have them interested in various fields of technologies.

Suzuki provides a class to learn the engine while disassembling and assembling the engine of the scooter "Choi-nori" by themselves.





05 With Local Communities Contribution to Local Community

### ▶ Presenting "ESCUDO" to Sagara Fire Department in Makinohara City

On March 24, 2013, we sent one Escudo to Makinohara City at the completion ceremony of Sagara Fire Department building. Escudo we presented was specially designed as an inspection vehicle to bring materials including a camera and measurement instrument for the onsite inspection into the site of the fire, fully utilizing mobile power of the professional four-wheel drive.



### Cooperation to Hamamatsu City Marathon

"9th Hamamatsu City Marathon" sponsored by Hamamatsu City was held on February 24, 2013. Suzuki cooperated on this event by lending "Swift EV Hybrid" (one unit) and electric scooter "e-Let's" (ten units) as the event operation support vehicles. "Swift EV Hybrid" was used as a supervising vehicle that run along with runners. "e-Let's" was assigned to specific spots in the marathon course to play roles requiring motive power of motorcycles. For example, four out of ten units carried AED.



SUZUKI ENVIRONMENTAL&SOCIAL REPORT 2013

# Aangrove Rehabilitation Project

SUZUKI

MNS - Environmental Interpretive Center, Sepang Gold Coast

# **Efforts by Plants**

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**Efforts for Society** 

**Efforts for** 

Efforts by Individual Domestic Plants and Companies

# **Efforts by Individual Domestic Plants and Companies**

### Activities at Yokohama Labo.

Some engineers were sent from the Suzuki Yokohama Labo. for a lecture aimed at elementary and junior high school students in line with a program called "Dr. Tsuzuki Club School" sponsored by the Tsuzuki Ward Administration Promotion Section (Yokohama City). In fiscal 2012, a lecture under the theme of "Robots" was provided to 43 students of two junior high schools. Generally, science is a popular subject for elementary school students in lower grades, and it is said that they are highly

interested in experiments and observations. However, scientific subjects in junior high school tend to be less popular and be avoided in selective classes in high school. After we understand such circumstances, we effectively used a personal computer, projector, comprehensible charts, graphs, pictures, animations, real robots, etc. in the presentation so that students could understand easily and enjoy the lecture. Robots demonstrated there include microcomputer-equipped master & slave type robots, a line tracing robot that follows a line with its infrared sensor, LED display unit, and radio-controlled electric wheelchair soccer robots. We used them to show the actual robot motions and functions, and also let students experience actual operation. While touching those

actually moving state-of-theart robots in front of their eyes, the students were listening to the instructor's explanation with keen interest. We are promoting these lectures, hoping that this helps prevent local children from drifting away from science.





### Activities of Motorcycle Technology Center (Ryuyo Proving Grounds)

### **Opening Ryuyo Proving Grounds to the Public for Sports Competitions**

In fiscal 2012, we opened Ryuyo Proving Ground to public sports competitions, in reply to a request by local sports groups and school representatives, as follows.

- ①Sunrise Iwata in Ryuyo (triathlon competition)
- ②Friendly Duathlon & Enduro in Iwata (Duathlon + Bicycle 3-hour endurance race)
   ③Shizuoka Prefecture Seibu Junior High School Marathon Relay Race
- ④lwata City Marathon Relay Race
- (5) Training for National Police Motorcycle Safe Riding Competition (training for balanced riding competition by female police officers of Shizuoka Prefectural Police Department)

In this way we support local sports organizations and contribute to nurturing healthy young people by opening the Ryuyo Proving Ground to all, from adults to elementary and junior high school students.





### Traffic Safety Guidance around Marine Technical Center

The Marine Technical Center conducts traffic safety guidance activities at the entrance of the Center and intersections

near the Center in the morning on working days during the period of the spring/fall nation-wide traffic safety campaigns and the summer/year-end prefectural traffic safety campaign. 2012 was the fourth year to hold these events. We hope that both our employees and neighbors of the Center become more aware of traffic safety through these activities.







To be a community-friendly company, we are actively participating in communication activities with local communities, social action programs, environmental protection activities, etc. This section describes the communication activities and environmental data collected at domestic plants, and environmental data at six Group manufacturing companies in fiscal 2012.

### Domestic plants, die plants, and six Group manufacturing companies



### <Environment-Related Data>

Each plant follows laws, regulations and agreements for environmental control, and is promoting the reduction of environmental impact, based on the strictest regulation values. Moreover, the in-house standard values are set to 70% of the strictest regulation values to aggressively reduce the environmentally unfriendly substances, as well as to prevent environmental incidents.

(1)Water quality [Code: Name (unit)] pH: Hydrogen-ion concentration (none) BOD: Biochemical oxygen demand (mg/L) SS: Suspended solids (mg/L) and Other items (mg/L)
(2)Air quality [Code: Name (unit)] NOx: Nitrogen oxide (ppm) SOx: Sulfur oxide (K value) Particulate (g/Nm<sup>3</sup>) Chlorine, hydrogen chloride, fluorine and hydrogen fluoride (mg/Nm<sup>3</sup>) Dioxins (ng-TEQ/Nm<sup>3</sup>)

③Among Water Pollution Control Law, Air Pollution Control Law, ordinances by local government and agreements on environmental pollution control, the strictest regulation values are adopted as our standard values. (The "-" mark indicates "no regulation value.")

④For the equipment using LPG fuel that does not contain sulfur, the SOx measurement is not required.

Special Article

**Efforts for** 

**Efforts for Society** 

Efforts by Suzuki's domestic plants and domestic Group manufacturing companies

### Suzuki's Domestic Plants

### **Kosai Plant**



[Operations]

[Plant site area]1,190[Building area]467,0[Number of employees]2,561[Location]4520

Final assembling of mini and compact passenger cars; assembling of automobile engines, etc. 1,190,000m<sup>2</sup> 467,000m<sup>2</sup> 2,561 4520 Shirasuka, Kosai City, Shizuoka Prefecture

### <Efforts for Communication Activities, etc.>

Elementary School Children's Plant Tour

We invited a total of 12,000 fifth-grade students from 130 elementary schools in Shizuoka Prefecture to the Kosai Plant tour as an out-ofclassroom social lesson in fiscal 2012. In this plant tour, we showed the video about "how to manufacture Suzuki automobiles," allowed children to see the assembly plant and wind-driven power generating facility, and introduced the assembly conveyor systems and production of environmentally-friendly vehicles.



### Exchange Meeting with Local Community Association

Believing that we could enhance mutual understanding with local residents by exchanging information, we hold the exchange meeting with the local community association (Kosai Plant tour) once a year. At this exchange meeting, we introduced our business activities, environmentally-friendly automobile production, traffic safety guidance for commuters, and 5S activities around the plant. Also, in addition to the automobile assembly lines, the environment-related facilities, such as incineration site and wind-driven power generating facility, were shown to visitors.

### **•**5S Activities around the Kosai Plant

As part of environmental conservation, we performed cleanup activities on roads around the plant three times a year together with affiliated companies located in the plant site (as a total of 150 persons). Also, employees and suppliers are strictly prohibited from littering and encouraged to raise environmental awareness.

### Requesting Vendors and Suppliers for Cooperation

Carriers transporting cargoes to and from Kosai Plant are also requested to understand its environmental policy and activities, and cooperate in "Prohibition of littering,", "Promotion of idling stop campaign," and "Preferential utilization of central highway."









### Traffic Safety Guidance around the Kosai Plant

We conduct traffic safety guidance on commuter roads and crossings around the plant to check employees' seatbelt usage, improve traffic manners mainly at intersections, and prevent traffic accidents. Six hundred employees in total participated in this activity on streets and cooperated to building of safe and comfortable town in fiscal 2012.

### Participation in Lake Hamana Cleanup Campaign

We participated in Lake Hamana Cleanup Campaign led by Kosai City and cleaned the Shirasuka coast. Approximately 130 employees participated in this cleaning through the Kosai branch of labor union in fiscal 2012.





### <Environment-Related Data>

### <Water Quality Data (at drain outlets)>

Item	Regulation values	Results	Averages
pН	5.8 to 8.6	7.4 to 8.0	7.7
BOD	15	0.8 to 6.25	2.3
SS	15	0.4 to 4.0	1.8
Oil content	2	0.1 to 1.0	0.51
Lead	0.1	0.005 to 0.018	0.008
Chrome	0.4	0.04 to 0.04	0.04
Total nitrogen	12	0.00 to 3.68	2.32
Total phosphorous	2	0.21 to 0.82	0.49
Zinc	1	0.09 to 0.24	0.13

### <Air Pollution Data (at exhaust outlets)>

Substances	Facilities	Regulation values	Results	Averages
	Small once-through boiler	150	73 to 110	90
	Small once-through boiler	150	20 to 32	25
	One-through boiler	150	54 to 73	65
NOx	Cooing and heating machine	150	49 to 81	62
	Incinerator	200	86 to 98	90
	Electrodeposition drying furnace	230	66 to 67	67
	Electrodeposition drying furnace	230	12 to 15	14
	Small once-through boiler	7	0.07 to 0.09	0.08
SOx (K VALUE)	Incinerator	7	0.4 to 0.66	0.53
(N VALUE)	Electrodeposition drying furnace	7	Under 0.02	Under 0.02
	Small once-through boiler	0.1	Under 0.01	Under 0.01
	Small once-through boiler	0.1	Under 0.01	Under 0.01
	One-through boiler	0.1	Under 0.01	Under 0.01
Particulates	Cooing and heating machine	0.1	Under 0.01	Under 0.01
	Incinerator	0.15	Under 0.01 to 0.01	Under 0.01
	Electrodeposition drying furnace	0.2	Under 0.01	Under 0.01
	Electrodeposition drying furnace	0.2	Under 0.02	Under 0.02
	Aluminum melting furnace (Low pressure casting)	3	Under 0.03	Under 0.03
Fluorine	Aluminum melting furnace (die cast ①)	3	Under 0.03	Under 0.03
	Aluminum melting furnace (die cast ②)	3	Under 0.03	Under 0.03
	Aluminum melting furnace (Low pressure casting)	30	Under 1	Under 1
Chlorine	Aluminum melting furnace (die cast ①)	30	Under 1	Under 1
	Aluminum melting furnace (die cast ②)	30	Under 1	Under 1
	Aluminum melting furnace (Low pressure casting)	80	Under 1	Under 1
Hydrogen chloride	Aluminum melting furnace (die cast ①)	80	Under 1	Under 1
unonue	Aluminum melting furnace (die cast ②)	80	Under 1	Under 1
	Incinerator	150	Under 1 to 29	15
Dioxin	Incinerator	5	0.24	0.24
CO	Incinerator	100	7	7
	Painting	700	232 to 241	
VOC	Painting	700	149 to 173	
	Painting	700	390 to 450	



### <PRTR Target Substances (accumulated values calculated according to PRTR Law)>

Unit: kg/year

Sub-	Sub-			Discha	arge		Transfer		Recycled	De-	Product
stance No.	Substance name	Amount*	Air	Rivers	Soil	Landfill	Sewerage	Waste materials	amount	composition disposal	inclusion
1	Zinc compound (water-soluble)	46,000	0	280	0	0	0	0.7	0	13,000	32,000
53	Ethyl benzene	270,000	150,000	0	0	0	0	0	76,000	17,000	29,000
80	Xylene	460,000	200,000	0	0	0	0	0	99,000	45,000	120,000
83	Cumene	5,200	3,900	0	0	0	0	0	0	1,300	0
239	Organic tin compound	17,000	0	0	0	0	0	0	840	0	16,000
296	1,2,4- trimetyl benzene	250,000	120,000	0	0	0	0	0	16,000	44,000	75,000
297	1,3,5- trimetyl benzene	73,000	45,000	0	0	0	0	0	21,000	7,000	0
300	Toluene	590,000	210,000	0	0	0	0	1.6	110,000	34,000	240,000
302	Naphthalene	9,000	5,000	0	0	0	0	0	0	3,900	0
309	Nickel compounds	6,800	2.3	75	0	0	0	190	4,500	0.2	2,100
355	Bis phthalate (2-ethylhexyl)	150,000	0	0	0	0	0	0	0	2,300	150,000
374	Hydrogen fluoride and its water- soluble salt	5,400	0	0	0	0	0	0	0	5,400	0
392	Normal-hexane	95,000	2,500	1.2	0	0	0	4.8	0	4,500	88,000
400	Benzene	16,000	200	0	0	0	0	0	0	840	15,000
407	Poly(oxyethylene) alkyl ether (alkyl group: C12 - C15)	2,800	0	210	0	0	0	0	0	2,600	0
411	Formaldehyde	8,500	6,700	0	0	0	0	0	25	1,800	0

\* Since the calculation was made with two effective digits, the amount may not be consistent with the total of the right columns (Discharge, Transfer, Recycled, Incineration disposal, and Products).

298,000m<sup>2</sup>

163,000m<sup>2</sup>

Efforts by Suzuki's domestic plants and domestic Group manufacturing companies

**Special Article** 

### Iwata Plant

Introduction

<Efforts for Communication Activities, etc.> Voluntary Cleanup around the Plant

For the purpose of maintaining the clean environment in surrounding areas of the plant, we perform cleanup called "Cleaning Campaign" by picking up trash around the plant with staff from cooperative companies in the plant once a month.

In addition, it is further promoting environmental preservation around the plant by providing environmental education to employees and requesting vendors and suppliers for cooperation to our environmental preservation activities.

### Deepening Exchanges with Local Residents

Aiming to "develop with the community," the plant invites board members of local residents' association and other interested persons for the plant tour, providing them with information on our environmental activities and freely exchanging opinions.

Also, we explain the implementation progress of the environmental measures at Iwata Plant to the local residents' association once per three months to further deepen mutual understanding.

### Participation in Groundwater Cultivation Business

We participate in the annually-held groundwater cultivation business cosponsored by the Council for Groundwater Usage in Chuen Area and the Iwata City Environment Preservations Section, and work for forest conservation activities together with other companies by planting and thinning out trees.

### Traffic Manner Check & Guidance

Traffic safety guidance activities are carried out on public streets around the plant by the plant's traffic safety group members to improve or check traffic manners of employees.

### Plant Tour for Elementary and Junior High School Students, etc.

We accept students from the local schools, as part of the outdoor social studies program, and provide them with a plant tour. In fiscal 2012, 209 students from eight schools joined the plant tours. The plant tour, which enables them to learn how automobiles are actually assembled, is helpful for their better understanding of the real world of manufacturing.







Final assembling of mini and compact

2500 Iwai, Iwata City, Shizuoka Prefecture

passenger/commercial cars



[Operations]

[Plant site area]

[Building area]

[Location]

[Number of employees] 1,404

**Efforts for Society** 



### <Environment-Related Data>

### <Water Quality Data (at drain outlets)>

Item Regulation values		Results	Averages	
pН	5.8 to 8.6	6.6 to 8.0	7.3	
BOD	15/20	0.3 to 9.1	3.5	
SS	30/40	0.0 to 7.2	1.9	
Oil content	3	0.0 to 1.1	0.3	
Lead	0.1	Under 0.005 to 0.01	0.0	
Chrome	2	Under 0.1	Under 0.1	
Total nitrogen	100	2.4 to 24.7	9.9	
Total phosphorous	8	0.2 to 3.17	1.3	
Zinc	1	0.03-0.34	0.1	

### <Air Pollution Data (at exhaust outlets)>

Substances	Facilities	Regulation values	Results	Averages
	Boiler ①	130	55 to 68	62
	Boiler 3	150	78 to 86	82
	Hot Water Boiler ①	150	Stopp	ed
NOx	Hot Water Boiler 2	150	92	92
	Cooling and heating machine $\textcircled{1}$	150	86 to 100	93
	Cooling and heating machine $\textcircled{2}$	150	64 to 79	72
	Cooling and heating machine $\Im$	150	74 to 99	87
	Boiler ①	0.1	-	-
Particulates	Boiler ③	0.3	Under 0.01	Under 0.01
Failles	Hot Water Boiler 12	0.1	-	-
	Cooling and heating machine (123)	0.1	-	-
	Second coat 1L	700	10 to 130	34.6
	Top coat 1L	700	12 to 212	120.8
VOC	Second coat 2L	700	12 to 238	91.6
	Top coat 2L	700	61 to 425	225.5
	Bumper	700	360 to 370	365

### <PRTR Target Substances (accumulated values calculated according to PRTR Law)>

Unit: kg/year

									onn. Kg/year		
Sub-				Disch	narge		Tran	sfer	Recycled	De-	Product
stance No.	stance Substance name No.	Amount*	Air	Rivers	Soil	Landfill	Sewerage	Waste materials	amount	composition disposal	inclusion
1	Zinc compound (water-soluble)	17,000	0	170	0	0	0	0	0	4,900	12,000
53	Ethyl benzene	130,000	68,000	0	0	0	0	0	36,000	10,000	15,000
80	Xylene	180,000	71,000	0	0	0	0	0	37,000	11,000	62,000
239	Organic tin compound	13,000	0	0	0	0	0	670	0	0	13,000
296	1, 2, 4 - trimetyl benzene	97,000	48,000	0	0	0	0	0	6,000	4,100	39,000
297	1, 3, 5 - trimetyl benzene	25,000	15,000	0	0	0	0	0	8,000	2,400	0
300	Toluene	300,000	100,000	0	0	0	0	18	53,000	16,000	120,000
302	Naphthalene	4,200	2,300	0	0	0	0	0	200	1,700	0
309	Nickel compounds	1,800	0	20	0	0	0	1,300	0	0	550
355	Bis phthalate (2-ethylhexyl)	99,000	0	0	0	0	0	3,000	0	0.1	96,000
392	Normal-hexane	46,000	130	0	0	0	0	0	0	1,000	45,000
400	Benzene	8,200	65	0	0	0	0	0	24	180	7,900
411	Formaldehyde	3,600	2,500	0	0	0	0	0	87	1,000	0
412	Manganese and its compounds	4,400	0	200	0	0	0	1,200	0	0	3,000
413	Phtahlic anhydride	1,100	0	0	0	0	0	33	0	0	1,100
438	Methylnaphthalene	11,000	56	0	0	0	0	0	0	11,000	0

\* Since the calculation was made with two effective digits, the amount may not be consistent with the total of the right columns (Discharge, Transfer, Recycled, Incineration disposal, and Products).



### Sagara Plant



[Operations]	Assembling of compact cars and
	automobile engines
	Casting and machining of main engine
	parts
[Plant site area]	1,970,000m <sup>2</sup>
[Building area]	269,000m <sup>2</sup>
[Number of employees]	1,571
[Location]	1111 Shirai, Makinohara City, Shizuoka
	Prefecture

### <Efforts for Communication Activities, etc.>

### •Voluntary Cleanup around the Plant

As part of global environmental preservation activities, Sagara Plant carries out joint cleanup activities around the plant three times a year and also around Nishi-Hagima IC eight times a year, in cooperation with Sagara Proving Grounds, Suzuki PDI(pre-delivery inspection) Nakanihon Sagara Plant, Suzuki Kasei, Snic and subcontractors.

Also, it is further promoting environmental preservation activities by providing environmental education to employees and requesting vendors and suppliers for cooperation.



### Deepening Exchange with Local Residents

An annual information exchange meeting is held in February to provide information on Suzuki's business activities and environmental efforts to local residents and listen to their opinions.

In fiscal 2012, the meeting was held in February 2012 and attended by 19 persons, including representatives of local residents, city councilors, and person in charge of Makinohara area.

### Efforts for Traffic Safety

We performed traffic manner check/guidance activity on public streets four times a year (one each in spring, summer, fall, and winter) as a member of Haibara District Safe Driving Management Association in order to eliminate traffic accidents and improve driver's manners.

### Promotion of Recycling in the Plant

End-of-life vehicles including those used for various development tests or used as company cars are recycled at Sagara Plant of Yamamoto Recycle Co., Ltd. to collect resources.

### Plant Tour for Local Elementary Schools

We accept local elementary school students for plant tours. After learning how to produce cars through video presentation, they walk around the production site where cars are actually manufactured. We have received favorable comments from them such as "It was good experience for us to know about the efforts for making good cars".

### Participation in "Eco Cap Collection Activities"

We participated in "Eco cap collection activities" to contribute to reduction of CO<sub>2</sub> emission and provision of polio vaccine.

### [Fiscal 2012 results]

Number of caps collected: 94,870 pcs. / Amount of CO<sub>2</sub> emission to be reduced: 721 kg / Number of people who can receive a polio vaccine: 115 persons



### <Environment-Related Data>

### <Water Quality Data (at drain outlets)>

### Regulation values Item Results Averages pН 5.8 to 8.6 7.3 to 7.5 7.6 BOD 15/20 4.5 to 8.2 5.7 SS 30/40 1 to 2 1.8 Under 0.5 to Under 0.5 **Oil content** 2.5 Under 0.5 0.1 Under 0.01 Lead Under 0.01 Chrome 1 0.025 to 0.025 0.025 Total nitrogen 60/120 7 to 16 11.5 Total 8/16 1.9 to 5.7 4.6 phosphorous Zinc 1 0.04 to 0.14 0.1

### <Air Pollution Data (at exhaust outlets)>

Substances	Facilities	Regulation values	Results	Averages
	Cooling and heating machine 1	150	94 to 120	107
	Cooling and heating machine 2	150	73 to 91	82
	Cooling and heating machine 3	150	69 to 89	79
	Cooling and heating machine 4	150	73 to 92	83
NOx	Heat-treating furnace	180	46 to 48	47
NUX	Melting furnace 1	180	39 to 40	40
	Melting furnace 2	180	31 to 39	35
	Dry type dust collector 1	180	Under 5	Under 5
	Dry type dust collector 2	180	Under 5	Under 5
	Electrodeposition drying furnace	230	24 to 32	28
	Cooling and heating machine 1	0.1	Under 0.01	Under 0.01
	Cooling and heating machine 2	0.1	Under 0.01	Under 0.01
	Cooling and heating machine 3	0.1	Under 0.01	Under 0.01
	Cooling and heating machine 4	0.1	Under 0.01	Under 0.01
Particulates	Heat-treating furnace	0.2	Under 0.01	Under 0.01
Faillulates	Melting furnace 1	0.2	Under 0.01	Under 0.01
	Melting furnace 2	0.2	Under 0.01	Under 0.01
	Dry type dust collector 1	0.2	Under 0.01	Under 0.01
	Dry type dust collector 2	0.2	Under 0.01	Under 0.01
	Electrodeposition drying furnace	0.2	Under 0.04	Under 0.04
Chlorine	Dry type dust collector 1	30	Under 1	Under 1
Chionne	Dry type dust collector 2	30	Under 1	Under 1
Hydrogen chloride	Dry type dust collector 1	80	Under 1	Under 1
chloride	Dry type dust collector 2	80	Under 1	Under 1
Fluorine &	Dry type dust collector 1	3	Under 0.3	Under 0.3
Hydrogen fluoride	Dry type dust collector 2	3	Under 0.3	Under 0.3
Dissila	Melting furnace 1	1	0.00000072	0.00000072
Dioxin	Chip drying furnace	1	0.00000022	0.0000022
	Painting 1	400	32 to 43	38
VOC	Painting 2	400	48 to 56	52
VUC	Painting 3	400	Under 10	Under 10
	Painting 4	700	170 to 210	190

### <PRTR Target Substances (accumulated values calculated according to PRTR Law)>

Unit: kg/year

									onna ng/youn				
Sub-	Sub-					Disch	narge		Transfer		Desvelod	De-	Droduct
stance No.	stance Substance name No.	Amount*	Air	Rivers	Soil	Landfill	Sewerage	Waste materials	Recycled amount	composition disposal	Product inclusion		
1	Zinc compound (water-soluble)	8,400	0	84	0	0	0	0	0	2,400	5,900		
53	Ethyl benzene	27,000	8,400	0	0	0	0	0	4,300	6,500	8,000		
80	Xylene	72,000	9,000	0	0	0	0	0	4,500	25,000	33,000		
188	N, N- dicyclohexylamine	1,400	0	0	0	0	0	1,400	0	0	0		
239	Organic tin compound	1,300	0	0	0	0	0	65	0	0	1,200		
296	1, 2, 4 - trimetyl benzene	43,000	11,000	0	0	0	0	0	1,700	10,000	21,000		
297	1, 3, 5 - trimetyl benzene	8,300	4,000	0	0	0	0	0	2,100	2,200	0		
300	Toluene	150,000	15,000	20	0	0	0	79	7,600	61,000	66,000		
309	Nickel compounds	930	0	10	0	0	0	630	1.8	0	280		
355	Bis phthalate (2-ethylhexyl)	3,400	0	0	0	0	0	0	0	0	3,400		
392	Normal-hexane	35,000	610	0	0	0	0	0	0	10,000	24,000		
400	Benzene	6,600	50	0	0	0	0	0	0	2,400	4,200		
411	Formaldehyde	530	460	0	0	0	0	0	0.1	78	0		
412	Manganese and its compounds	1,700	0	100	0	0	0	570	0	0	1,000		

\* Since the calculation was made with two effective digits, the amount may not be consistent with the total of the right columns (Discharge, Transfer, Recycled, Incineration disposal, and Products).



### Takatsuka Plant of headquarters



[Operations]

[Plant site area] [Building area] [Number of employees] 7,995 [Location]

Assembling of motorcycle engines and machining of parts 182,000m<sup>2</sup> 155,000m<sup>2</sup> 300 Takatsuka-cho, Minami-ku, Hamamatsu City, Shizuoka Prefecture

### <Efforts for Communication Activities, etc.>

### Deepening Exchange with Local Residents

On July 3, we invited board members of the local residents' association to our social gathering and plant tour for exchange of opinions and explanation of Suzuki's business activities and efforts for environmental preservation, as well as promotion of mutual communication.



### • Voluntary Cleanup around the Plant

Plant employees voluntarily conducted cleanup around the plant ("Manner Improvement Activities at Takatsuka Motorcycle Plant") twice a vear.

This activity was conducted under a slogan of "Pick up trashes and leave greetings," and was a good opportunity to deepen exchanges and increase communication with local residents.

### Noise Monitoring Activity on the West of the Plant

We conducted monitoring activities (patrol early in the morning and at night) on the west side of the plant to check noises from the plant four times throughout the fiscal year. We checked noises at 6:00 and 22:00 which was quiet time to make sure that there was no problem.

Through that activity, we ensure protection of local residents' living environment against noise.

### Traffic Safety Guidance on Streets

The managerial staff performs traffic safety guidance on public streets around the plant once a month. They alert employees during commuting and leaving work time to improve their driving manners and prevent traffic accidents.





### <Environment-Related Data>

### <Water Quality Data (at drain outlets)>

Item	Regulation values	Results	Averages
pН	5.8 to 8.6	7.1 to 7.6	7.4
BOD	20/30	1.0 to 5.8	1.45
SS	30/40	0.6 to 4.2	2.7
Oil content	5	0.5 to 1.3	0.7
Total nitrogen	60/120	1.3 to 12.7	6.6
Total phosphorous	8/16	0.06 to 0.74	0.38
Zinc	1	0.1 to 0.1	0.10

### <Air Pollution Data (at exhaust outlets)>

Su	bstances	Facilities	Regulation values	Results	Averages
	NOv	Small-sized boiler	140	85 to 85	85
	NOx	LPG-fueled air conditioner	150	79 to 87	83
	SOx	Small-sized boiler	7	3.25 to 3.25	3.25
(K	(K VALUE)	LPG-fueled air conditioner	7	-	-
Pa	rticulates	Small-sized boiler	0.18	0.01 to 0.01	0.01

Unit: kg/year

### <PRTR Target Substances (accumulated values calculated according to PRTR Law)>

Discharge Transfer Sub-De-Recycled amount Product inclusion stance No. Waste materials Substance name Amount\* composition **Rivers** Soil Landfill Sewerage Air disposal 53 Ethyl benzene 19,000 300 19,000 0 0 0 0 0 13 22 80 Xylene 86,000 320 0 0 0 0 13 24 86,000 3 1, 2, 4 - trimetyl benzene 32,000 87 1.4 0 0 0 6.7 32,000 0 296 0 297 1, 3, 5 - trimetyl benzene 5,800 28 0 0 0 0 0 0 5,800 0 300 Toluene 210,000 790 0.6 0 0 0 4.1 120 210,000 0 308 Nickel 2,400 0 0 0 0 0 1,700 700 0 0 309 Nickel compounds 6,000 0 0 0 0 0 0 4,200 0 1,700 Hydrogen fluoride and its water-0 780 0 374 8,500 0 0 7,700 0 0 0 soluble salt 392 Normal-hexane 33,000 100 0 0 33,000 0 0 0 0 0 400 Benzene 8,500 0.7 0 0 0 0 0 0 8,500 0 15,000 77 15,000 438 Methylnaphthalene 0 0 0 0 0 0 0

\* Since the calculation was made with two effective digits, the amount may not be consistent with the total of the right columns (Discharge, Transfer, Recycled, Incineration disposal, and Products).



# Toyokawa Plant



[Operations]

[Plant site area] 139,000m<sup>2</sup> [Building area] 75,000m<sup>2</sup> [Number of employees] 471 [Location] 1-2 Utari, Shir

outboard motors 139,000m<sup>2</sup> 75,000m<sup>2</sup> ] 471 1-2 Utari, Shirotori-cho, Toyokawa City, Aichi Prefecture

Assembling of motorcycles and

### <Efforts for Communication Activities, etc.>

### Cooperation to Environmental Activities on "Cleanup Days in Toyokawa City"

On cleanup days in Toyokawa City in May and September every year, the plant employees cooperated for environmental cleanup activities.

Approximately 40 employees participated in each of the cleanup events by picking up trash around the plant.





### Community Information Exchange Meeting

In July, we invited representatives of two neighborhood associations to our plant for frank exchange of views with them. We explained the outline of the plant and our efforts for environmental improvement, showed them our assembly lines of motorcycles and outboard engines, and wastewater disposal facilities, and asked their views and opinions about our activities.





### Traffic Safety Guidance Activities

Traffic safety guidance and crossing guard activities are performed on surrounding public streets by managerial staff on the 10th, 20th and 30th days every month. Every employee's observance of safety driving rules was carefully checked, and any inadequacies were pointed out on the spot. We cooperate with Japan Traffic Safety Association by participating in the prefectural traffic safety campaign through street activities.

### Plant Tour for Local Schools

We accept outdoor study of local schools as requested and provide them with plant tours. In fiscal 2012, we had plant tours for one elementary school and one high school, and show them our motorcycle and outboard motor assembly lines.



### <Environment-Related Data>

### <Water Quality Data (at drain outlets)>

Item	Regulation values	Results	Averages
pН	5.8 to 8.6	6.7 to 7.1	6.9
BOD	25	3.1 to 4.2	3.6
SS	30	2.1 to 3.9	3.2
Oil content	5	0.5 to 0.7	0.5
Lead	0.1	0.005 to 0.012	0.006
Chrome	0.5	0.1 to 0.1	0.1
COD (total amount)	26.63	0.00 to 7.12	2.17
Total nitrogen (total amount)	18.58	0.00 to 4.88	1.50
Total phosphorous (total amount)	2.46	0.00 to 0.78	0.21
Zinc	2	0.1 to 0.25	0.13

### <Air Pollution Data (at exhaust outlets)>

Substances	Facilities	Regulation values	Results	Averages
	Boiler 1	-	60 to 74	67
NOx	Absorption type cooling and heating machine 1	150	60 to 70	65
	Boiler 2	-	59	59
	Absorption type cooling and heating machine 1	0.1	Under 0.01	Under 0.01
	Boiler 2	0.3	Under 0.01	Under 0.01
Particulates	Absorption type cooling and heating machine 2	0.3	Under 0.01	Under 0.01
	Drying furnace 1	0.4	Under 0.01	Under 0.01
	Drying furnace 2	0.4	Under 0.01	Under 0.01

Unit: kg/year

### <PRTR Target Substances (accumulated values calculated according to PRTR Law)>

Discharge Transfer De-composition disposal Sub-Recycled Product stance No. Substance name Amount\* Waste materials inclusion Air **Rivers** Soil Landfill Sewerage amount 53 Ethyl benzene 13,000 7,500 0 0 0 0 540 3,200 1,600 330 21,000 9,300 0 0 0 660 4,000 5,300 1,400 80 Xylene 0 296 1, 2, 4 - trimetyl benzene 6,600 1,900 0 0 0 0 110 780 3,000 850 1, 3, 5 - trimetyl benzene 1,000 297 0 0 94 450 190 1,700 0 0 0 300 Toluene 66,000 32,000 0 0 0 0 3,300 14,000 14,000 3,000 3,000 392 Normal-hexane 0 990 4,100 28 0 0 0 0 0 740 2.6 0 0 0 0 0 0 530 200 400 Benzene

\* Since the calculation was made with two effective digits, the amount may not be consistent with the total of the right columns (Discharge, Transfer, Recycled, Incineration disposal, and Products).

Special Article

**Efforts for** 

Efforts for Society

Efforts by Suzuki's domestic plants and domestic Group manufacturing companies

# Osuka Plant



[Operations]Cast parts[Plant site area]151,000m²[Building area]55,000m²[Number of employees]403[Location]6333 Nish

Cast parts manufacturing, etc 151,000m<sup>2</sup> 55,000m<sup>2</sup> s] 403 6333 Nishi Obuchi, Kakegawa City, Shizuoka Prefecture

**Environmental Data** 

### <Efforts for Communication Activities, etc.>

### Voluntary Cleanup around the Plant

For the purpose of maintaining the clean environment in surrounding areas, the plant's employees perform cleanup activity around the plant once a month. In June and December, we conducted wide-area cleanup activities.

In fiscal 2013, we will continue to make efforts for environmental preservation to be loved by local residents.

### Cleanup Activities after Local Shrine Festival

After the Mikumano Shrine Grand Festival, we perform cleanup activity around the shrine every year.

In April 2013, after the festival, our volunteering employees performed cleanup activity.

We will continue to perform cleanup activities by the encouragement through making local residents happy.

### Deepening Exchange with Local Residents

(1) We hold a social gathering and plant tour by inviting members of local residents' association once a year.

In fiscal 2012, we had the gathering in September and members of six neighborhood community associations participated. At the gathering, we exchanged information including the report on the voluntary cleanup activity.

②Plant Tour for Local Junior High School

126 students in the seventh grade visited us for the plant tour from a local junior high school.

They were pleased with their great experience by watching the manufacturing site, and learning the difficulties of the work and our ingenious efforts.





### Efforts for traffic safety

In fiscal 2013, we were certified as the safe driving management promotion company by the Kakegawa Police and the Kakegawa District Safe Driving Management Association.

We, as an automobile manufacturer, will work on the safety drive promotion activity to be a model in the local community



### <Environment-Related Data>

### <Water Quality Data (at drain outlets)>

Item	Regulation values	Results	Averages
pН	5.8 to 8.6	6.8 to 7.5	7.2
BOD	10	0.3 to 5.3	1.7
SS	10	0.0 to 4.5	1.4
Oil content	2	0.0 to 1.3	0.3
Lead	0.1	0.005 to 0.023	0.009
Chrome	2	Under 0.1	Under 0.1
Total nitrogen	60	2.2 to 8.0	4
Total phosphorous	8	0.1 to 0.8	0.4
Zinc	1	0.11 to 0.13	0.12

### <Air Pollution Data (at exhaust outlets)>

Substances	Facilities	Regulation values	Results	Averages
	Cast iron melting furnace	0.1	Under 0.01	Under 0.01
Particulates	Aluminum melting furnace	0.2	Under 0.01	Under 0.01
raticulates	Aluminum melting & holding furnace	0.2	Under 0.01	Under 0.01
	Aluminum melting furnace	10	Under 1	Under 1
Chlorine	Aluminum melting & holding furnace	10	Under 1	Under 1
Hudrogon	Aluminum melting furnace	20	Under 5	Under 5
Hydrogen chloride	Aluminum melting & holding furnace	20	Under 5	Under 5
Fluorine &	Aluminum melting furnace	1	Under 0.3	Under 0.3
Hydrogen fluoride	Aluminum melting & holding furnace	1	Under 0.3	Under 0.3

Unit: kg/year

### <PRTR Target Substances (accumulated values calculated according to PRTR Law)>

Discharge De-composition disposal Sub-Transfer Recycled amount Product stance No. Substance name Amount\* Waste Landfill inclusion Air Rivers Soil Sewerage materials 2,000 80 Xylene 3,500 0 600 930 0 0 0 0 0 Chromium, trivalent chromium and their compounds 87 12,000 0 0 0 0 0 240 0 0 12,000 300 Toluene 5,700 3,000 0 0 0 0 140 1,100 1,500 0 2,000 321 Vanadium compounds 2,000 0 0 0 0 40 0 0 0 412 Manganese and its compounds 150,000 0 0 0 0 0 2,900 0 0 140,000 Molybdenum and its compounds 2,200 0 0 0 0 0 43 0 2,100 453 0

\* Since the calculation was made with two effective digits, the amount may not be consistent with the total of the right columns (Discharge, Transfer, Recycled, Incineration disposal, and Products).

Introduction	Special Article	Efforts for Environment	Efforts for Society	Y	Efforts by Plants	X	Environmental Data	
								_

### Domestic Group manufacturing company

# Suzuki Auto Parts Hamamatsu Plant of Suzuki Auto Parts Mfg. Co., Ltd.

[Operations] Machining of automobile parts, Die-casting and machining [Location] 7-3 Minami Hiramatsu, Iwata City, Shizuoka Prefecture

### <Water Quality Data (at drain outlets)>

<water (at="" data="" drain="" outlets)="" quality=""></water>				<air pollution<="" th=""><th colspan="9"><air (at="" data="" exhaust="" outlets)="" pollution=""></air></th></air>	<air (at="" data="" exhaust="" outlets)="" pollution=""></air>								
Item	Regulation values	Results	Averages	Substances	ubstances Facilities		Results	Averages					
рН	5.8 to 8.6	6.9 to 7.6	7.3	NOx	Aluminum melting furnace	150	16	16					
BOD	20	1.0 to 3.0	1.5	Particulates	Aluminum melting furnace	75	Under 0.02	Under 0.02					
SS	40	0.8 to 16.3	4.4	Chlorine	Aluminum melting furnace	30	Under 0.7	Under 0.7					
Oil content	5	0.5 to 0.6	0.5	Hydrogen	Aluminum melting furnace	80	Under 0.7	Under 0.7					
Total	60	0.5 to 7.3	3.4	chloride									
nitrogen	00	0.5 to 7.5	5.4	Fluorine &				Under 0.8					
Zinc	2	0.01 to 0.16	0.08	Hydrogen fluoride	Aluminum melting furnace	3	Under 0.8						
				naonue									

### <PRTR Target Substances (accumulated values calculated according to PRTR Law)>

There is no PRTR target substance subject to performance reporting.

### Suzuki Seimitsu Plant of Suzuki Auto Parts Mfg. Co., Ltd.

[Operations] Casting of automobile parts, Heat treatment and gear-cutting [Location] 500 Inoya, Inasa-cho, Kita-ku, Hamamatsu City, Shizuoka Prefecture

### <Water Quality Data (at drain outlets)>

Item	Regulation values	Results	Averages	
pН	5.8 to 8.6	7.2 to 7.7	7.4	
BOD	15	1.9 to 13.0	5.6	
SS	20	1.3 to 2.9	2.0	
Oil content	5	0.5 to 2.0	0.7	
Total nitrogen	60	7.3 to 20	13.8	
Total phosphorous	8	0.06 to 0.09	0.07	
Zinc	1	0.06 to 0.22	0.07	

### <Air Pollution Data (at exhaust outlets)>

Substances	Facilities	Regulation values	Results	Averages
	Continuous carburizing furnace	180	45 to 49	48
NOx	Annealing furnace	180	48 to 50	49
NOX	Water cooling and heating machine	150	46 to 70	65
	Continuous carburizing furnace	17.5	0.08 to 0.09	0.09
SOx	Annealing furnace	17.5	0.08 to 0.08	0.08
(K VALUE)	Water cooling and heating machine	17.5	0.07 to 0.16	0.12
	Continuous carburizing furnace	0.2	0.01 to 0.01	0.01
Particulates	Annealing furnace	0.2	0.01 to 0.01	0.01
i antioalates	Water cooling and heating machine	0.1	0.01 to 0.01	0.01

Unit<sup>,</sup> kg/vear

### <PRTR Target Substances (accumulated values calculated according to PRTR Law)>

										onna ng/yean	
Sub	-		Discharge				Transfer		Recycled	De-	Product
stance No.		Amount*	Air	Rivers	Soil	Landfill	Sewerage	Waste materials	amount	composition disposal	inclusion
1	Zinc compound (water-soluble)	1,789	179	89	0	0	0	179	1,252	0	90
18	N, N, dicyclohexylamine	1,462	731	731	0	0	0	0	0	0	0

\* Since the calculation was made with two effective digits, the amount may not be consistent with the total of the right columns (Discharge, Transfer, Recycled, Incineration disposal, and Products).

# Enshu Seiko Plant of Suzuki Auto Parts Mfg. Co., Ltd.

[Operations]Machining of automobile parts[Location]1246-1 Yamahigashi, Tenryu-ku, Hamamatsu City, Shizuoka Prefecture

### <Water Quality Data (at drain outlets)>

Item	Regulation values	Results	Averages
pН	6.5 to 8.2	7.0 to 7.6	7.4
BOD	10	1.0 to 5.9	2.6
COD	35	1.0 to 11.0	3.7
SS	<b>SS</b> 15		2.3
Oil content	3	0.5 to 0.8	0.5
Chrome	2	0.05 to 0.05	0.05
Total nitrogen 100		0.95 to 2.34	1.49
Zinc	2	0.05 to 0.13	0.06

### <Air Pollution Data (at exhaust outlets)>

Substances	Facilities	Regulation values	Results	Averages
Hydrogen chloride	Aluminum central melting furnace	80	Under 5	Under 5
Chlorine	Aluminum central melting furnace	30	Under 1	Under 1
Fluorine compound	Aluminum central melting furnace	3	0.6	0.6

### <PRTR Target Substances (accumulated values calculated according to PRTR Law)>

There is no PRTR target substance subject to performance reporting.

### Hamamatsu Pipe Co., Ltd.

[Operations]Manufacturing of automobile pipe parts[Location]6-2 Minami Hiramatsu, Iwata City, Shizuoka Prefecture

### <Water Quality Data (at drain outlets)>

Wastewater is transferred to Suzuki Auto Parts Hamamatsu Plant of Suzuki Auto Parts Mfg. Co., Ltd. for treatment.

### <Air Quality Data (at exhaust outlets)>

Unit: kg/year

No applicable facilities

### <PRTR Target Substances (accumulated values calculated according to PRTR Law)>

Discharge Transfer De-composition disposal Sub-Recycled Product Substance name Amount\* stance Waste materials inclusion Air Rivers Soil Landfill Sewerage amount No. Chromium, trivalent chromium and their compounds 87 21,134 20,395 211 0 0 0 528 0 0 0 308 Nickel 7,741 77 0 0 0 0 0 194 0 7,470 412 Manganese and its compounds 2,537 2,629 26 0 0 0 0 0 66 0

\* Since the calculation was made with two effective digits, the amount may not be consistent with the total of the right columns (Discharge, Transfer, Recycled, Incineration disposal, and Products).

### Suzuki Akita Auto Parts Mfg. Co., Ltd.

**Special Article** 

[Operations] Casting and machining of automobile parts 192-1 lenohigashi, Hamaikawa, Ikawa Town, Minamiakita County, Akita Prefecture [Location]

**Efforts for** 

### <Water Quality Data (at drain outlets)>

Introduction

Item	Regulation values	Results	Averages
pН	6.0 to 8.5	7.1 to 7.8	7.5
BOD	20	1.5 to 24*	4.5
SS	30	2.8 to 16.8	10.0
Oil content	4	0.5 to 1.3	0.6
Total nitrogen	39.5	0.6 to 3.5	1.7
Total phosphorous			0.15
Zinc	2	0.03 to 0.47	0.1

### <Air Pollution Data (at exhaust outlets)>

**Efforts for Society** 

Substances	Facilities	Regulation values	Results	Averages
NOx	Boiler	180	53 to 71	62
SOx (K VALUE)	Boiler	0.26	Under 0.01	Under 0.01
Particulates	Boiler	0.3	Under 0.01	Under 0.01

\* This exceeds the standard BOD value at the drain outlet in March 2013. When processing renewal liquid waste, the waste water treatment equipment was temporarily overloaded and its treatment capability was exceeded. We reported the fact to an administrative body and implemented the countermeasure to level loads to the waste water treatment unit.

### <PRTR Target Substances (accumulated values calculated according to PRTR Law)>

Unit: kg/year

Sub-			Discharge				Transfer		Recycled	De-	Product
stance No.	Substance name	Amount*	Air	Rivers	Soil	Landfill	Sewerage	Waste materials		composition disposal	inclusion
1	Zinc compound (water-soluble)	3,037	0	0	0	0	0	0	3,037	0	0
71	Ferric chloride	1,715	0	0	0	0	0	0	1,715	0	0
80	Xylene	2,271	108	0	0	0	0	0	0	2,163	0
188	N, N, dicyclohexylamine	1,394	0	0	0	0	0	0	1,394	0	0
224	1, 2, 4 - trimetyl benzene	3,060	40	0	0	0	0	0	0	3,020	0

\* Since the calculation was made with two effective digits, the amount may not be consistent with the total of the right columns (Discharge, Transfer, Recycled, Incineration disposal, and Products).

### Snic Co., Ltd.

[Operations] Manufacture of automobile internal trim parts 1403 Higashi Hiramatsu, Iwata City, Shizuoka Prefecture [Location]

### <Water Quality Data (at drain outlets)>

<Air Pollution Data (at exhaust outlets)>

No applicable facilities

### Headquarters (Ryuyo) Plant

No applicable facilities

<PRTR Target Substances (accumulated values calculated according to PRTR Law)>

	•			•		-					-
Sub-			Discharge				Transfer		Recycled	De-	Product
stance No.	Substance name	Amount*	Air	Rivers	Soil	Landfill	Sewerage	Waste materials	amount	composition disposal	inclusion
297	1, 3, 5 - trimetyl benzene	1,477	1,477	0	0	0	0	0	0	0	0
298	Tolylenediisocyanate	898,934	0	0	0	0	0	480	0	0	898,454
448	Methyl-1,3-phenylene = diisocyanate	137,954	0	0	0	0	0	120	0	0	137,834

\* Since the calculation was made with two effective digits, the amount may not be consistent with the total of the right columns (Discharge, Transfer, Recycled, Incineration disposal, and Products).

### Sagara Plant

### <PRTR Target Substances (accumulated values calculated according to PRTR Law)>

Sub			Discharge				Transfer		Desvelad	De-	Dueduet
stand No.	e Substance name	Amount*	Air	Rivers	Soil	Landfill	Sewerage	Waste materials	Recycled amount	composition disposal	Product inclusion
298	Tolylenediisocyanate	215,473	0	0	0	0	0	0	0	0	215,473
448	Methyl-1,3-phenylene = diisocyanate	74,091	0	0	0	0	0	0	0	0	74,091

\* Since the calculation was made with two effective digits, the amount may not be consistent with the total of the right columns (Discharge, Transfer, Recycled, Incineration disposal, and Products).

Unit: kg/year

Unit: kg/year

### Suzuki Toyama Auto Parts Mfg. Co., Ltd.

**Special Article** 

[Operations]Machining of automobile parts[Location]3200 Mizushima, Oyabe City, Toyama Prefecture

### <Water Quality Data (at drain outlets)>

Introduction

Item	Regulation values	Results	Averages
pН	6 to 8	6.9 to 7.7	7.3
BOD	15	1.0 to 12.5	4.1
SS	15	1.6 to 10	4.6
Oil content	5	Under 0.5 to 2.25	0.6
Lead	0.08	0.001 to 0.001	0.001
Chrome	2	0.0 to 0.03	Under 0.02
Total nitrogen	120	0.7 to 12	3.6
Total phosphorous	16	0.1 to 0.8	0.3
Zinc	2	0.1 to 0.22	0.11

### <Air Pollution Data (at exhaust outlets)>

**Efforts for Society** 

**Efforts for** 

Substances	ibstances Facilities		Results	Averages	
NOx	Boiler	150	64 to 110	78.5	
NUX	Melting furnace	180	22 to 24	23	
SOx	Boiler	17.5	0.04 to 0.16	0.19	
(K VALUE)	Melting furnace	17.5	0.0006 to 0.0018	0.0012	
Particulates	Boiler	0.3	0.0009 to 0.0036	0.0028	
Particulates	Melting furnace	0.2	0.012 to 0.023	0.0175	
VOC	Painting	700	298 to 402	350	

### <PRTR Target Substances (accumulated values calculated according to PRTR Law)>

Sub- stance No.		Substance name	Amount*	Discharge				Transfer		Recycled	De-	Product
				Air	Rivers	Soil	Landfill	Sewerage	Waste materials	amount	composition disposal	inclusion
	53	Ethyl benzene	1,700	1,700	0	0	0	0	0	0	0	0
	80	Xylene	4,000	4,000	0	0	0	0	0	0	0	0
3	300	Toluene	2,300	2,300	0	0	0	0	0	0	0	0
3	309	Nickel compounds	5,800	0	180	0	0	0	420	428	0	4,772

\* Since the calculation was made with two effective digits, the amount may not be consistent with the total of the right columns (Discharge, Transfer, Recycled, Incineration disposal, and Products).

### Suzuki Kasei Co., Ltd.

[Operations]Manufacture of automobile internal trim parts[Location]5158-1 Hiraguchi, Hamakita-ku, Hamamatsu City, Shizuoka Prefecture

### <Water Quality Data (at drain outlets)>

No applicable facilities

### <Air Pollution Data (at exhaust outlets)>

No applicable facilities

### <PRTR Target Substances (accumulated values calculated according to PRTR Law)>

Sut	ce Substance name		Discharge			Transfer		Recycled	De-	Product	
stan No		Amount*	Air	Rivers	Soil	Landfill	Sewerage	Waste materials	amount	composition disposal	inclusion
80	Xylene	2,469	2,346	0	0	0	0	123	0	0	0
30	Toluene	2 783	2466	0	0	0	0	139	0	0	0

\* Since the calculation was made with two effective digits, the amount may not be consistent with the total of the right columns (Discharge, Transfer, Recycled, Incineration disposal, and Products).

Unit: kg/year

Unit: kg/year

Efforts by domestic sales distributors

# Efforts by domestic sales distributors

Suzuki Group companies value reliable relationship with customers and local societies, and hope to have good fellowship with them for many years in future. We promote communication activities by providing the information about products and services, and participating or cooperating in welfare supports or other events. Also, we put the focus on education for employees to assure customer satisfaction for products and services we provide.



### Suzuki Motor Sales Yamataga Inc. http://sj-yamagata.jp (In Japanese language only)

### Cooperation for "Environment Fair

On September 30, 2012, we participated in "14th Environment Fair Tsuruoka 2012" sponsored by the Tsuruoka City. The Environment Fair is a civic environmental event to closely consider environmental issues including global warming and waste problems. We exhibited WAGON R and MR WAGON designed for low CO2 emission and fuel consumption, and explained visitors how eco-cars were effective in environment protection.

### Suzuki Motor Sales Saitama Inc. http://sj-saitama.jp (In Japanese language only)

### •Participation in "Car's Day Campaign"

On November 9, 2012, all of our sales dealers participated in "Car's Day Campaign (an eco-activity day for car dealers)" led by Saitama Automobile Dealers Association to perform cleanup activities. Our employees wore yellow aprons with the standard sign and contributed to local activities to show gratitude to usual patronage of our customers.

### Suzuki Motor Sales Tokyo Inc. http://suzuki-tokyo.co.jp (In Japanese language only)

### Installing "AED"

We installed AED to 19 sales dealers in fiscal 2012 to take an immediate action in an emergency such as when our customer has a heart attack etc. while they visit us.

### Suzuki Motor Sales Shizuoka Inc. http://sj-shizuoka.jp (In Japanese language only)

### "Electric vehicle handling course"

We had "Electric vehicle handling course" for welfare equipment renting companies and care managers on July 12, 2012. We explained the business flow and cautions when introducing an electric vehicle via nursing insurance, and characteristics of Senior Car. Also, we performed a practical lesson using an actual vehicle.










#### Suzuki Marine Co., Ltd. <u>http://suzukimarine.co.jp</u> (In Japanese language only)

•Implementation of "Boat-Taking Experience Gathering (Marine Week)"

On August 8, 2012, we held a gathering for giving an experience of taking a boat for members of a local children organization. We provided a lecture on ropework etc. and let them experience cruising for 30 to 40 minutes to stimulate their interest in boats and sea.

#### •Cooperation for "Lifesaving Drill"

On July 18, 2012, we participated in a lifesaving drill jointly conducted by Shizuoka Marina Association (West Branch) and Kosai Fire Department. We provided rescue boats and drilled in rescuing persons who needed help in the sea. In addition, we cooperated on a lifesaving drill of the Air Self-Defense Force on August 6, 2012.

India	MARUTI SUZUKI INDIA LIMITED

## **ROAD SAFETY**

Road safety is a major social concern in India. Maruti Suzuki runs a large scale nationwide road safety programme. Maruti Suzuki has undertaken various initiatives for imparting driving skills to existing and new drivers.

#### Institute of Driving and Traffic Research (IDTR)

Established in partnership with state governments, IDTRs offer training on passenger and commercial vehicles. Scientifically designed driving tracks and simulators are used for practical training. Trained and certified instructors impart theory and practical training. Maruti Suzuki has set up 6 IDTRs so far. In 2012-13, IDTRs trained 261,223 people in safe driving.

#### Maruti Driving Schools (MDS)

MDS have been set up in partnership with Maruti Suzuki dealers. Practical training is imparted on roads instead of test tracks. In 2012-13, 76 new MDS were established in the country taking the cumulative number of MDSs to 282. In 2012-13, MDS trained 120,537 people in safe driving.

MDS and IDTR together trained 381,770 people in safe driving. In the last decade, Maruti Suzuki has trained over 1.5 million people in safe driving.

#### Road Safety Knowledge Centre (RSKC)

RSKC setup in collaboration with Traffic Police are specifically aimed at educating and counseling traffic violators. Presently, Haryana state has 4 RSKC at Gurgaon, Faridabad, Karnal, Panipat. Karnal and Panipat RSKC were set up in 2012-13. In 2012-13, a total 129,264 people were trained in refresher training at these centres.

#### Road safety Awareness

Besides driver training, Maruti Suzuki's road safety programme also looks into aspects of road safety awareness. During the year, several programmes were organised to create road safety awareness amongst the public e.g. refresher training to 3-wheeler drivers, truck and bus drivers, college students, road safety seminars, rallies and street plays. The Company also organises road safety awareness workshops for school children across the country.

#### Road Safety for Truck Drivers

In 2012-13, more than 31,000 training sessions were conducted for truck drivers transporting Maruti Suzuki vehicles in Driver Education Centres (DEC). These DEC are located within the factory premises in Manesar and Gurgaon plants. The topics include safe driving, precautions in different weather conditions, and sensitisation on ill effects of drinking and driving. Besides, 6000 drivers were trained at IDTR. The company also rewarded drivers who practised safe driving and transported vehicles on time without damages - 110 Star Drivers were rewarded during the year.



Introduction
Efforts by Overseas Group Companies

## **SKILL DEVELOPMENT**

The availability of skilled manpower is critical to sustain industrial growth. To bridge the gap in industry requirement and manpower skills available, Maruti Suzuki has partnered with state governments to upgrade Industrial Training Institutes (ITIs). ITIs impart vocational training to school pass-outs, including those who work on the shop floor and in workshops. Under the upgradation programme, the Company undertakes numerous activities for overall improvement in the infrastructure of the institute and the quality of classroom teaching. The activities include:

**Efforts for Society** 

•Infrastructure improvements such as repair and maintenance of building

•Rain water harvesting structures, horticulture and landscaping

**Special Article** 

- •Provision of machines, tools and automobile parts for training
- •Industry exposure to students and teachers through factory visits
- •Addition of modules to augment course content safety, quality and shop floor practices
- •Facilitate participations in exhibitions, competitions and job interviews
- •Regular health camp and exclusive training on selfdefense for female students

In 2012-13, 11 new ITIs were adopted taking the total to 21 ITI adopted by Maruti Suzuki for overall upgradation. These ITIs benefit over 8000 students every year.

The Service department of the Company focuses on upgrading the automobile trade in ITIs. As on 31st March, 2013, MoU was signed with 80 ITIs for upgradation of automobile trade. As far as possible, youth trained in these trades are absorbed in the Company's service network. In 2012-13, 895 students trained in automobile trade were absorbed in the service network.

## **COMMUNITY DEVELOPMENT**

The neighbouring community is an important stakeholder for the Company. Maruti Suzuki has been engaging with four neighbouring villages around its Manesar plant since 2007.

In 2012-13, community development activities were extended to four new locations around the Gurgaon plant. In both Manesar and Gurgaon, the Company's engagement with community members is regularly done on issues such as health, education, infrastructure development and skill training for employment.

#### **Gurgaon Community Development**

In 2012-13, Maruti Suzuki upgraded an old Senior Secondary Government school in Sarhaul village, close to the Gurgaon plant. The activities included repair of the school building, construction of toilets including for girl students, fortification of boundary wall, provision of blackboards, teaching material, development of green areas and replacement of unsafe electrical fittings and wirings. This school was judged the most beautiful Senior

Secondary School under the Chief Minister's School Beautification Scheme at the block and district level.

The Company also promoted overall development of students in the school by promoting co-curricular activities such as dancing, singing, sports etc. With the Company's support, the School was able to hold its first Annual Event Navrang in which several children got the opportunity to showcase their talent. The Company provided the school with sports equipment such as cricket kit and footballs to encourage sports amongst children.

#### Manesar Community Development

In the Manesar village schools where the Company is engaged, there has been a steady improvement in enrolment, retention and academic performance. In health awareness, the Company took on a collaborative approach with the state government and focused on awareness generation. The mass awareness included billboards at strategic locations in the city, distribution of informational calendars, fogging to prevent spread of diseases like Malaria and Dengue in Gurgaon.

In Manesar, the focus of activities in 2012-13 was on education and infrastructure development. The Company along with its NGO partner established four Learning and Activity Centres at village schools. In the centres, interactive methods of teaching are used by teachers to teach weak students.

A massive sanitation and cleanliness drive was undertaken in all four villages in Manesar. To ensure hygienic living conditions for the village residents, the large scale cleanliness drive was implemented with the help village volunteers.

In infrastructure development, the Company constructed a shed at a village temple. The Company also supported a popular local religious festival. The Girls Middle School in Manesar where Maruti Suzuki has developmental work, stood first under the Chief Ministers School Beautification scheme at the block level.



**Efforts by Plants** 

## **EMPLOYEE VOLUNTEERING**

Maruti Suzuki encourages employees to contribute their time, talent, resources to less privileged sections of the society. The programme has been running since December 2008 and has seen participation of all ranges of employees. The programme offers employees various options of volunteering depending on their inclination and convenience. In 2012-13, the company's volunteering programme was made an integral part of the overall induction programme. This gave all new recruits a hands-on experience of volunteering and encouraged many to join the programme.

**Efforts for Society** 

In the year many volunteering events were held in the company such as Joy of Giving Week, Wish Tree Campaign, Book Donation Campaign, Tree Plantation Campaign, Health Awareness campaigns etc.

In 2012-13 the Company's volunteering hours saw a massive growth. From 4,000 volunteering hours in 2011-12, it crossed 14,000 volunteering hours in 2012-13.



### **ENVIRONMENT**

A new initiative "Green Aravali Campaign" was undertaken in Manesar under which a total of 500 plants were planted in Panchgaon village. In a similar initiative, a total of 1500 plants were planted inside the Manesar plant. These plants were planted by the employees as a part of the Company's volunteering programme, and these campaigns include specific steps to maintain and grow these plants over the next 2-3 years. Green areas were also developed and maintained in three schools in Manesar and one school in Gurgaon.



## **SUSTAINABILITY REPORT**

Maruti Suzuki shares its social, environmental and economic performance with its stakeholders through Sustainability Report. The Sustainability Report published by the Company every year conforms to the A+ level of the Global Reporting Initiative (GRI) G3.1 Guidelines. The report is available on the Company website www.marutisuzuki.com.

## **AWARDS & ACCOLADES**

Maruti Suzuki won following awards and accolades in 2012-13 for its efforts in CSR and Sustainability areas •Golden Peacock Award for Sustainability (Auto Sector)

- •Golden Peacock Award for Sustainability (Auto Sector)
- Responsible Business Awards 2012: Best in CSR Practice
   Asia's Best CSR Practices Award 2012: Best CSR Practice Overall
- •IPE CSR Corporate Governance Awards: Best CSR Practices (Auto Sector)
- •Caring Company Award by World CSR Congress



#### Indonesia

#### PT. SUZUKI INDOMOBIL MOTOR

In January 2013, PT. SUZUKI INDOMOBIL MOTOR did a service and an oil change for free, and 25% discount of parts to the Suzuki cars that were affected by the flood in Jakarta-Capital region.

In November 2012, PT. SUZUKI INDOMOBIL MOTOR donated 1,000 soccer balls to ASSBI (Asosiasi Sekolah Sepakbola Indonesia), the association of soccer in Indonesia, for the development of soccer in Indonesia.



Malaysia Suzuki Malaysia Automobile Sdn. Bhd.

## Contribution to the Society

#### School Adoption Program

Suzuki Malaysia Automobile adopted one native school at Selangor rural area with commitment to support the school and students development as part of our CSR support for our society. In August 2012, in conjunction with the month of Ramadhan, we organized a breaking fast event for them. A donation has been made to the school for improvement on their education facilities.



#### Invitation for AFF Suzuki Cup

In December 2012, during AFF Suzuki Cup 2012 semi-final game between Malaysia vs. Thailand, we invited 22 students from our adopted school to be the escort kids for this game. Tickets also have been allocated for them with their guardians to watch the match after the opening ceremony.



#### Effort for Environmental Preservation

In December 2012, Suzuki Malaysia Automobile Sdn Bhd planted 200 mangrove trees at Sepang Gold Coast with participation of our 35 employees, in collaboration with Malaysia Nature's Society, the oldest and largest non-governmental organization in Malaysia.



Introduction

Education Support

#### Inauguration of the Project of Construction & Renovation of School

**Special Article** 

Pak Suzuki Motor Co., Ltd.

Since Education plays a central role in Pak Suzuki's CSR strategy as company firmly believe that education is a key to success for any nation. Therefore, enhancement of education in local community has been of utmost consideration by Pak Suzuki.

Up gradation of Government School located in village at Bin Oasim. Karachi was done. constructions of additional classrooms, providing furniture and fixtures and repainting

of old classrooms. Pak Suzuki constructed 5 Toilets and Ablution Area which improved school's infrastructure and provided electric Water Cooler which will also help in attracting more students of the locality to study in the school. Moreover, the mosque is also repainted and school is also facilitated with 3 school sign boards.

**Efforts for** 

#### Distribution of Note books and Stationery to the student of Government Schools

Pak Suzuki understands that education is a fundamental human right and is committed to spread the light of education in local communities. Government is already providing only text books to all students of Government Schools, therefore, Pak Suzuki selected 18 schools, where note books and stationery were distributed to more than 2,700 students so, that pursuing education becomes easier for them.

#### In-house Computer Literacy Program 2012

A Computer Literacy Program for employees' children during the month of June & July, 2012 was conducted; the idea was to give children an opportunity to make their summer vacations useful. In 8 sessions, a total of 115 children participated. They learnt important computer applications and softwares like; Basic Computer Usage, different levels of MS - Office, etc. Concept and usage

of important Japanese tools Kaizen & 5S were also taught for practicing in their routine life. In closing ceremony of each batch, certificates and gift hampers were distributed in order to encourage their participation.

#### Technical Skills Training

During the year 2012-2013, 06 trainings were conducted at Vocational Training Institutes (VTI) in different cities of Pakistan and Memon Industrial Training Institute (MITI) in Karachi to groom the technical skill of the human resource in automobile sector. Trainings were arranged for maintenance of Motorcycles, Basic level and EFI & EURO-II, System, Procedures & Diagnosis for the students as well as for Trainers. Participants were 225 in total.

#### In-house Awareness Session on Assistance to Career Starters

Under CSR, a full day session on Assistance to Career Starters for the children of direct / indirect employees of the Company was arranged in company's premises on December 15, 2012. The purpose was to equip fresh graduates with important tips for starting their professional careers. Our trainers provided them the guidance for their Career Growth & Development, e.g. How to Make Resume & useful interviewee Techniques, etc.

#### Internship

36 Students from the top 13 Institutions completed 04 weeks Internship during Summer 2012 (June-Aug) in different divisions of the company which included Supply Chain Management, Production, Quality Assurance, Operations, Marketing, Research & Development, Finance & Information Technology.













environment protection. Moreover, air pollution is a major factor in deteriorating the Environment which is seriously affecting health of the community.

**Efforts by Plants** 

Efforts by Overseas Group Companies

Introduction

## Employee Support

#### Awareness Sessions for Employees

Trainings and awareness sessions were conducted for employees to know about the Safety, Fire Fighting, First Aid, Road Safety, Driving rules and how to respond to an accident

This workshop on "Sleep Management" was organized for general awareness of employees about managing sleep disorders in today's busy life which will enhance the efficiency.

A Session on "Harmful Effects of Smoking and Chewing Tobacco" was organized by company Medical Officer for general awareness about ill effects of tobacco intake and how to guit this habit.

**Efforts for** 

#### In-house Awareness Session on Health, Safety & Environment (HSE)

**Special Article** 

Pak Suzuki organized a full day awareness session on Health, Safety and Environment in company's premises on October, 2012 for children of direct / indirect employees of the company. The purpose of this awareness session was to equip them with utmost knowledge of how to take safety measures in routine life, how to take better care of one's health and importance of natural environment protection.

## Blood Donation Campaign

Pak Suzuki in collaboration with Fatimid Foundation arranged Blood Donation Campaign on September and October, 2012 in company's premises. The campaign's aim was to help the people who are struggling against incurable blood disorders like Thalassemia, Hemophilia, etc. Total 68 employees donated their blood.

## Free Medical Campaigns

During the year of 2012, total 06 Free Medical Camps were conducted in different villages of Bin Qasim Town, Karachi with the support Town Health Office, Bin Qasim. in which free medical checkup and prescribed medicines were provided to around 3,100 people. During each camp, coloring contests were also arranged for children of local communities to enhance the sense of education among

them. Around 800 children could participate in coloring competitions.

## Suzuki Light Change Activity

This activity was conducted with collaboration of Islamabad Traffic Police for the awareness generating in general public on 05 busiest Roads of Islamabad. Suzuki team checked and replaced Motorcycles Lights of head, rear lamps and indicators. During event, flowers, sweets, give away and Suzuki Motorcycles flyers were distributed.

## Environment

#### Beach Cleaning Campaigns

Pak Suzuki organized Beach Cleaning Campaigns at Sea View Clifton on June 2012, and March 2013. Around 700 employees of Pak Suzuki with their families participated in campaign. The aim was to remove debris that causes threat to sea turtles and other marine life and to create awareness to the public about the importance of natural















## China

#### CHONGQING CHANGAN SUZUKI AUTOMOBILE CO., LTD

Chonqing Changan Suzuki Automobile Co., Ltd. has made the following activities in 2012.

•Donated books, stationery goods, clothes (total 4,000 yuan) and money (600 yuan) par a year to five children in financial difficulties in Fengsheng Town,Banan District,Chongqing City.



•Donated money (15,000 yuan) to Qijiangmajing Primary School, Chongqing City.



- •Donated money (2,000 yuan) to the children in Chongqing Child Welfare Facility on the occation of Boy's day (May 5).
- •Donated money (4,000 yuan) to Yudong Bin Jiang Road, Chongqing City on the occation of the midautumn harvest festival.



•Donated money (4,000 yuan) to Huaxi / Yudong nursery home, Chongqing City on the occation of the midautumn harvest festival.



•Donated money (20,000 yuan) and winter clothes worth 15,000 yuan at Chengkoumiaoba junior high school, Chongqing City.



•Donated a million yuan as aid for earthquake in Sichuan Province.



•Planted activities on April 2 / 2013.



China

#### SHANGHAI SUZUKI AUTOMOBILE CO., LTD

Suzuki customers and their families participated in treeplanting event named Go Tree-planting on the blue sunny day at Modern Agricultural Park in Taicang on 16 March, 2013.



Efforts for

Efforts for Society Efforts by Plants

Efforts by Overseas Group Companies

#### Hungary Magyar Suzuki Corporation

## Suzuki Kindergarten

Maintaining kindergarten operations for children whose parents work for MSC.

## Support for sports activities

MSC Supports several sports activities in Komarom/Esztergom County including Esztergom Rowing Club, Esztergom Knights Rugby Team, Esztergom Kick Box Association, Esztergom Tabletennis Association, Suzuki youth football squad, Aikido Shinbukan Dojo, Maria Valeria Bridge Running

MSC organized Puskas Suzuki Cup for the 6th time to promote football for the youth and prepare them for a dynamic, healthy lifestyle.

A swimming competition arranged with mixed Hungarian and Slovakian teams at the border of Esztergom and Sturovo (in Slovakia,) was supported by MSC.



## Support for cultural activities

Financial support for several cultural associations such as the Esztergom Summer Theatre every year, Saint Stephen's Day (State founder of Hungary) in Esztergom, Tastes-Eras-Feelings Eszterom local, historical program.

Contribution to the yearly 'Spring Voices' concert held in Hungarian Music Academy as a combined Japanese-Hungarian musical event provided by the excellent graduating students of the Academy.

## Contributions to the local community

Volunteer activities to share knowledge with local and regional elementary and secondary school students through factory tours and conferences .

Presentation and exchange experience with small/medium size entrepreneurs, suppliers, business partners, automotive industry players during conferences and roundtable discussions .

Voluntary donation of blood organized by Hungarian Red Cross by MSC employees twice a year.

Huge number of voluntary employees gave blood which could be used by Esztergom local hospital in case of need.







Suzuki Italia S.p.A.

We (Suzuki Italia managers and employees) have cleaned an area of 950 square metres on the river Stura, near our headquarter. We have collected around 200 big black bags of waste, plastic and glass, tyres and other big garbages. In any case is drastically increased the sense of responsibility for the environment.





Suzuki GB PLC

Efforts by Overseas Group Companies

U.K.

#### Provided outboard motors to the participant of the Thames Diamond Jubilee Pageant

Suzuki GB PLC which is Suzuki's sales subsidiary in Great Britain provided 55 units of the four-stroke outboard motor "DF2.5" for "SEA CADETS" that participated in of the Thames Diamond Jubilee Pageant which was held on June 3, 2012. "DF2.5" is a model with the minimum horsepower among other Suzuki outboard motors for overseas markets and equipped with a four-stroke engine of 68cm<sup>3</sup> displacement. 55 boats with Suzuki's "DF2.5" carried 12- to 17-year-old young boys and girls from Great Britain and other countries of the British Commonwealth, formed a diamond shape that symbolized celebration of 60th anniversary (Diamond Jubilee), and paraded the Themes, leading the mother ship that carried the King and Queen, and other royal families.

 $\boldsymbol{\star}$  SEA CADETS: Nonprofit organization of marine education for juvenile in Great Britain

#### Topics

#### Activity for "Clean-Up-The-World Campaign"

The Global Marine & Power Products Division of Suzuki is making efforts to constantly provide our customers with inspiration and satisfaction, and hope that they spend a wonderful day on the water in clean and healthy environment. To accomplish this role, we conducted "the 2nd Clean-up the World Campaign" from November 2012 to January 2013 to clean beaches for marine leisure under cooperation with distributors, sales dealers, and local residents.

Since local residents were pleased with this campaign, it was proved that this reinforced Suzuki Brand. The Global Marine & Power Products Division will promote "Clean-up the World Campaign" with our worldwide fellows for rich future.

#### U.S. SKORE BARC DECOMPARE SLOW MORD DE CADRANS JA BISANADOR TRADES JA & C.C. FIL INFORMATION SWEETEN KARREN ALLASSON DIFFE SWEETEN KARREN ALLASSON DIF



**Efforts for Society** 

**Efforts for** 

Topics

## Supporting the Development of Human Resources in Overseas Manufacturing Companies

**Efforts for** 

Environment

Suzuki participates in the trainee acceptance program led by HIDA\* (former AOTS) and directly accepts trainees from overseas manufacturing companies to provide practical on-the-job training in individual sections of the company. Effective training in practical techniques and skills for overseas companies that support the manufacturing sector contributes to developing industries in developing countries and promotes mutual understanding and friendship between each other's countries.

\* AOTS (Association for Overseas Technical Scholarship) merged with JODC (Japan Overseas Development Corporation) on March 30, 2012 to become HIDA (The Overseas Human Resources and Industry Development Association).

	Country	Name of Company
	India	MARUTI SUZUKI INDIA LIMITED
	Thailand	SUZUKI MOTOR THAILAND CO., LTD.
Asia	Indonesia	PT. SUZUKI INDOMOBIL MOTOR
ASId	China	JINAN QINGQI SUZUKI MOTORCYCLE CO., LTD.
	Cillia	CHONGQING CHANGAN SUZUKI AUTOMOBILE CO., LTD
	Pakistan	Pak Suzuki Motor Co., Ltd.

#### **Companies Accepting Overseas Trainees (fiscal 2012)**

 Number of overseas trainees accepted in fiscal 2012: 143 persons
 Accumulated total number of overseas trainees: 22,258 persons (From 1983 to 2012)

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# **Environmental** Data

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## A History of Suzuki's Environmental Protection Efforts

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**Efforts for** Environment

**Efforts for Society** 

**Efforts by Plants** 

**Environment-Related Data of Key New Products in Fiscal 2012** 

# **Environment-Related Data of Key New Products in Fiscal 2012**

The environmental data on key new products launched in fiscal 2012 are as follows. The environment-related data of automobiles and motorcycles (vehicle type-specific environmental information) and automobile models that conform to the Law on Promoting Green Purchasing are available on the following website. <Vehicle type-specific environmental information>

http://www.suzuki.co.jp/about/csr/environmentalInfo/index.html (In Japanese language only) <Automobile models that conform to the Law on Promoting Green Purchasing> http://www.suzuki.co.jp/about/csr/green/index.html (In Japanese language only)

## Automobiles

Introd

Au								IT A							
		Car Nar	ne	ALTO	ECO			ALTO	Ø						
asse	enger	Capacity (Person	ıs)	L	¥			4							
	Mod	el name		ECO-	ECO-L/S F F/G G/X F F/G4					F / G4					
	Vehi	cle Type			HA35S DBA-HA25S										
		Model			6A			K6A							
		Total Piston E	Displacement (L)		558 0.658										
tion	Engine	Туре		DOH Air-intake/E		In-line three-cylinder engine: DOHC12V VVT									
ma	Eng	Applicable Fu	el	Lead-free Reg	gular Gasoline		Lead	-free Regular Gas	soline						
Basic Information		Fuel Supply System		Electronically-	ction		Electronica	Ily-Controlled Fu	el Injection						
Basi			net) [kW (PS) / rpm]		/6,000			40(54)/6,500							
-		Max. Torque [		63(6.4			01110	63(6.4)/3,500	())	10					
	rain rain	Drive System Transmission		2WD C\	4WD	5MT	2WD 4AT	CVT	4V 5MT	CVT					
		cle Weight (kg)		【710】	(760)	690 (700)	710 720	【740】	(750)	(790)					
	Rem				em (Engine Auto Stop	030[700]	/10[/20]	[740]	[730]	[730]					
	u l		Fuel efficiency (km/l)	33.0	30.4	22.6	21.8	24.0	21.0	22.2					
	npti	g JC08mode	CO2 Emission (g/km)	70	76	103	106	97	111	105					
	Fuel Consumption Rate		Reference	Vehicles achie efficiency ta		Vehicles achie efficiend	eved 2015 fuel cy target	Vehicles achieved 2015 fuel efficiency target + 10%	Vehicles achie efficienc						
	Gas	Applicable sta certification I	andard / evel	SU-LEV (Level 75% Lower than 2005 Exhaust Gas Standard)											
on		Test mode				JC08H+JC08C Mode									
mat	Exhaust	Regulation / CO Certification		1.15											
Ifor	ı ۳	Values, etc.	NMHC	0.013											
e II	Stop	(g/km)	NOx signation of Low-	0.013 Meet the Nine-cities Standard for the Designation of Low-emission Vehicles.											
nanc	Emis	sion Vehicles,	etc.		Meet the Nine	-cities Standard	for the Designa	tion of Low-emis	ssion Vehicles.						
erfori		cles Subject to uction (Note 1)	Eco-car Tax	0	0	0	0	0	0	0					
Environmental Performance Information	Vehi Prom	cles that Confo noting Green Pu	orm to the Law on urchasing	0	0	0	0	0	0	0					
Iame	Noise	Applicable sta	andard level		Conforming to	1998 Standard	Acceleration No	ise Regulation Va	alue: 76 dB (A)						
liror	Air c	onditioner refrig	erant consumption				ıbstitute: HFC13	, ,							
ED		rior VOC		Meet the JAMA's	s Target (Lower Ir	nterior VOC Level	s than the Target	Set by the Minist	try of Health, Lab	or, and Welfare					
	ental ces.	Lead*1		Meet the JAMA's Target (1/10 or Lower of the Usage in 1996).											
	ironm bstan	Mercury* <sup>2</sup>		Meet the JAMA's Target (Usage Prohibited in and after Jan. 2005).											
	Nu Su	Hexavalent chromium		Meet the JAMA's Target (Usage Prohibited in and after Jan. 2008).											
	act ce	Hexavalent ch	Ironnum	Meet the JAMA's Target (Usage Prohibited in and after Jan. 2007).											
	Reduce e impact	Hexavalent ch Cadmium	iroiniuni		Meet the	e JAMA's Target (	Usage Prohibite	u ili allu altei Jai	1. 2007).	Lead acid battery (excluded because the collection route for recycling is established) LCD such as for navigation system, combination meter, discharge head lamp, room lamp (excluding the ultratrace level of usage in parts indispensable for traffic safety)					
		Cadmium	o JAMA's Target	*2 LCD such a	battery (exclude as for navigation	d because the c system, combir	ollection route f nation meter, dis	for recycling is es scharge head larr	stablished)	excluding the					
	Parts			*2 LCD such a ultratrace Consider ease o parts, structure	battery (exclude as for navigation level of usage in of recycling (use that can be eas	d because the c system, combin parts indispens	ollection route f hation meter, dis able for traffic s at can be recycle , etc.).	for recycling is es scharge head larr	stablished) 1p, room lamp (e						
Environment	Parts Recy	s Not Subject to	o JAMA's Target	*2 LCD such a ultratrace Consider ease o parts, structure	battery (exclude as for navigation level of usage in of recycling (use that can be eas cycled materials	d because the c system, combin parts indispens of materials tha ily disassembled for the dash sile	ollection route f nation meter, dis able for traffic s at can be recycle l, etc.). encer etc.	for recycling is e scharge head lam afety)	stablished) np, room lamp (e ion of material n						

Figures in [ ] indicate the weight of automobiles equipped with ABS. As of February 2013 (Note 1) A measure for tax reduction when a new car is purchased according to the "tax system to promote the use of eco-friendly vehicle". Applicable to new car registrations till March 31, 2015 for the automobile acquisition tax. By the registration of a new car on April 30, 2015 for the automobile weight tax \* The fuel consumption rates are the values obtained under a specific testing condition. The rates vary according to the actual use conditions (weather, traffic, etc.) and driving situations (sudden starting, use of air conditioner, etc.).

## Automobiles

		Car Nar	ne		SPACIA				
Pass	enger	Capacity (Person	ns)		4				
	Mode	el name		G	/ X	Т			
	Vehi	cle Type			DBA-M	IK32S			
		Model			RO	6A			
		Total Piston	Displacement (L)		0.6	58			
Basic Information	Engine	Туре			cylinder engine: take/Exhaust VVT	In-line three-cy DOHC12V VVT Int			
Ĩ	Eng	Applicable Fu	el		Lead-free Reg	ular Gasoline			
nfo		Fuel Supply S	ystem		Electronically-Contr	olled Fuel Injection			
sic		Max. output (net) [kW (PS) / rpm]			)/6,000	47(64),			
Ba		Max. Torque [	N•m(kgf•m)/rpm]	63(6.4	)/4,000	95(9.7)	/3,000		
	e i	Drive System		2WD	4WD	2WD	4WD		
	Drive Train	Transmission			CV	́Т			
	Vehi	cle Weight (kg)		840 / 850	890 / 900	870	920		
	Rema				ling stop system (Engine Auto Stop				
	ption		Fuel efficiency (km/l)	29.0	26.8	26.0	25.0		
	Fuel Consumption Rate	JC08 mode	CO2 Emission (g/km)	80	87	89	93		
	Fuel (		Reference		Vehicles achieved 2015 fu	el efficiency target + 20%			
	Gas	Applicable sta certification I		SU-LEV (Level 75% Lower than 2005 Exhaust Gas Standard)					
tion		Test mode	00	JC08H+JC08C Mode					
ma	Exhaust	Regulation / Certification	CO NMHC		1.1				
ufoi	<u> </u>	Values, etc.	NOX	0.013					
ce	Stan		signation of Low-						
Jan	Emis	sion Vehicles,	etc.	Meet the Nine-cities Standard for the Designation of Low-emission Vehicles.					
Environmental Performance Information	Vehicles Subject to Eco-car Tax Reduction (Note 1)			0	0	0	0		
ental P		oting Green Pu		0	0	0	0		
me	Nois	Applicable sta	andard level	Conformir	ng to 1998 Standard Accelera	tion Noise Regulation Value:	76 dB (A)		
/irol	<u> </u>		erant consumption		CFC's substitute:	, 0			
Env		ior VOC		Meet the JAMA's Target (Low	ver Interior VOC Levels than the	e Target Set by the Ministry o	f Health, Labor, and Welfare)		
	ental ces.	Lead*1		Me	eet the JAMA's Target (1/10 o	r Lower of the Usage in 199	6).		
	ironm bstan	Mercury* <sup>2</sup>		Mee	et the JAMA's Target (Usage Pr	rohibited in and after Jan. 20	05).		
	e env ict su	Hexavalent ch	nromium	Meet the JAMA's Target (Usage Prohibited in and after Jan. 2008).					
	Reduce environmental impact substances.	Cadmium		Mee	t the JAMA's Target (Usage Pr	rohibited in and after Jan. 20	07).		
		1	o JAMA's Target	Meet the JAMA's Target (Usage Prohibited in and after Jan. 2007). *1 Lead acid battery (excluded because the collection route for recycling is established) *2 LCD such as for navigation system, combination meter, discharge head lamp, room lamp (excluding the ultratrace level of usage in parts indispensable for traffic safety)					
Efforts for nvironment	Recy	cling		parts, structure that can be	(use of materials that can be easily disassembled, etc.). rials for the dash silencer, flo	5 5,			
Effor	<u> </u>	e of Substance	es of Concern	Lead: Us	sed in electronic boards, piez	oelectric element (PZT sens	or), etc.		
	Others								

(Note 1) A measure for tax reduction when a new car is purchased according to the "tax system to promote the use of eco-friendly vehicle". Applicable to new car registrations till March 31, 2015 for the automobile acquisition tax. By the registration of a new car on April 30, 2015 for the automobile weight tax \* The fuel consumption rates are the values obtained under a specific testing condition. The rates vary according to the actual use conditions (weather, traffic, etc.) and driving situations (sudden starting, use of air conditioner, etc.).

**Efforts for Society** 

Environment-Related Data of Key New Products in Fiscal 2012

## Automobiles

Car Name				Wag	on R			Wag STIN	on R GRAY		
Passe	enger	Capacity (Persor	ns)			4			l	ł	
	Mode	el name		FX	FX / FX Limited	FX	FX / FX Limited	)	<		T
	Vehic	le Type				MH34S			DBA-N	1H34S	
		Model			R0	6A			R0	6A	
		Total Piston	Displacement (L)		0.6	58			0.6	58	
_	Engine	a Type				ylinder engine ake / Exhaust \		In-line three-c DOH Air-intake /	-	DOHC1	cylinder engine: 12V VVT oler Turbo
Itio	튭	Applicable Fu	el		Lead-free Reg	gular Gasoline			Lead-free Reg	gular Gasoline	
Basic Information		Fuel Supply S		Elect		rolled Fuel Inje	ction		ronically Contr		
lufo		Max. output (	<b>net)</b> [kW (PS) / rpm]			/6,000		38(52)			)/6,000
sic		Max. Torque [	N•m(kgf•m)/rpm]		63(6.4	)/4,000		63(6.4)	)/4,000	95(9.7	)/3,000
Ba	Drive Train	Drive System		21	VD	4V	VD	2WD	4WD	2WD	4WD
	Dri	Transmission		5MT	CVT	5MT	CVT		C'	/T	
	Vehic	cle Weight (kg)		750	780 / 790	800	830 / 840	800	850	820	870
	Remarks			Idling Stop (Engine Auto Stop Start System)	Idling stop system (Engine Auto Stop Start System) with charge control	Idling Stop (Engine Auto Stop Start System)	Idling stop system (Engine Auto Stop Start System) with charge control	Idling	stop system (Er with charş	•	rt System)
	E		Fuel efficiency (km/l)	25.6	28.8	24.0	27.8	28.8	27.8	26.8	25.0
	ptio		CO2 Emission (g/km)	91	81	97	84	81	84	87	93
	Fuel Consumption Rate	JC08 mode	Reference		hieved 2015 / target + 20%	Vehicles achieved 2015 fuel efficiency target + 10%	Vehicles achieved 2015 fuel efficiency target + 20%	Vehicles achieved 2015 fuel efficiency target + 2		arget + 20%	
		Applicable sta certification I			S	U-LEV (Level 7	5% Lower that	n 2005 Exhaus	t Gas Standar	d)	
ion	Gas	Test mode					JC08H+JC	08C Mode			
mat	ust	Regulation /	со					15 )13			
lor	Exha	Certification	МИНС								
e l		Values, etc. (g/km)	NOx					)13			
vironmental Performance Information		dard for the De sion Vehicles,	esignation of Low- etc.		Meet the I	Nine-cities Sta	ndard for the	Designation of	Low-emission	n Vehicles.	
erfo	Vehic	cles Subject to	Eco-car Tax	0	0 0 0 0				0	0	0
ental	Vehicles that Conform to the Law on Promoting Green Purchasing		0	0	0	0	0	0	0	0	
onme	e	Applicable sta		Conforming to 1998 Standard Acceleration Noise Regulation Value: 76 dB (A)							
		nditioner refrig	erant consumption	CFC's substitute: HFC134a, 320g							
<u>۳</u>	Interi	ior VOC		Meet the JAMA	A's Target (Low					of Health, Labo	r, and Welfare)
	ntal ss.	Lead*1						or Lower of the			· · ·
	onme	Mercury*2								-	
	is g	Hexavalent ch	romium	Meet the JAMA's Target (Usage Prohibited in and after Jan. 2005). Meet the JAMA's Target (Usage Prohibited in and after Jan. 2008).							
	duce	Cadmium	ioilluii				0,0			,	
			o JAMA's Target	*2 LCD suc ultratrac	Meet the JAMA's Target (Usage Prohibited in and after Jan. 2007). *1 Lead acid battery (excluded because the collection route for recycling is established) *2 LCD such as for navigation system, combination meter, discharge head lamp, room lamp(excluding the ultratrace level of usage in parts indispensable for traffic safety)						
Efforts for invironment	Recyc	cling		parts, structu	re that can be	(use of materia easily disasse rials for the da	mbled, etc.).	e recycled eas	ily, indication (	of material na	mes on resin
Line Usage of Substances of Concern					Lead: Us	sed in electron	ic boards, piez	zoelectric eler	nent (PZT sens	or), etc.	
₩ 5 I				Lead: Used in electronic boards, piezoelectric element (PZT sensor), etc.							

(Note 1) A measure for tax reduction when a new car is purchased according to the "tax system to promote the use of eco-friendly vehicle". Applicable to new car registrations till March 31, 2015 for the automobile acquisition tax. By the registration of a new car on April 30, 2015 for the automobile weight tax \* The fuel consumption rates are the values obtained under a specific testing condition. The rates vary according to the actual use conditions (weather, traffic, etc.) and driving situations (sudden starting, use of air conditioner, etc.).

## Automobiles

Car Name					ALTO LA	PIN					
Pass	enger	Capacity (Person	is)			4					
	Mode	el name		G	G	/ X	T				
	Vehi	cle Type				DBA-HE22S					
		Model		КбА							
		Total Piston D	isplacement (L)		0.658						
io	Engine	Туре		In-line thre	ee-cylinder engine: DO	HC12V VVT	In-line three-c DOHC12V(inte				
nat	Engl	Applicable Fu	el		Le	ad-free Regular Gasolii	ne				
Basic Information	-	Fuel Supply S	ystem		Electron	ically-Controlled Fuel I	njection				
cln		Max. output (I	net) [kW (PS) / rpm]		40(54)/6,500		47(64)	/6,000			
asi		Max. Torque [	N•m(kgf•m)/rpm]		63(6.4)/3,500		95(9.7)	/3,000			
8	e r	Drive System		21	VD	4WD	2WD	4WD			
	Drive Train	Transmission		4AT		C\	/Т				
	<u> </u>	cle Weight (kg)		790	800	850	820	870			
	Rema			790	Idling Stop (Engine Auto Stop Start System)	830	020	870			
	5		Fuel efficiency (km/l)	21.0	26.0	22.0	20.2	19.0			
	npti		CO2 Emission (g/km)	111	89	106	115	122			
	nsur Rate	JC08 mode	CO2 EIIIISSIOII (g/kiii)				115	122			
	Fuel Consumption Rate		Reference	Vehicles achieved 2015 fuel efficiency target	Vehicles achieved 2015 fuel efficiency target + 20%	Vehicles achieved 2015 fuel efficiency target	-	-			
		Applicable sta	indard /			Lower than 2005 Exha	aust Gas Standard)				
_	Gas	certification le	evei	JC08H+JC08C Mode							
atio	Exhaust	Regulation /	CO	1.15							
Ë	xha	Certification	МИНС			0.013					
Info		Values, etc. (g/km) NOx		0.013							
Environmental Performance Information		dard for the De sion Vehicles,	signation of Low- etc.	Meet the Nine-cit	Meet the Nine-cities Standard for the Designation of Low- emission Vehicles.						
erforn		cles Subject to	Eco-car Tax	0	0	0	-	-			
tal Pe	Vehi		rm to the Law on Irchasing	0	0	0	_	-			
nem	Noise	Applicable sta	¥	Conf	orming to 1998 Standa	rd Acceleration Noise	Regulation Value: 76 dl	B (A)			
<i>iroi</i>	Air co	onditioner refrig	erant consumption		CFC's	s substitute: HFC134a,	320g				
Env		rior VOC		Meet the JAMA's Target		vels than the Target Set	e e	th, Labor, and Welfare)			
	ental es.	Lead*1			Meet the JAMA's Ta	rget (1/10 or Lower of	the Usage in 1996).				
	Reduce environmental impact substances.	Mercury*2			Meet the JAMA's Targ	et (Usage Prohibited in	and after Jan. 2005).				
	te env	Hexavalent ch	romium		Meet the JAMA's Targ	et (Usage Prohibited in	and after Jan. 2008).				
	Reduc	Cadmium			Meet the JAMA's Targ	et (Usage Prohibited in	and after Jan. 2007).				
		s Not Subject to	) JAMA's Target	*2 LCD such as for i	navigation system, con	e collection route for r abination meter, discha ensable for traffic safet	irge head lamp, room l				
Efforts for Environment	Recy	/cling		parts, structure that c	cling (use of materials an be easily disassemb materials for the dash		asily, indication of mat	erial names on resin			
Effor	Usag	ge of Substance	s of Concern	Le	ad: Used in electronic	boards, piezoelectric e	lement (PZT sensor), e	tc.			
- 2	Othe	ers									

(Note 1) A measure for tax reduction when a new car is purchased according to the "tax system to promote the use of eco-friendly vehicle". Applicable to new car registrations till March 31, 2015 for the automobile acquisition tax. By the registration of a new car on April 30, 2015 for the automobile weight tax \* The fuel consumption rates are the values obtained under a specific testing condition. The rates vary according to the actual use conditions (weather, traffic, etc.) and driving situations (sudden starting, use of air conditioner, etc.).

## Automobiles

		Car Nar	ne			LANDY		2		
Pass	enger	Capacity (Person	is)				8			
	Mod	el name		2.0S	2.0S(Note 2)	2.0G	2.0S	2.0S(Note 2)	2.0G	
	Vehicle Type			DBA-SC26	DAA-S	HC26		DBA-SNC26		
		Model		MR20	MR20-			MR20		
		Total Piston D	isplacement (L)				997			
E	le	Туре			Cylinder direct fue		e four-cylinder engir	ne, DOHC16 valve		
Basic Information	Engine	Applicable Fu					gular Gasoline			
orn		Fuel Supply S			Electronically Controlled Fuel Injection					
1 L		Max. output (net) [kW (PS) / rpm]			108(147)/5,600			106(144)/5,600		
asic		Max. Torque [N·m(kgf·m)/rpm]			210(21.4)/4,400			207(21.1)/4,400		
8	Drive Train	Drive System			2WD			4WD		
	2 F	Transmission				С	VT			
	Vehi	cle Weight (kg)		1,610[1,620]	1,6	60	1,700 [1,710]	1,73	30	
	Rem	arks			S-HY idling stop (Engine	/		Idling (Engine Auto Sto		
	ion		Fuel efficiency (km/l)	13.8	15	.2	12.6	13.	6	
	mpt		CO2 Emission (g/km)	168	15	i3	184	171		
	Fuel Consumption Rate		Reference	Vehicles achieved 2015 fuel efficiency target	Vehicles achie efficiency ta	ved 2015 fuel	Vehicles achieved 2015 fuel efficiency target	Vehicles achiev efficiency ta	ved 2015 fuel	
	Gas	Applicable sta certification I			SU-LE	V (75% lower than	2005 Emission Sta	ndard)		
uo		Test mode				JC08H+JC	08C Mode			
nati	Exhaust	Regulation /	CO			1.	.15			
for	E	Certification Values, etc.	NMHC				013			
e In		(g/km) NOx		0.013						
manc	Emis	sion Vehicles,	etc.	Meet the Nine-cities Standard for the Designation of Low-emission Vehicles.						
rfor		cles Subject to action (Note 1)	Eco-car Tax	0	0	0	0	0	0	
Environmental Performance Information		cles that Confo noting Green Pu	rm to the Law on irchasing	0	0	0	0	0	0	
mer	loise	Applicable sta	andard level	C	onforming to 1999	Standard Acceler	ration Noise Regula	tion Value: 76 dB (A	)	
ron	Air c	onditioner refrig	erant consumption			CEC's Substitute	: HFC134a, 800 g			
Envi	<u> </u>	rior VOC		Meet the JAMA's Target (Lower Interior VOC Levels than the Target Set by the Ministry of Health, Labor, and Welfare)						
_	ntal ss.	Lead*1			•		or Lower of the Usa			
	environmenta substances.	Mercury*2						<u> </u>		
	teduce environmental impact substances.	Hexavalent ch	romium	Meet the JAMA's Target (Usage Prohibited in and after Jan. 2005). Meet the JAMA's Target (Usage Prohibited in and after Jan. 2008).						
	educe e impact	Cadmium								
	-	ouumum	o JAMA's Target	Meet the JAMA's Target (Usage Prohibited in and after Jan. 2007). *1 Lead acid battery (excluded because the collection route for recycling is established) *2 LCD such as for navigation system, combination meter, discharge head lamp, room lamp(excluding the ultratrace level of usage in parts indispensable for traffic safety)						
Efforts for nvironment	Recy	/cling		parts, structure that	at can be easily dis	assembled, etc.).		dication of materia de cover, fender fitt		
ffor	Usag	ge of Substance	es of Concern	Lead: Used in	solder for electron	ic boards and elec	trical parts, piezoel	ectric element (PZT	sensor), etc.	
E E	Othe	ers								

As of August 2012

Figures in [ ] indicate the value of automobiles equipped with the power sliding door on the left. (Note 1) A measure for tax reduction when a new car is purchased according to the "tax system to promote the use of eco-friendly vehicle" and "green tax plan." Applicable to new car registrations till March 31, 2015 for the automobile acquisition tax. By the registration of a new car on April 30, 2015 for the automobile weight tax. The automobile tax will be reduced for the next fiscal year of the purchase based on the green tax system. New car

(Note 2) Automobiles equipped with makers set options
 S-HYBRID (only 2WD), idling stop system, VDC, hill-hold control, power sliding door on both sides, discharge head lamp
 \* The fuel consumption rates are the values obtained under a specific testing condition. The rates vary according to the actual use conditions (weather, traffic, etc.) and driving situations (sudden starting, use of air conditioner, etc.).

		Introduction	Special Article	Efforts for Environment	Efforts for Society	Efforts by Plants	Environmental Data	
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## Motorcycles

		Car Name		V-Strom			
	Pass	enger Capacity (Persons)		2			
	Vehi	cle Type		EBL-VP56A			
-		Model		P515			
tior		Total piston displacen	nent (cm <sup>3</sup> )	0.645			
rma	e	Туре		Water-cooled, 4-cycle, V2-cylinder engine, DOHC			
nfo	Engine	Applicable Fuel		Lead-free Gasoline			
Basic Information	Hell Supply System Max. output (net) [kW (PS) / rpm]			Electronic fuel injection			
Bas				49(66.6)/8,800			
		Max. Torque [N·m(kgf·m),	/rpm]	59(6.0)/6,500			
	Transmission			Gear type			
		cle Weight (kg)		214			
ation	Fuel Consumption Rate	Fuel Consumption during Running at 60 km/h on Proving Ground (km/L) (values submitted to the Ministry of Land, Infrastructure, Transport and Tourism)		39.0			
rma	Gas	Applicable standard le	evel	Conforming to 2007 Standard			
nfo			CO	2.62			
ce	Exhaust	regulation value	HC	0.27			
nan	EX	(g/km)	NOx	0.21			
Environmental Performance Information	Noise	Applicable standard level		Conforming to 2001 Standard Acceleration Noise Regulation Value: 73 dB (A)			
ental I	nental ces.	Lead*1		Meet the JAMA's Target (60 g or Lower of the Usage in 2006).			
omno.	Reduce environmental impact substances.	Mercury*2		Meet the JAMA's Target (Usage Prohibited in and after Oct. 2004).			
Envi	uce en pact si	Hexavalent chromium	1	Meet the JAMA's Target (Usage Prohibited in and after Jan. 2008).			
	Redu	Cadmium		Meet the JAMA's Target (Usage Prohibited in and after Jan. 2007).			
	Parts	s Not Subject to JAMA's	a Target	<ul> <li>*1 Lead acid battery (excluded because the collection route for recycling is established)</li> <li>*2 LCD such as for navigation system, combination meter, discharge head lamp (excluding the ultratrace level of usage in parts indispensable for traffic safety)</li> </ul>			
Efforts for Environment	Recy	cling		Consider ease of recycling (use of materials that can be recycled easily, indication of material names on resin parts, structure that can be easily disassembled, etc.). PP recycle materials are used for the air cleaner and cowl inner cover.			
ffor	Usag	e of Substances of Cor	ncern	Lead: Used in electronic boards, piezoelectric element (PZT sensor), and bearing			
۳ <u>۳</u>	Othe	rs					
Spec	ificati			ABS			

\* Fuel consumption rate is values taken under the specified test conditions. The rates vary according to various conditions such as the actual use conditions (weather, traffic, etc.), driving situations, vehicle conditions (equipment, specifications, etc.), and maintenance conditions.

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Environment-Related Data of Key New Products in Fiscal 2012							
Motorcycles							
		1					

Car Name				GSR 250		
	Pas	senger Capacity (Persons)		2		
	Veh	icle Type		JBK-GJ55D		
5		Model		J509		
Basic Information		Total piston displacen	nent (cm <sup>3</sup> )	0.248		
orm	Engine	Туре		Water-cooled, 4-cycle, 2-cylinder engine, SOHC		
Inf	Eng	Applicable Fuel		Lead-free Gasoline		
sic		Max. output (net) [kW (	PS) / rpm]	18(24.4)/8,500		
Ba		Max. Torque [N·m(kgf·m)/	/rpm]	22(2.24)/6,500		
	Trai	nsmission		Gear type		
	Vehicle Weight (kg)			183		
ition	Fuel Consumption	Fuel Consumption dur Running at 60 km/h or Ground (km/L) (values submitted to the Min Infrastructure, Transport and T	istry of Land,	40.0		
rma	Gas	Applicable standard le	vel	Conforming to 2006 Standard		
nfo		WMTC mode CO		2.62		
ce	Exhaust	regulation value	HC	0.27		
nan	EX	(g/km)	NOx	0.21		
Environmental Performance Information	Applicable standard level			Conforming to 1998 Standard Acceleration Noise Regulation Value: 73 dB (A)		
ental	environmental	j Lead*1		Meet the JAMA's Target (60 g or Lower of the Usage in 2006).		
omno	vironm	Mercury* <sup>2</sup>		Meet the JAMA's Target (Usage Prohibited in and after Oct. 2004).		
Envi	188			Meet the JAMA's Target (Usage Prohibited in and after Jan. 2008).		
	Redu	Cadmium		Meet the JAMA's Target (Usage Prohibited in and after Jan. 2007).		
	Parts Not Subject to JAMA's Target			<ul> <li>*1 Lead acid battery (excluded because the collection route for recycling is established)</li> <li>*2 LCD such as for navigation system, combination meter, discharge head lamp (excluding the ultratrace level of usage in parts indispensable for traffic safety)</li> </ul>		
Efforts for Environment	Rec	ycling		Consider ease of recycling (use of materials that can be recycled easily, indication of material names on resin parts, structure that can be easily disassembled, etc.).		
Effo	Usa	ge of Substances of Con	icern	Lead: Used in solder for electronic boards and electrical parts, and bearing		
- <u>-</u> -	Oth	ers				
Spe	ificat	tions		STD		
			ies taker	under the specified test conditions. The rates vary according to various conditions such as the actual use		

\* Fuel consumption rate is values taken under the specified test conditions. The rates vary according to various conditions such as the actual use conditions (weather, traffic, etc.), driving situations, vehicle conditions (equipment, specifications, etc.), and maintenance conditions.

	mont-	Introduction Related Data of Key New		Article         Efforts for Environment         Efforts for Society         Efforts by Plants         Environmental Data           Fiscal 2012         Environment         Efforts for Society         Efforts by Plants         Environmental Data				
		rcycles	i iouucis iii					
		Car Name		GSR 750 ABS				
	Passe	enger Capacity (Persons)		2				
	Vehic	le Type		EBL-GR7NA				
u		Model		R751				
Basic Information		Total piston displacement (cm <sup>3</sup> )		749				
forn	Engine	Type		Water-cooled, 4-cycle, four-cylinder engine, DOHC 4-valve				
티	E	Applicable Fuel		Lead-free Gasoline				
3a si		Max. output (net) [kW (PS) / rpm] Max. Torque [N·m(kgf·m)/rpm]		78(106)/10,000 80(8.2)/9,000				
- 1	Trans	smission		Gear type, 6 shifts				
H		cle Weight (kg)		213				
ıtion	Fuel Consumption during Running at 60 km/h on Provin Ground (km/L) (values submitted to the Ministry of La Infrastructure, Transport and Tourism)			30.0				
in i	Gas	Applicable standard level		Conforming to 2007 Standard				
Info		WMTC mode	CO	2.62				
nce	Exhaust	regulation value	НС	0.27				
rma		(g/km)	NOx	0.21				
Environmental Performance Information	Noise	Applicable standard le	evel	Conforming to 2001 Standard Acceleration Noise Regulation Value: 73 dB (A)				
ntal	ental :es.	Lead*1		Meet the JAMA's Target (60 g or Lower of the Usage in 2006).				
onme	environmental et substances.	Mercury*2		Meet the JAMA's Target (Usage Prohibited in and after Oct. 2004).				
Envi	ce en act si	Hexavalent chromium	I	Meet the JAMA's Target (Usage Prohibited in and after Jan. 2008).				
	Reduce ( impact	Cadmium		Meet the JAMA's Target (Usage Prohibited in and after Jan. 2007).				
	Parts	Not Subject to JAMA's	Target	<ul> <li>*1 Lead acid battery (excluded because the collection route for recycling is established)</li> <li>*2 LCD such as for navigation system, combination meter, discharge head lamp (excluding the ultratrace level of usage in parts indispensable for traffic safety)</li> </ul>				
nent	Recy	cling		Consider ease of recycling (use of materials that can be recycled easily, indication of material names on resin parts, structure that can be easily disassembled, etc.). Used for the recycled materials for the rear fender etc.				
3 E								
Environment	Usage	e of Substances of Cor	ncern	Lead: Used in solder for electronic boards and electrical parts, piezoelectric element (PZT sensor), and bearin				

\* Fuel consumption rate is values taken under the specified test conditions. The rates vary according to various conditions such as the actual use conditions (weather, traffic, etc.), driving situations, vehicle conditions (equipment, specifications, etc.), and maintenance conditions.

Introduction	Special Article	Efforts for Environment	$\setminus$	Efforts for Society	Efforts by Plants	Environmental Data	
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## **Outboard Engines**

		Model name		Y			
			DF20AE	DF15AE	DF9.9BE		
	Timi	ng of release	June	2012	January 2013		
	Mode	el	02002F	01504F	00995F		
		Total piston displacement (cm <sup>3</sup> )		327			
		Туре	4-cycle,	parallel two-cylinder engine, SOHC,	4-valve		
	e	Applicable Fuel	Lead-free Regular Gasoline				
5	Engine	Fuel supply system	Battery-less Electronically-Controlled Fuel Injection				
atic		Max output (kW (PS)/rpm)	14.7(20)/5,800	11.0(15)/5,500	7.3(9.9)/5,200		
orm		Full-throttle allowable rotation range (rpm)	5,300-6,300	5,000-6,000	4,700-5,700		
Inf		Generation capacity		12V-12A			
<b>Basic Information</b>	Installation	Transom height (mm)		L:549			
	p	Operation method		Tiller handle			
	Ship operation	Tilt & trim type	Manual tilt & trim				
		eleration rate	2.08				
	Weig	ght (with propeller) (kg)	L:49				
Environmental Design	Emis	sion regulation conforming level	Conform to the marine engine emission volu	intary regulation values (secondary regulatio	n) of the Japan Marine Industry Association.		
Environ Des	lssue type o	e No. of environment-preservation outboard gasoline engine certificate	24 Marine No.0002	24 Marine No.0001	24 Marine No.0003		
Efforts for Environment	Recy	rcling	Consider ease of recycling (use on resin parts, structure that ca	of materials that can be recycled eas n be easily disassembled, etc.).	ily, indication of material names		
	Othe	ers					

		Model name				
			DF140AT	DF115AT	DF100AT	
	Timi	ng of release		August 2012		
	Mode	el	14003F	11503F	10003F	
		Total piston displacement (cm <sup>3</sup> )		2,045		
		Туре	4-cycle	, inline-four-cylinder engine, DOHC 16	õ-valve	
	e	Applicable Fuel		Lead-free Regular Gasoline		
_	Engine	Fuel supply system	Electronically Controlled Fuel Injection			
atio	<b>—</b>	Max output (kW (PS)/rpm)	103.0(140)/5,900	84.6(115)/5,500	73.6(100)/5,500	
rmé		Full-throttle allowable rotation range (rpm)	5,600-6,200 5,000-6,000			
nfo		Generation capacity	12V-40A			
Basic Information	Transom height (mm)		L:539 X:666			
	Ship operation	Operation method	Remote control			
	Sh	Tilt & trim type	P.T.T			
	Dece	eleration rate	2.59			
		ght (with propeller) (kg)	L:182 X:187			
mental ign	Emission regulation conforming level Issue No. of environment-preservation type outboard gasoline engine certificate		Conform to the marine engine emission volu	untary regulation values (secondary regulation	n) of the Japan Marine Industry Association.	
Environmental Design			24 Marine No.0006	24 Marine No.0005	24 Marine No.0004	
Efforts for Environment	Recy	cling	Consider ease of recycling (use on resin parts, structure that ca	of materials that can be recycled eas n be easily disassembled, etc.).	ily, indication of material names	
	Othe	ers				

	Introduction	Special Article	Efforts for Environment	Efforts for Society	Efforts by Plants	Environmental Data	
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## **Outboard Engines**

		Model name					
			DF250AP				
	Timi	ng of release	February 2013				
	Mode	el	25003P				
		Total piston displacement (cm <sup>3</sup> )	4,028				
		Туре	4-cycle, V6-cylinder engine, DOHC 24-valve				
	e	Applicable Fuel	Lead-free Regular Gasoline				
E	Engine	Fuel supply system	Electronically Controlled Fuel Injection				
atic	<b>—</b>	Max output (kW (PS)/rpm)	184.0(250)/5,800				
Drm		Full-throttle allowable rotation range (rpm)	5,500-6,100				
Infe		Generation capacity	12V-54A				
Basic Information	Installation	Transom height (mm)	X:635 XX:762				
	tion I	Operation method	Remote control				
	Ship operation	Tilt & trim type	P.T.T				
		eleration rate	2.08				
	Weig	ght (with propeller) (kg)	X:294 XX:303				
Environmental Design	Emission regulation conforming level		Conform to the marine engine emission voluntary regulation values (secondary regulation) of the Japan Marine Industry Association.				
Environ	lssue type	e No. of environment-preservation outboard gasoline engine certificate	24 Marine No.0007				
Efforts for Environment	Recy	rcling	Consider ease of recycling (use of materials that can be recycled easily, indication of material names on resin parts, structure that can be easily disassembled, etc.).				
ш	Othe	ers					

Introduction

# A History of Suzuki's Environmental Protection Efforts

1970	Mar.	Demonstrated 10 units of CARRY VAN electric vehicles at the Osaka Expo.
1971	Jul.	Established an Environmental Protection Section in Facilities Group of Production Engineering Dept. to take environmental measures in our production processes.
1977	Apr.	Built the Suzuki Group Safety & Hygiene and Pollution Issues Council.
1981	Dec.	Held "Energy Saving Symposium" with Machinery Industry Promotion Foundation (now Suzuki Foundation).
1989	Aug.	Established an Environmental Issue Council to promote company-wide environmental conservation activities.
1990	Mar.	Installed Freon collectors at domestic distributors to collect Freon contained in car air conditioner refrigerant for reuse.
1991	Dec.	Totally abolished the use of specific CFC (contained in polyurethane foamed components, such as seats).
		Started displaying material names on resin parts.
	Jan.	Developed a continuously variable transmission (SCVT) which was installed in CULTUS Convertible.
1992	Oct.	Developed a natural gas-fueled scooter.
	Nov.	Established a Waste Countermeasure Group in Production Engineering Development to promote reduction and reuse of wastes.
	Dec.	Launched electric vehicles ALTO and EVERY.
	Mar.	Prepared an "Environmental Protective Activities Plan."
1993	Мау	Reorganized an Environment & Industrial Waste group by integrating the Environmental Protection Section and the Waste Countermeasure Group to enhance environmental protection activities.
	Dec.	Completed the replacement of Freon used in car air conditioner refrigerants.
	Jun.	Started collecting and recycling used bumpers replaced by dealers.
1994		Installed a facility to recycle sludge contained in wastewater to reuse it as asphalt sheets.
	Aug.	Started reusing casting sand waste (generated at foundries) as cement materials.
	Jan.	Renewed the waste incinerator to reduce waste and reuse heat waste (steam).
1995	Aug.	Introduced co-generation facilities into the Kosai Plant to promote energy saving activities.
	Apr.	Launched electric power-assisted bicycle LOVE.
1996	May	Prepared the "Environmental Protective Activities Plan (follow-up version)."
	Dec.	Introduced co-generation facilities into Sagara Plant.
	Mar.	Developed a natural gas-fueled WAGON R.
	May	Greatly modified and sold electric vehicles ALTO and EVERY.
1997	Oct.	Won the Technical Innovation Award for our 4-stroke outboard engine at the Chicago Boat Show.
	Dec.	Issued a "Vehicle Disassembly Manual" and distributed it to distributors.
	000	Introduced co-generation facilities into Osuka Plant.
	Feb.	Prepared an "Initiative Voluntary Action Plan for the Recycling of Used Automobile."
	Apr.	MAGYAR SUZUKI (Hungry) obtained the ISO14001 certification.
1998	Jul.	Kosai Plant obtained the ISO14001 certification.
1990	Jui.	Launched a new mini vehicle equipped with a lean-burn engine which achieved 29.0km/l fuel consumption in 10×15 mode.
	Oct.	Won the Technical Innovation Award for our 4-stroke outboard engine at the Chicago Boat Show for the second consecutive year.
	Dec.	Developed an environmentally friendly pipe bending technology.
	Mar.	Developed a new catalyst for motorcycles and employed it in a scooter "LET'S II."
	Mar. May	Launched fuel-efficient ALTO with "Sc lean-burn" CVT.
	Jun.	Launched natural gas-fueled (CNG) WAGON R.
	Aug.	Launched new model of EVERY electric vehicle.
	Sept.	Osuka and Sagara plants obtained the ISO14001 certification.
1999		Launched ALTO equipped with Idling Stop System (Engine Auto Stop Start System).
1999	Oct.	Won "The Best Concept Car" special award for Suzuki PU-3 COMMUTER at the Tokyo Motor Show.
		Fully changed the design of the electric power-assisted bicycle LOVE.
		MARUTI UDYOG (India) (currently: MARUTI SUZUKI INDIA LIMITED) obtained the ISO 14001 certification.
	Nov.	Launched ultrasonic compact washing machines "SUC-300H & 600H" that employ ultrasonic waves for washing instead of organic solvent.
	Dec.	Launched natural gas-fueled (CNG) EVERY.

#### A History of Suzuki's Environmental Protection Efforts

	Law	
	Jan.	Developed a compact bumper crushing machine in-house.
	Feb.	SUZUKI MOTOR ESPANA (Spain) obtained the ISO14001 certification.
	Jun.	CAMI AUTOMOTIVE (Canada) obtained the ISO14001 certification.
2000	Jul.	Won the "Logistic Prize" for the transportation package for "Senior Cars" (environmentally-friendly electric vehicles) at the Japan Packaging Contest.
	Oct.	Fully changed the design of the electric power-assisted bicycle LOVE.
	Nov.	Won the "World Star Prize" for the transportation package for "Senior Cars" (environmentally-friendly electric vehicles) at the World Packaging Contest.
	Dec.	Toyokawa Plant obtained the ISO14001 certification.
	Jan.	Totally abolished the use of lead (used in painting processes of domestic motorcycle and automobile plants).
	Mar.	Expanded the sale of the bumper crushing machine nationwide.
2001	Apr.	Established an Environmental Planning Group that handles environmental matters related to products, technology, manufacturing and logistics. Established an Environmental Committee (as an alternative to Environmental Issue Council) to enhance the environmental protection efforts.
	Aug.	Achieved the target of drastic reduction in landfilled solid waste to almost zero.
	Oct.	Started mutual cooperation with GM in the fuel cell technology field.
	Jan.	Won the "Excellent Environmentally-Friendly Concept Car Award from the Automotive News magazine (U.S.A) for
		our electric vehicle concept car "COVIE" at the Detroit Motor Show.
2002	Mar.	Launched the "Idling Stop (Engine Stop)" campaign.
	Jul.	Put the direct-injection turbo engine which realized both low fuel consumption and high output power to practical use for the first time in mini cars.
	Jan.	Announced a hybrid engine car "TWIN" for the first time in mini passenger cars.
		Announced a new concept energy-saving scooter "CHOINORI."
		Iwata Plant obtained the ISO14001 certification.
2003	Mar.	Takatsuka plant obtained the ISO14001 certification.
	hul	Installed a wind-driven power generating facility at the Inasa Training Center.
	Jul.	Became a member of IMDS (international material data system).
	Sept.	Issued a "Green Procurement Guideline." Launched certified ultralow-emission vehicle.
	Jan.	Jointly established Japan Auto Recycling Partnership and ART with other manufacturers.
	Feb.	Installed 2 units of wind-driven power generating facility at the Kosai Plant.
	1051	Announced the motorcycle recycling fees.
2004	Jul.	Announced the end-of-life automobile recycling fees.
		Obtained the approval of Japan's first 700-bar compressed hydrogen storage system for fuel cell vehicles.
	Aug.	Launched car sharing-dedicated MR WAGON car sharing system
	Jul.	Developed "Hyper Alumite" that has improved corrosion resistance and durability, with the anodized aluminum film smoothed on the aluminum material surface.
2005	Aug.	Participated in "Team Minus 6%".
	Oct.	Participated in the "FRP Boat Recycling System" promoted by the Japan Boating Industry Association and announced the recycling fees.
2006	Sept.	Developed "MIO," an electric wheelchair equipped with a fuel cell, and exhibited it at the International Home Care & Rehabilitation Exhibition.
2007	Oct.	Developed the fuel cell motorcycle "CROSSCAGE" and exhibited it at the Tokyo Motor Show.
2007	Nov.	Established Suzuki Environment Control Regulations.
2008	Jun.	Received the Minister's award for the newly developed fuel-cell electric vehicle "SX4-FCV".
2000	Jul.	Exhibited "SX4-FCV" at "Environmental Showcase" held in International Media Center for Hokkaido Toyako G8 Summit.
		Set up "Suzuki Plaza" to introduce Suzuki's history and manufacturing know-how to the public.
	Apr.	Received Local Industry Contribution Award (Ichimura Award) for development and practical application of high- speed system realizing low price and low environmental impact.
2009	Sept.	Maruti Suzuki India Limited greatly reduced CO2 emission by shifting the transport method from the trailer to the double-deck merchandise train and received the Golden-Peacock Eco Innovations Award.
	Oct.	Developed the plug-in hybrid automobile "SWIFT Range Extender" and the fuel cell scooter "BURGMAN Fuel Cell Scooter" and exhibited them at the Tokyo Motor Show as reference exhibits.
2010	Мау	"Plug-in hybrid Swift (Swift range extender)" acquired the type approval of the Ministry of Land, Infrastructure and Transport.
	Sept.	Electric scooter "e-Let's" was developed and the research for driving on public roads started for productization.
0011	Mar.	"Whole Vehicle Type Approval" was acquired for the first time in the world as a fuel cell scooter
2011	Мау	Suzuki received "Engineering Development Award of the 61st JSAE EXPOSITION AWARD" for "development of the rear lower arm made of aluminum-extruded material that realized weight reduction by low costs."
2012	Feb.	Suzuki established a joint venture together with Intelligent Energy Holdings for development and manufacture of fuel cell systems.
2012	Jul.	Developed light polypropylene resin material which excels in material coloring for automobiles.
2012	Nov.	Received 2013 RJC Car of the Year for its next-generation environment technology "SUZUKI GREEN technologies."
2013	Mar.	Established "Suzuki Environmental Plan" and "Suzuki Biodiversity Guidelines."