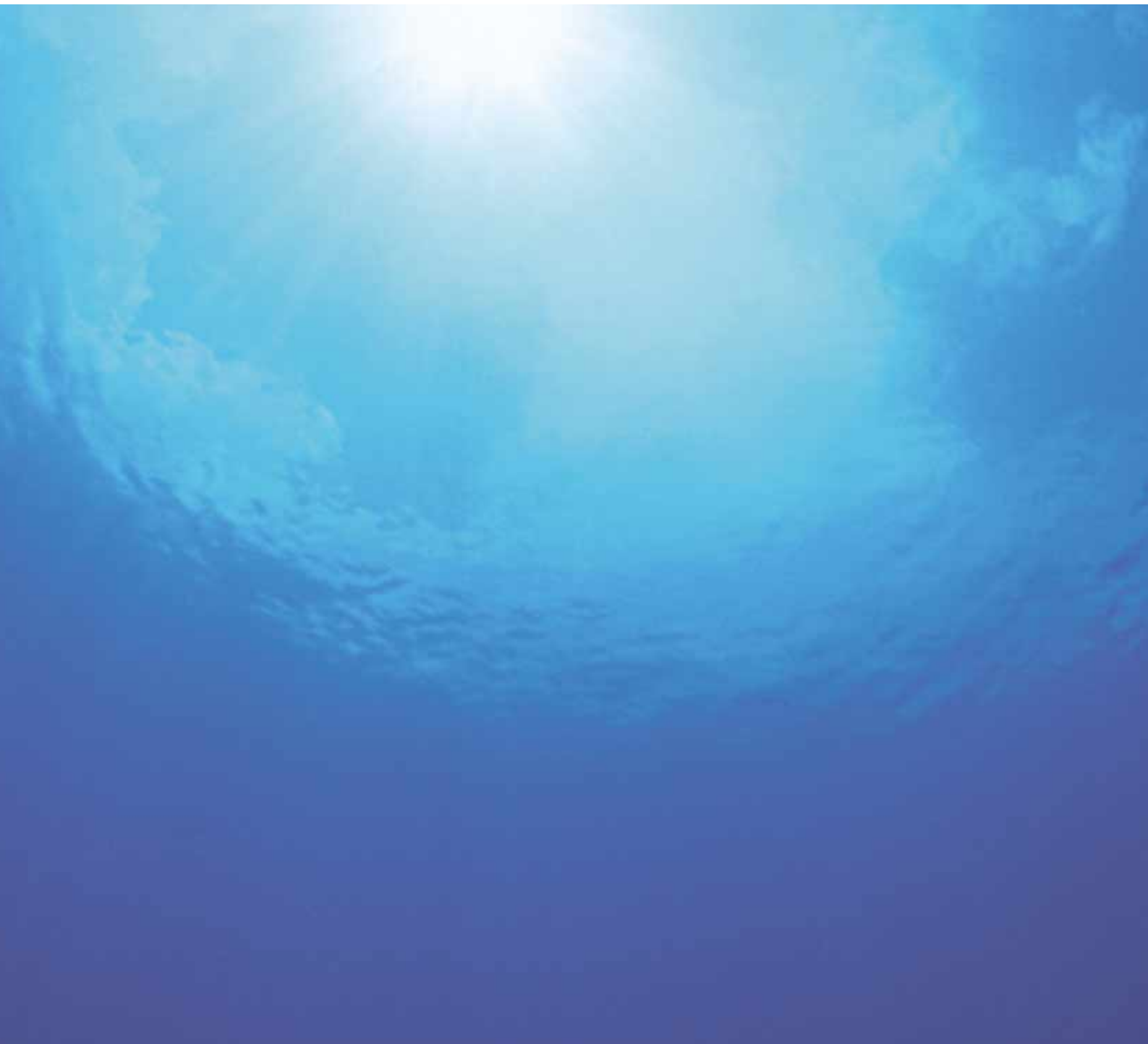


# **2001 SUZUKI ENVIRONMENTAL REPORT**



This report is an English translation of the original Japanese text of Suzuki's Environmental Report. It contains information regarding Suzuki's environmental conservation activities carried out in fiscal 2000 (April 2000 to March 2001). Unless otherwise mentioned, the text mainly refers to Suzuki's domestic environmental conservation activities, vehicles, and markets, as well as Japanese laws and regulations. Also, unless the related company or dealer, etc. is mentioned, the text refers to the SUZUKI MOTOR CORPORATION only.

Also, the activities prior to fiscal 2000 and in early fiscal 2001 that are mentioned in this report have been included because they relate to applicable subjects in the report.

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## *Introduction*

20th Century advances in both our civilization and the sciences has provided mankind with a very comfortable and convenient lifestyle while providing the driving force of our present society. But now that we have entered the 21st Century, the results of this rapid expansion of our civilization and the sciences are showing its effects on the earth and its environment.

The world's economic growth in the 20th Century created a disparity in manufacturing, consumption, and disposal, causing the global environmental problems that we face today. As the global community's view on the environment has changed, our civilization has implemented new laws and regulations that reflect the great need to protect our environment. These laws and regulations encourage development that is harmonious with our environment and a revolution in the methods and manners of manufacturing.

While the automobile quickly became an indispensable tool in both our daily life and commerce, it has also become one of the greatest contributors to the environmental problems we face. It is for this reason that restrictions placed on automobiles are strict.

"Environmental Consideration", the prevailing theme heard in the last part of the 20th Century, has changed to "Environmental Conservation" as we moved into the 21st Century. And the call for Environmental Conservation has gained in strength all over the world. This movement requires that the corporate community takes active measures to protect the environment, so as responsible members of the global corporate community, we, and our affiliated companies, are working to strengthen our environmental responsibilities to become a corporation that functions in harmony with the environment.

At Suzuki, our philosophy on issues concerning both manufacturing and environmental responsibility are summed up into the simple concept of "Smaller, Fewer, Lighter, Shorter, and Neater." From the standpoint of environmental responsibility, this means "Smaller", "Fewer" and "Lighter" influences on the environment, "Shorter" terms in which we can achieve goals set for environmental measures, and keep a "Neater" global environment.

Adopted by our management and put into practice in as timely a manner as possible, this philosophy has been put into practice throughout our entire corporation and we are continually working to meet and advance upon these challenges.

Our environmental policy for the new century is mapped out within this "2001 Suzuki Environmental Report". We are pleased if this report helps you gain a deeper understanding of our environmental challenges. We are looking forward to your comments.



*Osamu Suzuki*

A stylized, handwritten signature in black ink, consisting of several loops and a long horizontal stroke.

*Chairman & CEO*



*Masao Toda*

A handwritten signature in black ink, appearing to read 'M. TODA' in a cursive style.

*President/COO/Environmental  
Committee Chairman*

# Environmental Management

As a general manufacturer of automobiles, motorcycles, marine and power products, etc., we make every effort to protect the environment in every phase of our corporate activities—from product development to manufacturing, distribution, and disposal.

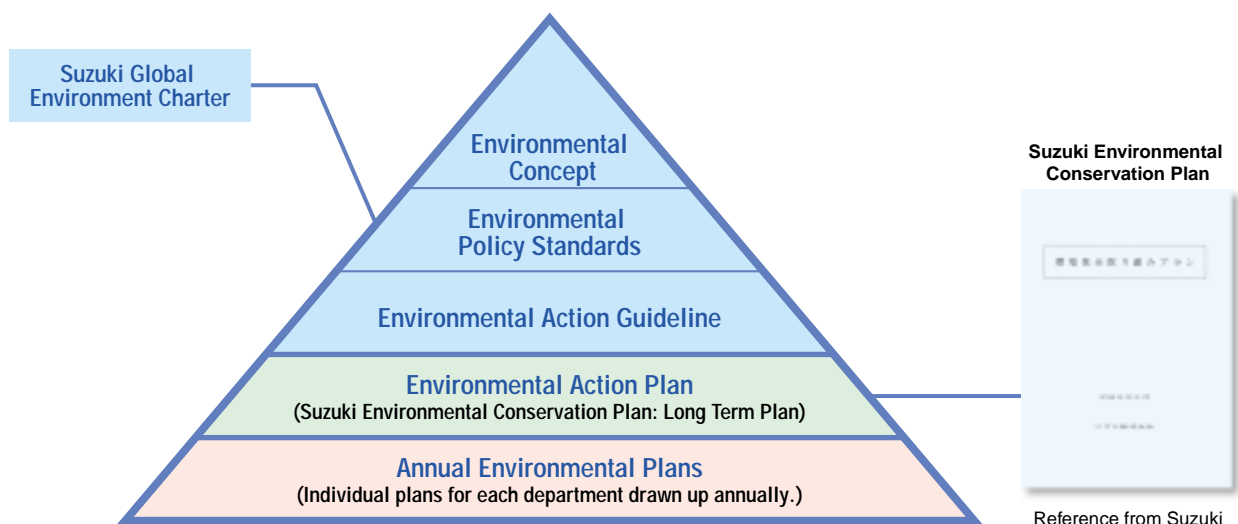
To further advance the effectiveness of our environmental management in the 21<sup>st</sup> century, we established a new environment planning department in April of 2001, which operates according to the “Suzuki Global Environment Charter” that was newly created after a complete reassessment of our “Standard Concepts on Environmental Problems” (established in March, 1993). This charter represents our standard concept in regard to environmental conservation. Based on these concepts we have given greater thought to environmental conservation.

## Company Creed

- 1. To produce consumer oriented products of value.*
- 2. To Maintain vigor of the company with a cooperative spirit.*
- 3. To strive for individual advancement with objectives.*

## Suzuki Global Environment Charter

### ■ Illustrating the Concepts of our Environmental Policy



## Environmental Concepts

To pass on to the next generation a clean environment and bountiful society, we all must 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.

## Environmental Policy Standards

As greater priority is being given to global environmental conservation within our management, we have determined that the following environmental policies that are aimed at a sustainable society, have the greatest potential for allowing our society to develop further and to advance environmental conservation in regard to our business activities and our products.

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

## Environmental Action Guidelines

Understanding that all business related activities as well as the products we produce have an impact on our local community and on the global environment, we put forth the following action guidelines that place emphasis on the environment.

### Environmentally Friendly Business Management

- Z Continuously improve upon our environmental management system.**
- X Promote environmental organization activities.**
- C Maintain an emergency system.**

### Develop Environmentally Friendly Products

- Z Improve fuel economy.**
- X Reduce exhaust emissions.**
- C Develop automobiles that use clean energy.**
- V Promote the three Rs (Reduction, Re-Use, and Recycle).**
- b Manage/reduce those materials that place a burden on the environment.**
- n Reduce noise.**
- m Develop Intelligent Transportation Systems (ITS).**

### Environmentally Friendly Manufacturing

- Z Consider the environment at all of our corporate sites.**
- X Prevent pollution.**
- C Promote energy reduction and the use of alternative energy.**
- V Manage/reduce those materials that put stress on the environment.**
- b Promote the three Rs (Reduce, Reuse, and Recycle).**
- n Promote "Green" procurement.**

### Environmentally Friendly Distribution

- Z Efficient transportation and logistics, and reducing energy consumption.**
- X Promote the three Rs (Reduce, Reuse, and Recycle).**
- C Promoting the use of low emission transport.**

### Environmentally Friendly Marketing

- Z Promoting environmental management among our distributors.**
- X Suitable management of used products.**
- C Promote the three Rs (Reduction, Re-Use, and Recycle).**

### Environmentally Friendly Offices

- Z Promote energy reduction.**
- X Promote purchase and use of "Green" products.**
- C Promote the three Rs (Reduction, Re-Use, and Recycle).**

### Environmental Education and Information Disclosure

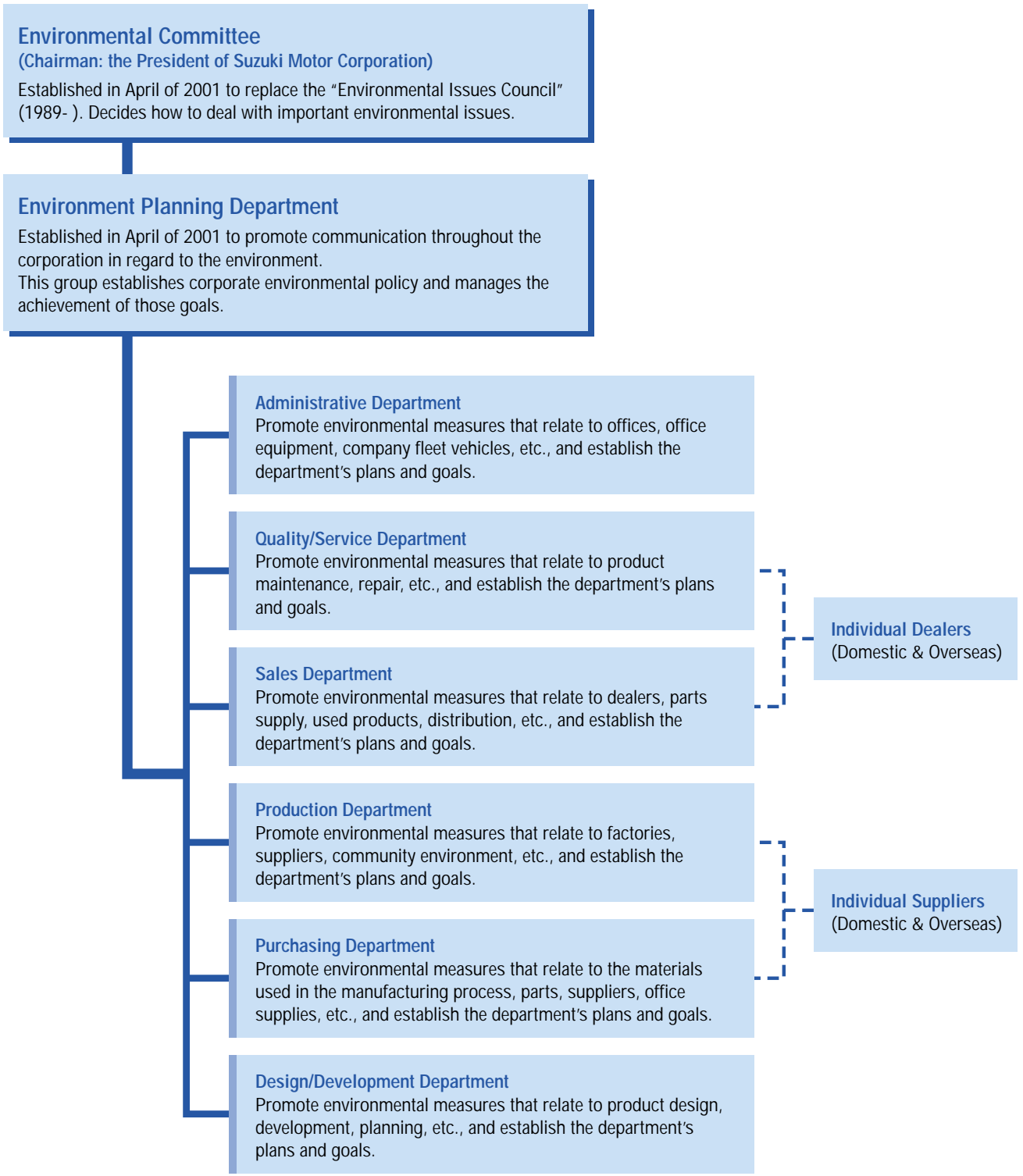
- Z Provide our employees with environmental education to increase their awareness.**
- X Promote and contribute to community activities.**
- C Disseminate information regarding the environment.**

## Environmental Action Plans

The "Suzuki Environmental Conservation Plan" clearly defines goals to be achieved in the future. Progress on the attainment of these goals and reassessment of these plans will be carried out on a regular basis.

# Environmental Organization

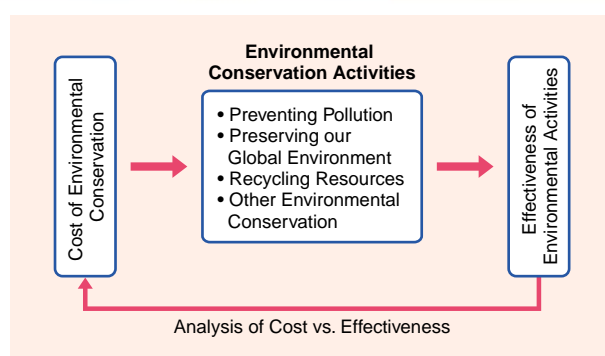
In August of 1989, an “Environmental Issues Council” was established that would oversee the corporations environmental conservation plans. In April of 2001, a special “Environment Planning Department” was created to further promote the environment throughout the entire corporation. The “Environmental Committee” was also established to take over the functions of the former “Environmental Issues Council”. At present, special projects that promote environmental conservation are organized under this “Environmental Committee” whenever needed.



## Environmental Accounting System

Environmental accounting makes it possible to manage the cost of environmental conservation and analyze its cost effectiveness. It also allows us to promote effective environmental investments through sound decisions. Using less energy, resources, and waste in the manufacturing process while maintaining a high level of performance in our products requires greater environmental efficiency. For this, it is both necessary and important to physically manage energy, resources, and waste, plus comprehend and manage the cost of environmental conservation, etc. This section explains our own Environmental Accounting System, which is based on the “Establishing an Environmental Accounting System” report by the Japanese Ministry of the Environment (Year 2000 Report).

In addition to the cost of environmental conservation, we have also calculated the effectiveness of our environmental programs in this report. The economic effects have been indicated as a numerical value and used to calculate the effects of environmental activities to the best of our capabilities.



### < Cost of Environmental Conservation > (Unit: Fiscal Year)

(Unit: ¥100,000,000)

Classification	Fiscal 1999	Fiscal 2000
<b>Cost Within the Corporation</b>	24.0	23.4
(Breakdown)		
Pollution Prevention	(9.1)	(7.7)
Environmental Conservation	(7.7)	(8.3)
Recycling of Resources	(7.3)	(7.4)
<b>Cost of the upstream and downstream</b>	0.8	0.3
<b>Cost of Managerial Activities</b>	6.8	6.9
<b>Cost of Research and Development</b>	117.7	140.1
<b>Cost of Social Activities</b>	1.1	2.0
<b>Cost of Environmental Damage</b>	0.3	0.3
<b>Total</b>	150.7	173.0

(Note) • Since some figures were rounded off, they may not agree with the total.  
• These are in-house environmental figures.

### < Effectiveness of Environmental Conservation > (Compared to the previous fiscal year.)

(Unit: ¥100,000,000)

Item	Fiscal 1999	Fiscal 2000
<b>Economical Effect (Unit: ¥100,000,000)</b>		
Energy Cost Reduction	1.4	3.4
Waste Management Cost Reduction	0.2	0.2
Resource Cost Reduction	0.3	6.1
<b>Total</b>	1.8	10.0

## Gaining ISO14001 Certification

Domestic Plants	
Plant Name	Date of ISO14001 Certification
Kosai Plant	July 1998
Osuka Plant	September 1999
Sagara Plant	September 1999
Toyokawa Plant	December 2000

Overseas Factories	
Factory Name	Date of ISO14001 Certification
Magyar Suzuki Corporation (Hungary)	April 1988
Maruti Udyog Ltd. (India)	November 1999
Suzuki Spain (Spain)	February 2000
CAMI Automotive Inc. (Canada)	June 2000

We have provided leadership and support in the introduction of environmental management systems and acquiring ISO14001 certification within our related companies, three\* of which gained certification in 2001. Also, our environmental section carries out spot investigations to check environmental conservation activities and provides guidance in making improvements at the site.

\* Suzuki Hamamatsu Auto Parts Mfg. Co., Ltd., Suzuki Precision Industries Co., Ltd., Suzuki Toyama Auto Parts Mfg. Co., Ltd.

About our foreign plants, besides the four factories that have already gained certification, all overseas factories, such as our factory in Colombia, are working toward the goal of achieving ISO14001 certification.



# Environmental Inspection

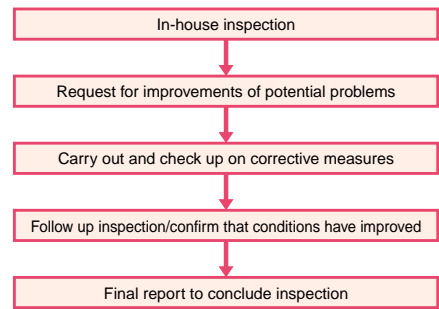
Environmental inspections are carried out so that we can continuously improve upon our environmental management system. The results of these inspections are reported to factory managers, and used for improvements and regular reassessment of our environmental conservation activities. A factory directors meeting is held once every two months with its location rotated among our plants. Changes to environmental conservation activities that have been implemented at the plant, matters that relate to all plants, etc., are observed, discussed, and advanced to all plants.

< Inspection Calendar >

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Environmental inspections carried out by independent inspectors.						A						
In-house Inspections												
Environmental Management System Inspection	B											
Prevention Inspection						C						
Environmental Patrol							D					

- A: Timed yearly to correspond with certification
- B: Once a year Purpose: To create an overall plant system that conforms to the environmental manual
- C: Once a year Purpose: To create systems that prevent environmental accidents, and adherence to laws and regulations
- D: Each factory/More than once a year

< How in-house inspections lead to improvements >



## Inspections Carried Out by Independent Inspectors (Overall Inspection)

We have contracted with independent inspectors to examine documents and carry out on site examinations in regard to the validity and adequacy of our environmental management system, and determine whether measures are being carried out or not. In 2000, one case was pointed out and 19 cases were observed, then properly corrected.

## In-house Inspections

We carry out two types of in-house inspections. When the inspection is carried out, we select inspectors that have no direct association with the section being inspected, and they examine whether environmental management is being properly carried out or not.

### Environmental Management System Inspections (Overall Inspection)

The inspection of documents and on-site checks are used to determine whether environmental management is being properly carried out or not. In 2000, 181 cases were pointed out and properly corrected.

### Preventive Inspections (limited local inspections)

The environmental management section makes on-site observations and inspections in areas that possess a potential for accidents such as drainage disposal facilities, chemical use/storage, waste disposal facilities, etc. In 2000, 124 cases were pointed out and properly corrected.

### Environmental Patrol (limited local inspections)

Since our goal is to live in harmony with the people in the community, plant managers take the responsibility to carry out inspections on a regular basis in areas that possess a potential for accidents. In 2000, 270 cases were pointed out and properly corrected.

## Environmental Education

To promote a deeper awareness of our environmental conservation activities, we carry out new employee education, education for individual sections within the company, and managerial education. Also, to reduce the environmental impact of accidents and emergencies, we hold emergency response drills.

### Education According to Job Level

As a part of our employee education program, we have carried out environmental education programs for new employees, individual sections within the company, in-house inspectors, etc., and for managerial positions.

Also, our factories have carried out a total of 816 educational programs—786 programs for employees whose jobs deal with processes that have an impact on the environment for new employees, and executives, etc., and 30 programs covering the overall factories.

### Education to Obtain Special Qualifications

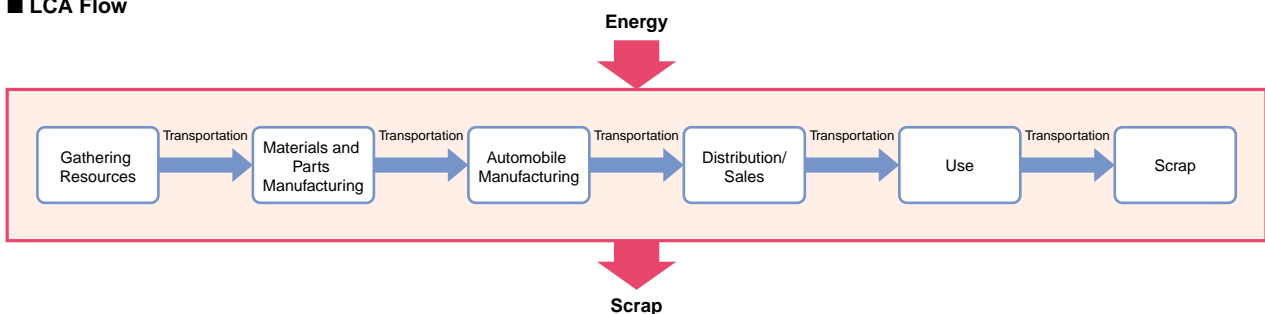
In addition to those persons holding special qualifications that are required by law, we encourage the education of those employees who wish to obtain special qualifications relating to the environment. The number of those obtaining such qualifications include 178 managers for pollution prevention, 39 energy managers, 340 in-house inspectors, etc.

Please refer to the “Emergency Response Drills” section on page 29.

## LCA (Life Cycle Assessment)

LCA has been developed as a tool that allows us to comprehend the burden placed on the environment from activities such as gathering resources to disposal of the product. Suzuki, along with the Japan Automobile Manufacturers Association, Inc., has taken part in the development of LCA, commenced LCA projects in 2001 and is improving upon LCA development.

#### ■ LCA Flow



## Results of Environmental Performance in Fiscal 2000

### Design/Development

#### < Automobiles >

Items	Fiscal 2000		Fiscal 2001 Goals
	Goals	Results	
<b>Fuel economy</b>	<ul style="list-style-type: none"> <li>Introduce vehicles to the market that meet the 2010 standards as soon as possible.</li> <li>Exceed the previous year's fuel economy averages in all weight categories.</li> </ul>	<ul style="list-style-type: none"> <li>Improved the fuel economy of our Alto, Kei, Wagon R, Wagon R Solio, and gradually added vehicles that meet the 2010 standards.</li> <li>Exceeded the previous year's fuel economy averages in all weight categories.</li> </ul>	As planned, introduce vehicles to the market that meet the 2010 standards.
<b>Exhaust Gas</b>	Offer vehicles that have excellent or good ratings for low exhaust emissions.	With the exception of models equipped with our lean burn engines, all vehicles newly introduced in 2000 received excellent or good ratings for low exhaust emissions.	Introduce to the market as soon as possible, mini trucks that comply with new short term regulations.
<b>Clean Energy Automobiles</b>	Continue research and development of electric vehicles, fuel cell vehicles, hybrid vehicles, and natural gas vehicles.	<ul style="list-style-type: none"> <li>Developed lead battery for hybrid vehicles.</li> <li>Exhibited and promoted the sale of natural gas vehicles at the "21st Century Dream Technology" show.</li> <li>Improved circuit board technology in fuel cell vehicles and identified problems discovered from test vehicle trials.</li> </ul>	<ul style="list-style-type: none"> <li>Obtain registration and licensing of hybrid vehicles to conduct tests on public roads.</li> <li>Cooperate with General Motors in the development of fuel cell vehicles at GM's Global Alternative Propulsion Center (GAPC) In Europe.</li> </ul>
<b>Intelligent Transport System (ITS)</b>	<ul style="list-style-type: none"> <li>Research and develop ASV vehicles that match the infrastructure.</li> <li>Collect and gather basic data from testing on public roads.</li> </ul>	<ul style="list-style-type: none"> <li>Participated in AHS-ASV experiments (6/2000-12/2000 in Tsukuba).</li> <li>Participated in the Smart Cruise 21 Demo 2000 (11/2000).</li> <li>Obtained registration and licensing from the Ministry of Land, Infrastructure and Transport and began collecting basic data (2/2001).</li> </ul>	Participate in the third ASV project which addresses the practical use of ASV systems and development of ASV systems that match the infrastructure.
<b>Materials with Environmental Impact</b>	Reduce the amount of lead by 1/2 compared to amounts used in 1996.	Reduced the amount of lead used in all domestic vehicles to less than 1/2 (35.7%).	Reduce levels to less than 1/3 in new vehicles.
<b>Recyclable Design</b>	Reconsider all designs (use materials that are easy to recycle, structures that are easy to dismantle).	To improve recycling we used non-compound resins and structures that are easy to dismantle.	Use more non-compound materials to improve recyclability. Reassess the assembly of all parts and try to reduce the number of bolts used in assembly to make dismantling easier.

### Manufacturing, Purchasing

Items		Fiscal 2000		Fiscal 2001 Goals
		Goals	Results	
<b>CO2 (Carbon Dioxide)</b>	<b>Amount of CO2 emissions per sales</b>	27.76 tons-CO2/100,000,000 Yen (10% reduction compared to 1990)	28.13 tons-CO2/100,000,000 Yen (9% reduction compared to 1990)	27.45 tons-CO2/100,000,000 Yen (11% reduction compared to 1990)
<b>Waste</b>	<b>Landfill Waste</b>	Less than 535 tons (Contracted with waste removal company.)	401 tons (Contracted with waste removal company.)	Less than 250 tons (99% reduction compared to 1990)
	<b>Contracted with waste removal firm.</b>	Less than 1,748 tons	Less than 1,136 tons	
<b>VOC (Volatile Organic Compounds)</b>	<b>Approximate Emission per Area</b>	60g/sq. meter (30% reduction compared to 1995)	59g/sq. meter (31% reduction compared to 1995)	56g/sq. meter (34.5% reduction compared to 1995)

### Market

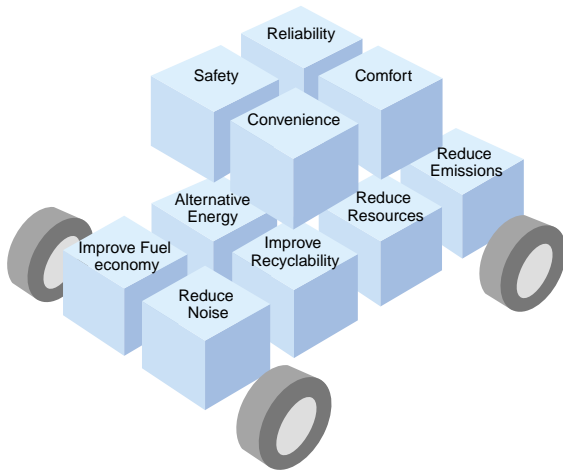
Items	Fiscal 2000		Fiscal 2001 Goals
	Goals	Results	
<b>Recycling</b>	Collect and recycle used bumpers from all over Japan.	Commenced collection from Hokkaido to Kyushu (20 prefectures).	Start nationwide collection in all areas.

# Reducing Pressure on the Environment

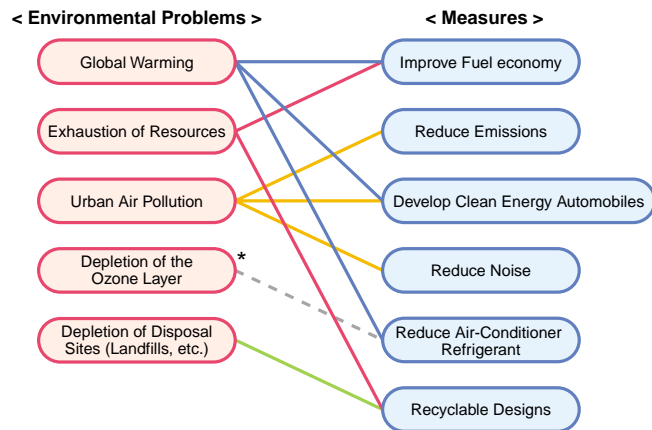
## Design and Development

## Automobiles

Traditionally, consumer concerns related to automobiles have been “safety”, “reliability”, “convenience”, “comfort”, etc. Recently however, these concerns have been augmented with environmentally related concerns such as “reduced emissions”, “improved fuel economy”, “reduced noise”, “reduced resources”, “improved recyclability”, etc. To please the consumer on all of these concerns, we at Suzuki have raised our technological expertise in a wide range of areas.



Reference from the Japan Automobile Manufacturers Association, Inc.



\* CFC-12, which is responsible for depletion of the ozone layer, is no longer used in current automobiles.

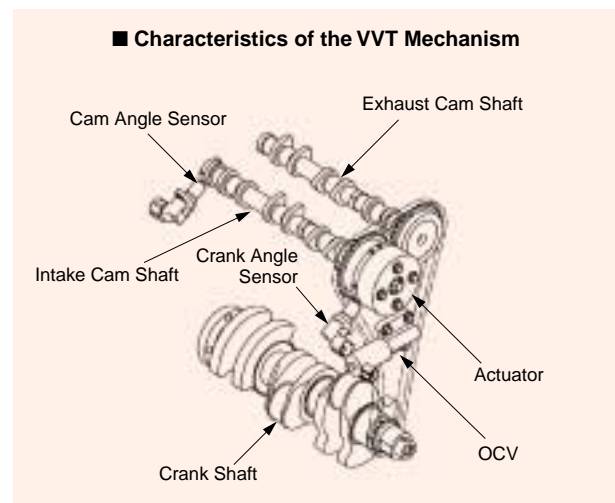
## Fuel economy

Automobiles expel carbon dioxide (CO<sub>2</sub>) in proportion to the amount of fuel that they burn. Through gradual increase in the number of automobiles that meet the 2010 Fuel Standards\*, we have greatly improved fuel economy thereby reducing the amount of CO<sub>2</sub>, reducing our reliance on resources, and prevent global warming.

\* Amendment of fuel standards set in the energy reduction law (Governmental Fuel Economy Improvement Goals)

### Improving the Engine

- Variable Valve Timing mechanisms (VVT) have been widely used in K-type engines found in our mini cars such as the Alto, Wagon R, etc., to achieve greater fuel economy.
- Another VVT equipped engine, new type M13A found in our Jimmy Wide and Swift vehicles, utilizes a dual exhaust manifold to achieve high power output, quiet operation, and excellent fuel economy.
- Wagon R Solio vehicles not equipped with the K10A VVT engine, are equipped with a new type M13A engine like the one found in our Swift vehicles. This engine utilizes VVT and a dual exhaust manifold to achieve high power output, quiet operation and greater fuel economy.



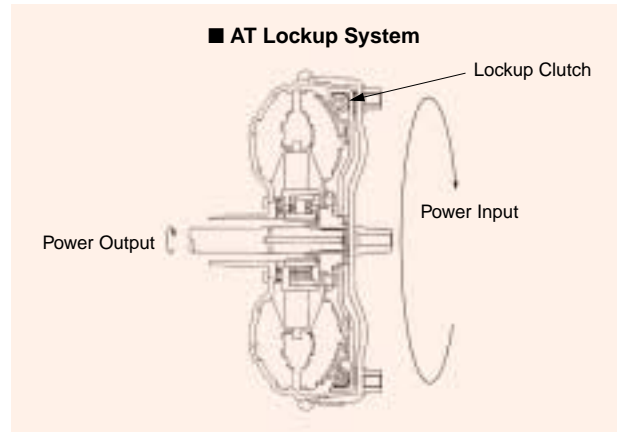
### Improving the Drive Mechanism

● **Automatic Transmission (AT)**

Our Escudo, Wagon R Solio, Swift, Aerio, Wagon R and Kei vehicles all utilize a torque converter with a lockup slip control to improve power transfer efficiency in the transmission.

● **CVT**

To achieve excellent fuel economy, our Alto and Wagon R vehicles utilize a highly efficient Continuously Variable Transmission System that does not need oil pressure.



### Light Bodies

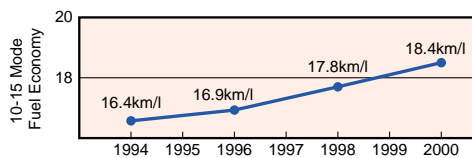
To reduce the weight of our Aerio, high-tension sheet steel, etc., is utilized in 40% (by weight ratio) of the body parts to achieve a 30kg reduction in weight.

### Trends in Fuel Economy Averages According to Body Weight (Gasoline Vehicles)

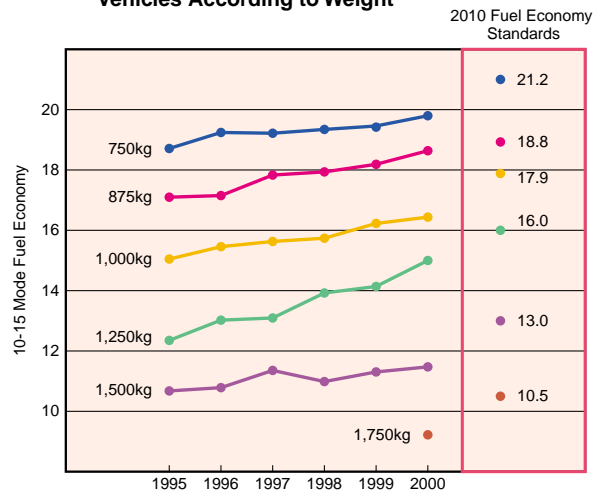
Working to meet 2010 Fuel Economy Standards, improvements in the average fuel economy of each weight category are being achieved.

● **Trends in Average Fuel Economy of Our Most Popular Vehicle**

■ Fuel Economy Improvements in the Wagon R 2WD-AT



■ Trends in Average Fuel Economy of Gasoline Vehicles According to Weight

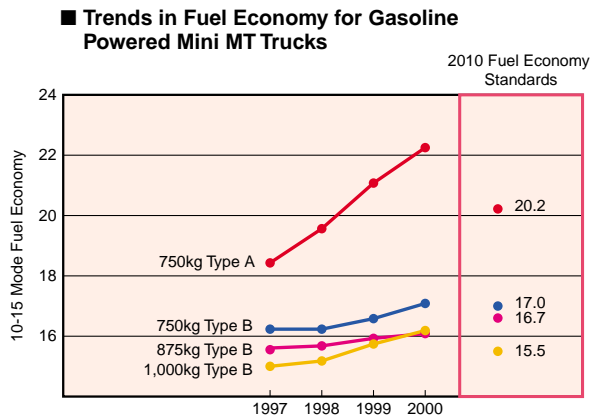


< Reference: Gasoline Vehicles • 2010 Fuel Economy Standards (10-15 Mode Fuel Economy) >

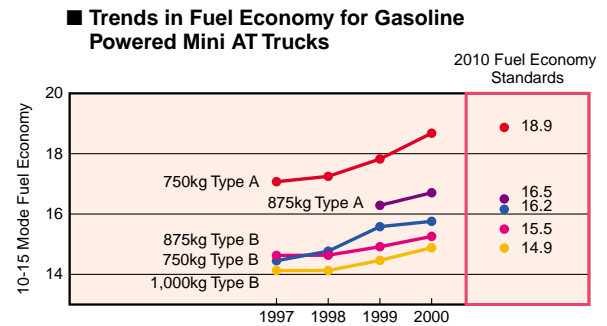
Weight Category (kg)	- 750	875	1,000	1,250	1,500	1,750	2,000	2,250	2,500 -
Body Weight (kg)	- 702	703 - 827	828 - 1,015	1,016 - 1,265	1,266 - 1,515	1,516 - 1,765	1,766 - 2,015	2,016 - 2,265	2,266 -
2010 Fuel Economy Standard (km/l)	21.2	18.8	17.9	16.0	13.0	10.5	8.9	7.8	6.4

## Trends in Average Fuel Economy According to Body Weight (Gasoline Trucks)

Three out of four types of Suzuki's gasoline powered mini trucks equipped with manual transmissions already comply with the 2010 Fuel Economy Standard.



Two out of five types of Suzuki's gasoline powered mini trucks equipped with automatic transmissions already comply with the 2010 Fuel Economy Standard.



< Reference: Gasoline Mini Trucks, 2010 Fuel Economy Standards (10-15 Mode Fuel Economy) >

Weight Category (kg)		- 750		875		1,000 -
Body Weight (kg)		- 702		703 - 827		828 -
Body Type		Type A	Type B	Type A	Type B	—
2010 Fuel Economy Standard (km/l)	AT	18.9	16.2	16.5	15.5	14.9
	MT	20.2	17.0	18.0	16.7	15.5

Type A: Suzuki's Alto Van  
Type B: Suzuki's Carry and Every models.

## Exhaust Emissions

Due to an increase in vehicle ownership, the number of vehicles on the road, and heavy traffic congestion, the air quality around major metropolitan areas is in much need of improvement. Suzuki is taking an active role in improving the quality of our air through the development and introduction of "Low Emission" vehicles.

The 2000 Exhaust Emissions Standards represent a 68% reduction in exhaust emissions compared to previous regulations in 1978. By December of 2000, nearly all of our vehicles could achieve reductions greater than those set by the 2000 standards. Vehicles with emission levels that are 50% lower than those set by the 2000 standards are awarded an "Excellent-Low Emissions" rating, while those with levels that are 25% lower than the standards are awarded a "Low Emissions" rating. (See related section on page 40)

## Technologies that Reduce Exhaust Emissions

### ● VVT (Variable Valve Timing)

Optimizing intake valve timing delivers better fuel economy and power while producing low exhaust emissions.

### ● Stainless Steel Exhaust Manifolds

Used in exhaust manifolds, stainless steel's lower heat capacity provides quicker warming of the catalyst, even when the engine is cold, to reduce exhaust emissions.

### ● Catalyst

While improving upon its performance, attachment of the catalyst just downstream of the exhaust manifold provides for a compact layout and lower exhaust emissions when the engine is cold.

### ● Electronic Control EGR (Exhaust Gas Return)

Redirecting a portion of the exhaust back to the combustion chamber reduces pumping-loss during the intake process and the amount of NOx exhaust due to low combustion temperatures.

Utilizing an electronic stepper motor to control the amount of EGR to the combustion chamber provides an optimum amount of EGR under any driving condition while improving fuel economy and reducing exhaust emissions due to a reduction in pumping-loss.

## Clean Energy Vehicles

Clean energy vehicles, which refer to vehicles that use natural gas, electric power, methanol, hydrogen, etc., have drawn considerable attention from the viewpoint of conserving the global environment (prevent global warming by reducing CO<sub>2</sub>) and improving the environment in cities (reducing exhaust emissions). To help in environmental conservation, we are proceeding with the development, production, and supplying of clean energy automobiles to the marketplace. (See related section on page 40)

< A Comparison of Clean Energy Vehicle Types >

		Exhaust Emissions				Type Performance			
		City Environments			Global Environments	Output Power	Driving Distance		
		NOx	CO/HC	Black Smoke/PM	CO <sub>2</sub>				
Gasoline Vehicles		○	○	○	○	○	○		
Diesel Vehicles		▲-△	○	▲	◎	△	◎		
Clean Energy Vehicles	LPG Vehicles	○	○	○	○	△	△-○		
	Natural Gas Vehicles	CNG	○	○	○	◎	△	▲	
		LNG	○	○	○	◎	△	△	
	Methanol Vehicles	Otto Type	○	○	○	○	○	△	
		Diesel Type	△	○	○	○	△	△	
	Hybrid Vehicles	Parallel Type	Diesel: Accumulative	△	○	△	◎-☆	△	◎-☆
			Diesel: Electric	△	○	△	◎-☆	△	◎-☆
		Series Type	Otto: Electric	○-◎	○-◎	○-◎	◎-☆	△-○	○-☆
			Otto: Electric	○-◎	○-◎	○-◎	◎-☆	△-○	○-☆
	Series/Parallel	Otto: Electric	○-◎	○-◎	○-◎	◎-☆	△-○	○-☆	
		Otto: Electric	○-◎	○-◎	○-◎	◎-☆	△-○	○-☆	
	Electric Vehicles		☆	☆	☆	☆	△-○	▲-△	
Fuel Cell Electric Vehicles	Hydrogen Type		☆	☆	☆	☆	△-○	△-○	
	Methanol Reformer Type		☆	☆	☆	☆	△-○	△-○	
	Gasoline Reformer Type		☆	☆	☆	☆	△-○	○	
Hydrogen Vehicles		○	☆	☆	☆	△	▲		

(Note 1) Gasoline vehicles are used as a standard for comparisons in vehicle performance and equivalent performance is denoted with a ○. The amount of exhaust emissions resulting from the fuel manufacturing process is not included. (Inferior ▲ ← △ ← ○ → ◎ → ☆ Excellent)

Reference from the Japan Automobile Manufacturers Association, Inc.

(Note 2) PM= Particulate Matter

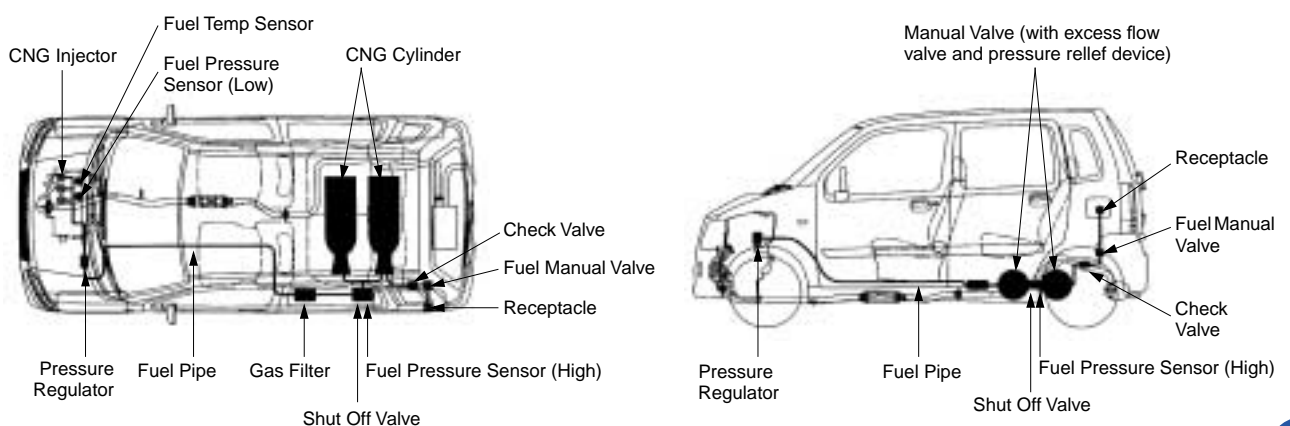
## Natural Gas Vehicles

In 1997, the “Wagon R Natural Gas Vehicle” was the first such vehicle to be introduced in the mini vehicle class. In 1999, we started selling the “Every Natural Gas Vehicle” which was top in its class\* for driving distance on a single fill up. Thorough consideration as to the placement of the CNG (Compressed Natural Gas) container in both vehicles provided the wide passenger and trunk space just as in gasoline vehicles. We are continuing with the development of natural gas vehicles with an aim to deliver lower pollution and further convenience.



\* Mini Vehicle (CNG Vehicles) Class (December 1999)

### Wagon R CNG System



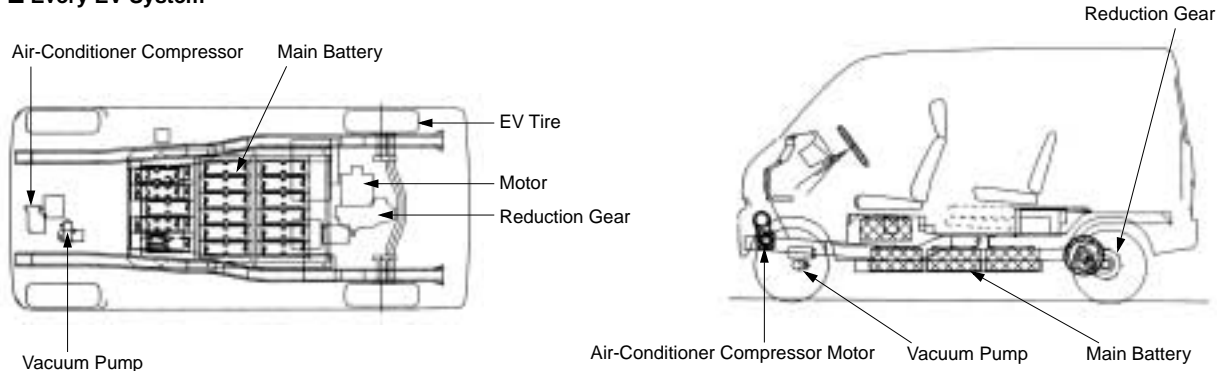
## Electric Vehicles

Our first electric vehicles went on the market in 1978. In August of 1999, we introduced new electric vehicles that were developed and based on newly revised mini vehicle standards. Using a new permanent-magnet type synchronous motor and a single gear transmission, the vehicle offers a driving feel close to a vehicle equipped with an automatic transmission. The vehicle's 20 batteries are stored underneath the floor of the vehicle so that luggage space can be used the same as in the gasoline version. Its maximum speed is 95km/h and it can travel approximately 110km\* on a single charge.

In August 2001 we also added vehicles that are equipped with an inductive charging system (an electromagnetic charging system that has no direct electrical connection to the vehicle). Future plans call for use of systems that share ITS/CEV, etc. (See page 16)

\* Result from in-house tests (10/15 Mode)

### ■ Every EV System



Every EV



## Hybrid Vehicles

In designing our hybrid vehicles we have focused on "better fuel economy", "lower exhaust emissions", and "quiet operation". We are working to develop a low cost system in which the motor is directly connected to the engine and relies on lead batteries, and that can be used in a variety of vehicle types. In 2001, we started testing of some of these vehicles on public roads.

## Fuel Cell Vehicles

At Suzuki, we have long felt that the fuel cell vehicle is a strong candidate for contending with environmental problems and have made it our goal to equip mini vehicles with fuel cell technology. We feel that the fuel of choice is hydrogen but there are still many problems that must be overcome. Solutions to problems such as cost, durability, recyclability, and creating a light and compact system, etc. must be found before this system can be implemented for practical use. At present, we have equipped an Every EV vehicle with a fuel cell system for testing and study.

Our collaboration with the General Motors Corporation will provide development that will solve such problems.



Fuel Cell Test Vehicle (Every EV)



## TOPICS

### GM and Suzuki agree to cooperate on Fuel Cell Technology (October 17, 2001)

The General Motors Corporation and Suzuki announced that they have agreed to long term cooperation in the development of Fuel Cell Technology. The agreement focuses on the development of fuel cell technology and fuel cell vehicles. Suzuki has

been working together with GM's Global Alternative Propulsion Center (GAPC) located in Europe, to develop fuel cell technology so that Suzuki may benefit from advances made by GM in this technology.

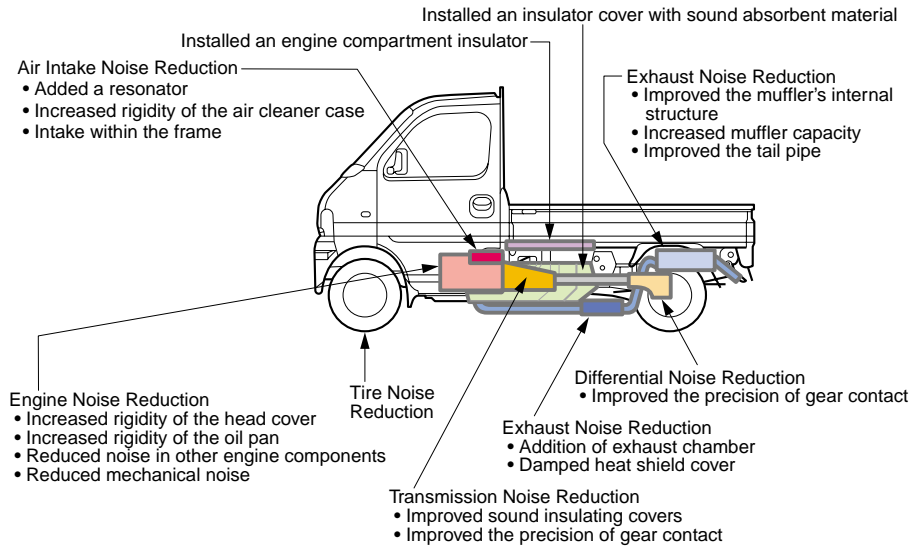


## Noise

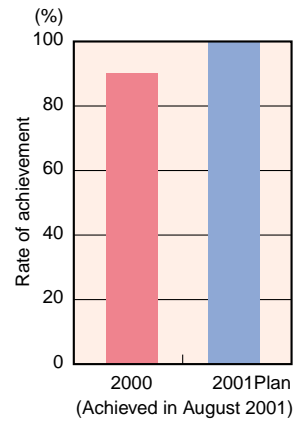
We are working to develop ways to reduce the amount of noise produce by vehicles.

This development is aimed at all types of vehicles including commercial vehicles. As a result, all vehicles domestically manufactured and distributed by Suzuki by August of 2001, were already in compliance with domestic regulations in regard to vehicle external noise (1998-2001 Regulations).

### ■ Main Noise Measures



### ■ Percentage of Vehicles Meeting New Domestic Standards for Vehicle External Noise



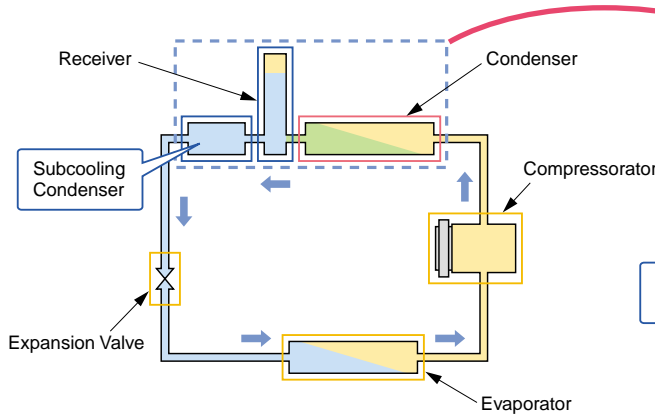
## Freon (Air Conditioner Refrigerant)

In order to reduce the amount of HFC134a, a refrigerant which has been primarily blamed for global warming, we are working to develop an air-conditioning system for new vehicles that uses less of this refrigerant.

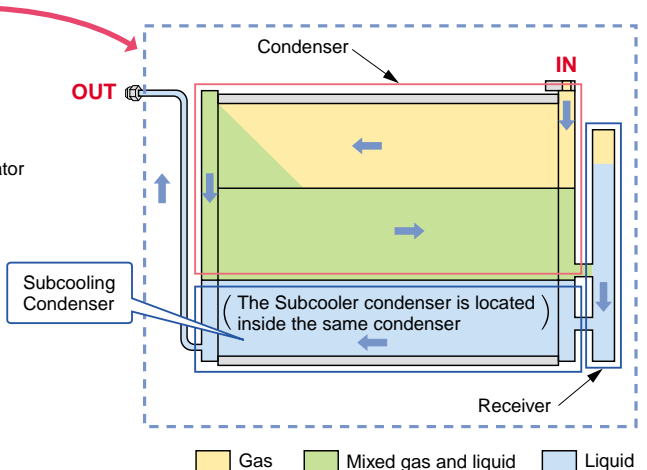
Introduced in 2000, the subcooling system utilized in the Aerio provides efficient cooling of the refrigerant allowing for a 100g reduction in refrigerant per vehicle (reduction rate: 17%) compared to the Cultus.

Development of our new type mini vehicles continues. (See page 32)

### ■ Subcooling System



### ■ Subcooling Condenser System



## ITS\*1/CEV\*2 Cooperative System

Rather than rely solely on the expanded use of low pollution vehicles to cope with congested traffic, environmental pollution, and other such problems, it is important to use multi-mode traffic systems that are highly efficient and convenient, in combination with “door to door” vehicles and public transport such as railroads, buses, etc.

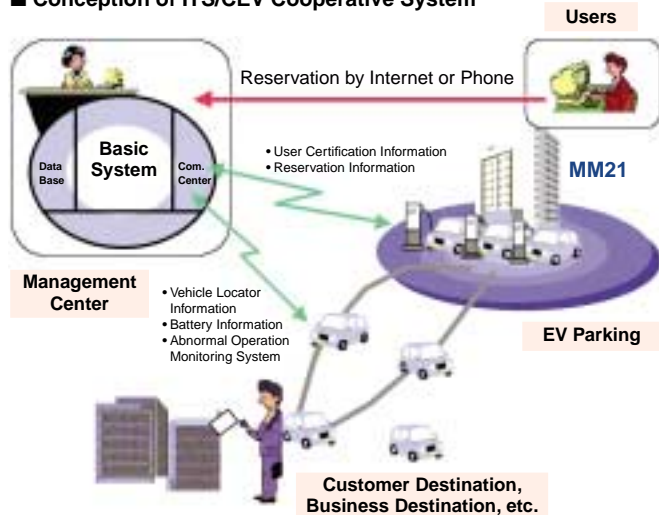
Suzuki, in association with the Association of Electronic Technology for Automobile Traffic and Driving, is working to develop a system for practical use that combines both ITS and CEV technologies. The system uses environmentally friendly low emission vehicles for local or supplemental transportation between public transport points and homes or offices as needed. (See page 14)

\*1 ITS : Intelligent Transport Systems  
 \*2 CEV : Clean Energy Vehicle

### Cooperative System Vehicles (Every EV, Alto EV)



### Conception of ITS/CEV Cooperative System



## AHS\*1/ASV\*2 Project

ITS\*3 holds great promise as the new transportation system of the 21st Century with its ability to put together people, vehicles, and roads to solve traffic problems like congestion, accidents, increased pressure on the environment, etc. The Ministry of Land, Infrastructure and Transport is developing an AHS/ASV system which consists of a new driving support service that provides communication between vehicles and road infrastructure in regard to road and traffic conditions, etc.

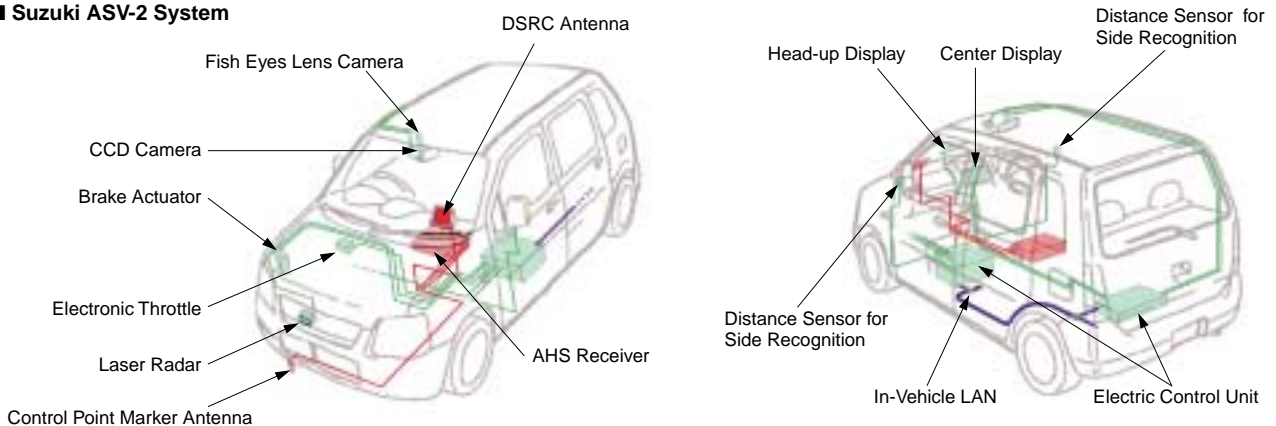
Suzuki is participating in the AHS/ASV project and has proposed the use of ITS vehicles with their ability to provide safety, convenience and reduced environmental impact. In February of 2001, we were the first to gain permission from the Minister of the Ministry of Land, Infrastructure, and Transport to use mini vehicles in testing on public roads.

\*1 AHS : Advanced Cruise-Assist Highway System  
 \*2 ASV : Advanced Safety Vehicles  
 \*3 ITS : Intelligent Transport Systems

### Suzuki AHS/ASV Experiment Vehicles (Vehicles certified by the Ministry of Land, Infrastructure and Transport)



### Suzuki ASV-2 System



## Recycling

When the product comes to the end of its life cycle, recycling is an important way to obtain the most effective use of our resources, and reduce waste. Brought out in 1993, our “Guidebook for Designs that Promote Recycling” offered some guidelines in product design for making products easy to recycle. In 1998, the Japan Automobile Manufacturers Association came out with their “End-Of-Life Vehicle Voluntary Recycling Initiative” guidebook, this was followed by our own “End-Of-Life Vehicle Voluntary Recycling Initiative” guidebook which strives to increase recyclable designs and reduce our reliance on materials that place a burden on the environment. We have also developed technologies that have allowed us to implement the collection and recycling of used parts from the market. (See page 32)

Guidebook for Designs that Promote Recycling



Reference from Suzuki

End-Of-Life Vehicle Voluntary Recycling Initiative



Reference from the Japan Automobile Manufacturers Association, Inc.

End-Of-Life Vehicle Voluntary Recycling Initiative



Reference from Suzuki

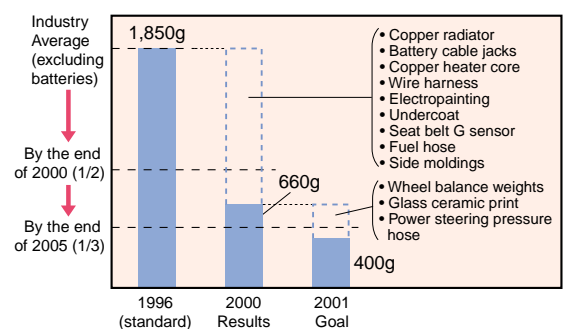
## Reducing Materials with Environmental Impact

In order to reduce the materials with environmental impact, it is necessary to understand where and how much these materials are being used. To this, we made an assessment on the use of such materials in our own products to better understand the situation. Future plans will offer development of substitute materials and a reduction of materials with environmental impact.

### ● Reducing Lead

After adopting the “End-Of-Life Vehicles Recycling Initiative” proposed by the Ministry of International Trade and Industry in 1997, the Japan Automobile Manufacturers Association established voluntary guidelines that called for reducing the amount of lead in new cars to less than 1/2 by the end of 2000, compared to the amount used in 1996. These goals also called to cut the amount to less than 1/3 by the end of 2005 (with the exception of the battery). By reassessing our goals and increasing lead reducing measures we could meet the Japan Automobile Manufacturers Association’s 2000 goals. In 2000 we also put into use a lead free wire harness and a lead free electroplating process (see page 28).

### ■ Lead Reduction Goals



**Parts already in compliance :**

Copper radiator, battery cable jacks, copper heater core, wire harness, electropainting, undercoat, seat belt G sensor, fuel hose, side moldings.

**Parts currently under development :**

Wheel balance weights, fuel tank, electronic circuit boards, glass ceramic print, power steering pressure hose, other engine parts, other body parts.

## TOPICS

### Lead-Free Solder



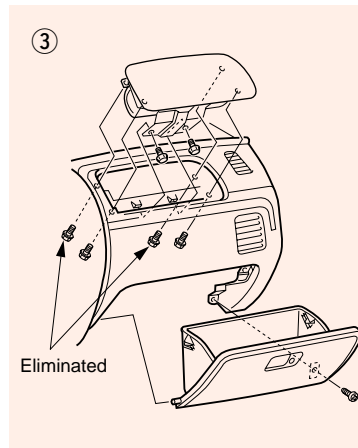
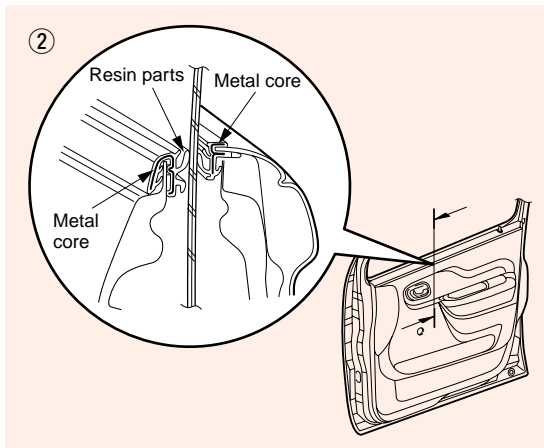
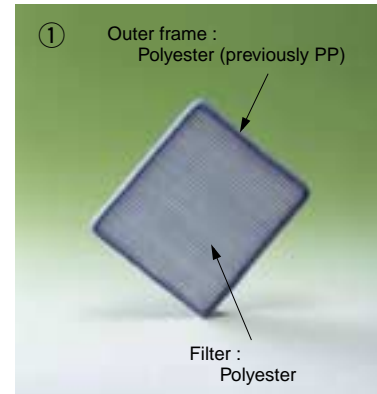
Solder containing lead (tin 6: lead 4) is used in the Electric Control Unit (ECU) but research is underway to develop a lead-free solder that will enable us to move away from the current lead-based solder. Until recently, lead-based solders have been considered the best choice while lead-free solders suffer from problems like too high a melting point, etc. Research and development is currently underway that will lead to the development of a lead-free solder that is reliable enough for use in critical components like the ECU. At present, a lead-free solder is being used in the EMCD (Electro Magnetic Control Device) controller that is found in the Chevrolet Cruze that was introduced in November of 2001. We will continue to convert to lead-free solders as the related technologies improve.

● **Other Materials with Environmental Impact**

In Europe, the regulation of materials with environmental impact (lead, mercury, hexavalent, cadmium) has been decided by the EU. Suzuki has already made progress in the reduction of those materials. As an example, some metal parts are finished with a hexavalent free finish which has proved to be just as durable against corrosion as the hexavalent finish.

**Recyclable Designs**

- ① In air-conditioners, filters made of a mixture of PP (polypropylene) and polyester have been switched to a polyester only part to improve recyclability.
- ② In domestically manufactured vehicles, moldings found around door glass made of compound materials of mixed resins and a metal core have been switched to a resin only part to improve recyclability.
- ③ Redesigned the attachment and bolts on airbag systems to improve disassembly and recycling of the airbag.
- ④ The use of wires used to hold the urethane seat covers in place has been discontinued and an adhesive is now being used which simplifies the type of materials being used and improves the recyclability of the urethane.
- ⑤ Resin and rubber parts are all labeled as to their material type to improve the dismantling and recyclability of scrapped vehicles.



**PP and ABS Materials**

After increasing the number of materials made of PP, and standardizing the category and grade of these materials, we have eliminated the need for separation and made recyclable materials easier to use.

We have also started the standardization of ABS resins (acrylonitrile, butadiene, styrene)

**Identification of Materials**

Markings based on ISO standards are used on parts to clearly identify their materials.

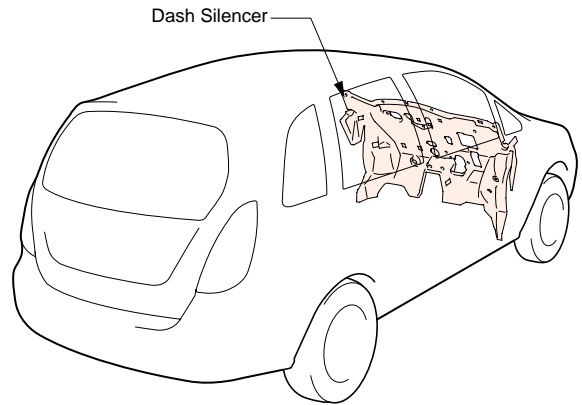
## Recycling Materials from Other Industries

To get the most out of our limited global resources, we have pushed forward with the use of materials from industries other than the automobile industry. Presently we are using recycled PET materials and scrap pulp from the leftover cuttings in the manufacture of paper diapers as indicated in the list below.

### < How Suzuki Puts Recycled Materials to Use >

Vehicle Name	Recycled Material	Parts
Alto	Recycled PET	Dash Silencer
	Scrap Pulp	Door Trim Ornament
Wagon R	Recycled PET	Dash Silencer
	Scrap Pulp	Door Trim Ornament
MR Wagon	Recycled PET	Dash Silencer
Kei	Recycled PET	Dash Silencer
	Scrap Pulp	Door Trim Ornament
Wagon R Solio	Recycled PET	Dash Silencer
	Scrap Pulp	Door Trim Ornament
Swift	Recycled PET	Dash Silencer
	Scrap Pulp	Door Trim Ornament
Cultus	Recycled PET (1.8 only)	Dash Silencer
	Scrap Pulp	Door Trim Ornament
Aerio	Recycled PET	Dash Silencer
Escudo (Grand Escudo)	Recycled PET	Dash Silencer
	Scrap Pulp	Door Trim Ornament

### ■ Examples of the Use of Recycled PET Materials in the Aerio



## Recycling Scrapped Bumpers

Bumpers and instrument panels are collected and recycled into materials that are used in battery trays, engine under covers, etc. Since removing the finish off of the bumper improves the quality of the recycled material, we are working to develop a method to remove the finish from the bumper before recycling. Once this method is developed it will allow us to recycle various materials and reuse some materials in bumpers. In the future, we are planning to utilize this method on scrapped bumpers that are acquired through the exchange of parts, etc. (See page 33)

### ■ Removing the Finish Off from the Bumper



Goes Through the Bumper Crusher



## Disposal of End-Of-Life Vehicles

### ● Dismantling and Shredder Disposal

In cooperation with companies that specialize in dismantling and shredding of vehicles, we have experimented with several different methods for disposing of end-of-life vehicles. In fiscal 2001, we experimented with dismantling and shredding of the Carry.

### ● Shredder Dust Disposal

We are working toward a reduction and recycling of 800,000 tons of shredder dust per year from vehicles in Japan plus analyzing and chemical recycling shredder dust into recycled oil.

## Design and Development

## Motorcycles

### Fuel Economy

On our Let's II scooter, we took a close look at port timing and the clutch, gear character, etc. to improve fuel economy and comply with domestic exhaust emissions regulations.

(57km/l → 59km/l [at 30km/h constant speed test value])

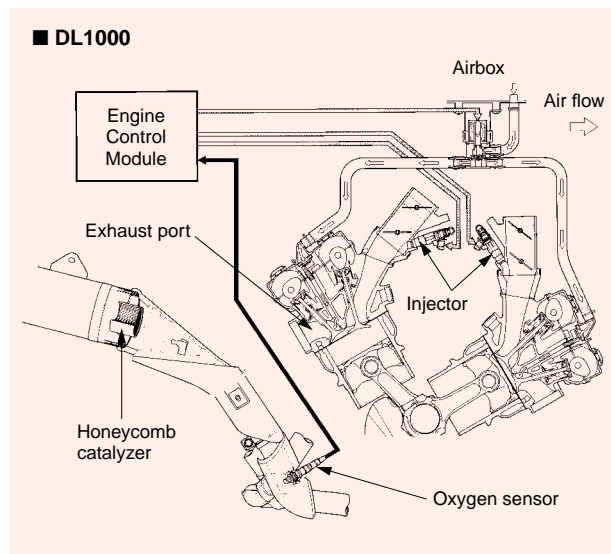


Let's II

### Exhaust Emissions

Technologies like injection systems, honeycomb catalyzers, second stage air systems, O<sub>2</sub> (oxygen) feedback systems, etc. incorporated on our big displacement, high performance motorcycles like the GSX1300R, DL1000, etc., have reduced exhaust emissions and allowed these motorcycles to comply with future European regulations ahead of schedule.

With the GSX1300R alone, we have achieved a 63% reduction in the total amount of HC exhaust and a 43% reduction of CO. (ECE R40 Mode)



## Noise

To reduce engine noise on our 250cc “Sky Wave” scooter we added a rib reinforcement to increase the rigidity of the air cleaner box on the engine, improved muffler structure, and increased the accuracy of drive gear contact. (Complies with 1998 Noise Regulations)



Sky Wave

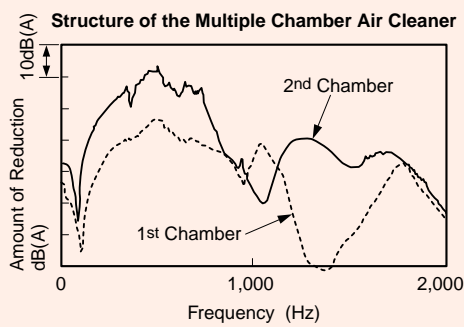
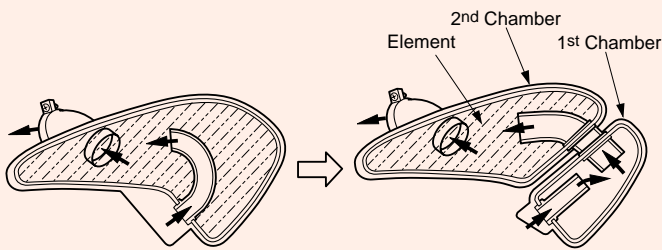
To reduce engine and exhaust noise, etc., on our 50cc “ZZ” scooter, we added a resin outer engine cover to reduce noise, added a multiple chamber air cleaner to reduce intake noise, and used a larger muffler, etc. (Complies with 1998 Noise Regulations)



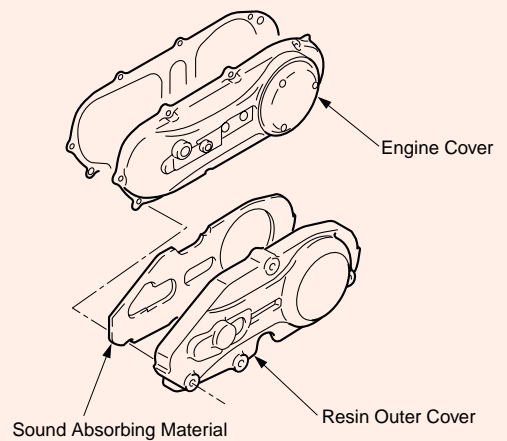
ZZ

### ■ Noise Reduction on the 50cc “ZZ”

#### (1) Structure of the Multiple Chamber Air Cleaner



#### (2) Adding a Resin Outer Engine Cover



## Recycling

### Materials with Environmental Impact

As in our automobile production, we have worked to reduce the amount of lead used in motorcycles. Lead-free components and processes currently in use are battery cable jacks, wire harnesses, electropainting (undercoating), and the fuel hose. We have also worked to reduce the use of other materials with environmental impact.

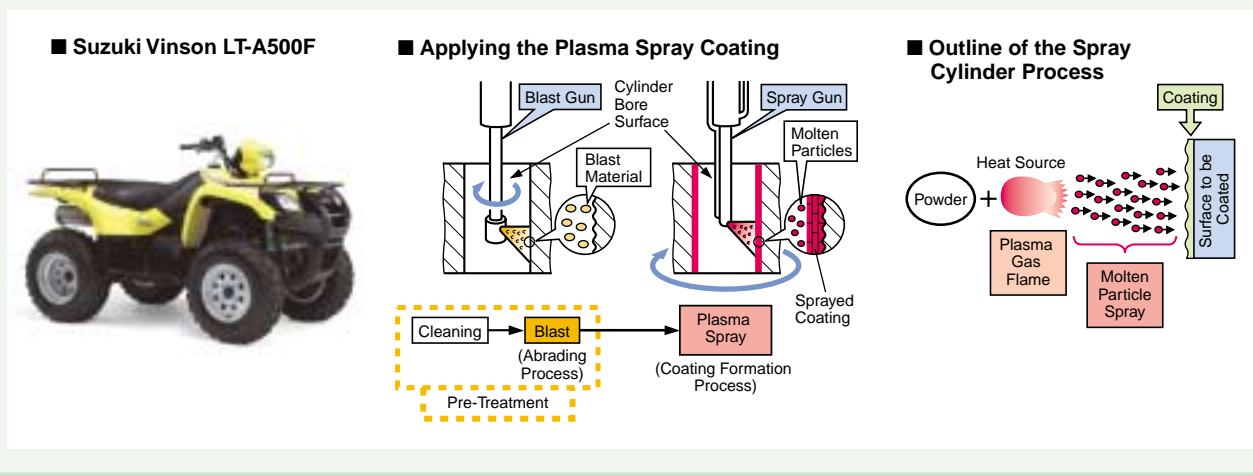
Development of technologies like plasma spray coating utilized on the cylinder wall of some of our ATV engines has also reduced the amount of materials with environmental impact used in the manufacturing process.

### TOPICS

#### The LT-A500F Engine Utilizes Plasma Spray Cylinder Coating (June 25, 2001)

Plasma Spray Cylinder is the result of a process in which different types of materials are sprayed directly onto the cylinder block wall to produce a thin and light coating that creates a sleeve. Suzuki is the first domestic automobile manufacturer to

utilize this system and this is the first time it has ever been utilized in a motorcycle or ATV engine. Compared to plated cylinders this process requires no chemicals therefore better for the environment.



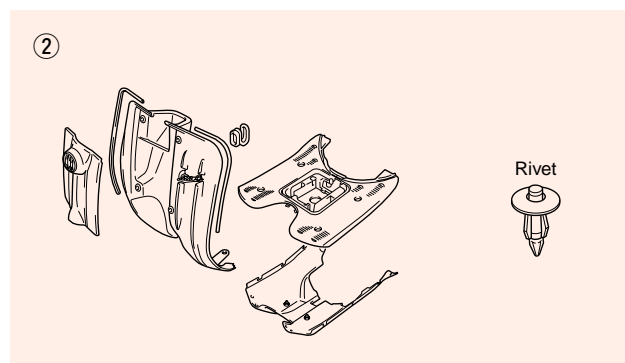
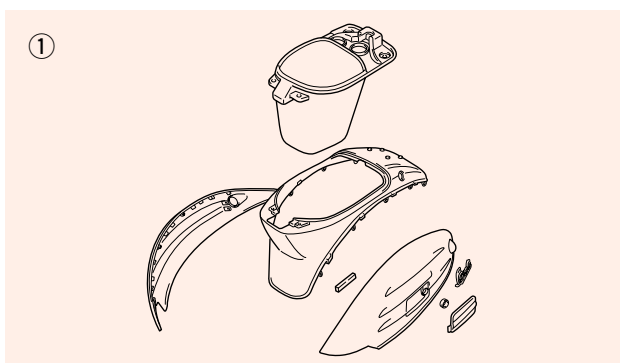
### Recyclable Designs

Here are some examples that have made the “Verde” scooter easier to dismantle.

- ① Parts are designed as an integrated unit to reduce the number of parts and improve dismantling.
- ② The utilization of rivets has improved dismantling.



Verde





# Design and Development Marine and Power Products

## Fuel Economy

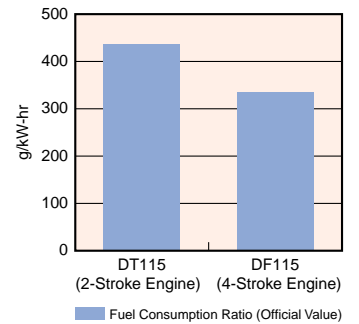
### Outboard Motors

Our DF115 four-stroke outboard motor has achieved a 20% improvement in fuel economy under maximum performance conditions compared to its traditional two-stroke counterpart the DT115.

DF115



■ Fuel Consumption at Maximum Performance Levels



### Snowmobiles\*

The new 600-C-EID engine equipped with fuel injection has achieved an approximate 15% improvement in fuel economy compared to its carbureted counterpart, the 600-B.

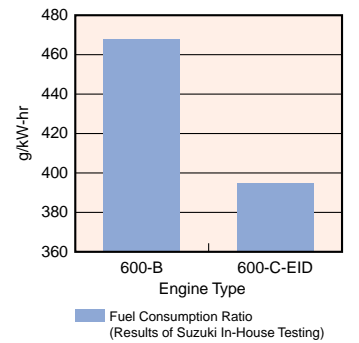
\* Suzuki supplies engine to the Arctic Cat Corporation for use in their snowmobiles.

A snowmobile equipped with the Suzuki 600-C-EID



ZR 600 EFI

■ Fuel Consumption at Maximum Performance Levels



## TOPICS

### Development of the “Kind Chair” Wheel Chair



Introduced in April 2001, the “Kind Chair” is available as a complete powered wheelchair or as a kit that can be attached to an existing standard type wheelchair. The “Kind Chair” uses Nickel Hydrogen batteries for longer battery life, lightweight, compactness, and large capacity.

Using 20 batteries connected in a series, the system weighs 4.0kg compared to 3.6kg for a NiCad system using the same size batteries (D cell size). However, the increase in capacity, from 5Ah for NiCad to the Nickel Hydrogen’s 7Ah, results in an energy density that is approximately 1.3 times greater than the NiCad system. This increases operating distance from about 7km to 10km. The battery lasts for more than 1,000 recharges making it a long lasting\*, reliable system.

\* According to the Suzuki Cycle Life Test Pattern.

## Exhaust Emissions

Every year we release new four-stroke outboard motors that comply with the EPA\* exhaust emissions regulations that have been in effect since 1998. EPA exhaust emission regulations that apply to snowmobiles come into effect on models to be released in 2007. We are currently developing engines that will comply with these new regulations.

### Outboard Motors

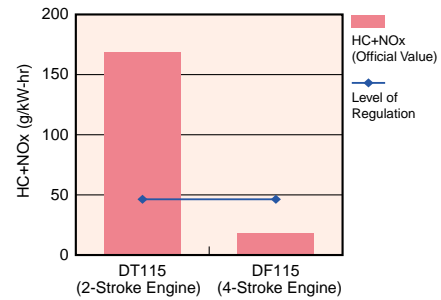
At present, both the EPA and CARB\* have HC + NOx regulations. To comply with these regulations, we have switched our outboard engines to four-stroke technology. This change in engine design has reduced exhaust emissions to less than 1/10 of that produced by a two-stroke outboard motor with the same power output.

\* EPA : The U.S. Environmental Protection Agency  
 \* CARB : California Air Resource Board

#### < Comparing Exhaust Emissions Regulations > (HC+NOx: Unit (g/kW-hr))

	DF115
2006 EPA (Same as the Japan Boating Industry Association's regulations)	46.3
2008 CARB	16.6

#### ■ 2006 EPA Exhaust Emissions Standards



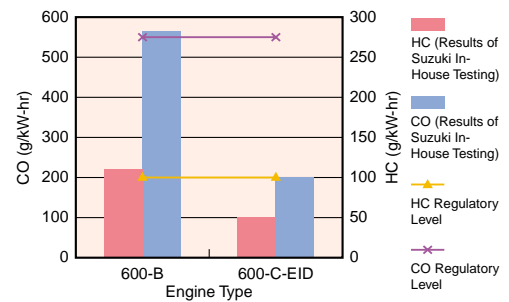
### Snowmobiles

EPA exhaust emission regulations for snowmobiles will be phased in, in two steps. The utilization of fuel injection allows our two-stroke engines to comply with the phase 1 regulations while switching to four-stroke engines will allow us to comply with phase 2 regulations.

#### < EPA Exhaust Emission Regulations > (Proposed)

Phase	Model Year	Exhaust Emission Regulation [g/kW-hr]		FEL Maximum [g/kW-hr]	
		HC	CO	HC	CO
1	2007 - 2009	100	275	150	400
2	After 2010	75	200	150	400

#### ■ EPA Phase 1 Snowmobile Emission Standards



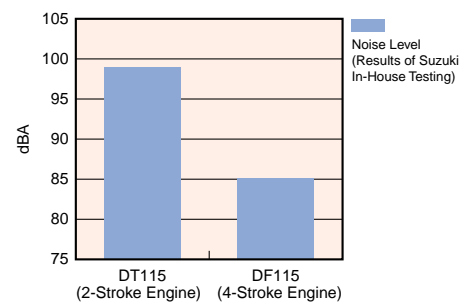
## Noise

### Outboard Motors

In addition to switching to four-stroke engine's, we have also taken a close look at the intake and exhaust systems to achieve further reductions in noise.

Comparing noise levels from idle to full power with the four-stroke DF115 and the two-stroke DT115, the four-stroke DF115 had an approximate 15dBA reduction in noise compared to the DT115.

#### ■ Operating Noise Levels (Weighted calculation)



## Recycling

Recycling of both outboard motors and snowmobiles is based on the particular economic market. In all of our marine and power products, we have reduced use of material with environmental impact and utilized designs derived from our automobile and motorcycle products that offer easier recycling.

### Materials with Environmental Impact

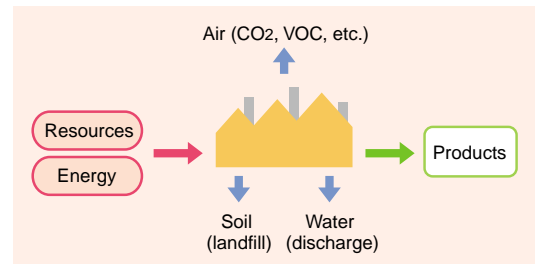
Just as in automobiles and motorcycles, we are working to reduce the amount of lead that is used in our marine and power products. Earlier fuel tank designs relied on steel plated with a lead alloy. As of April 2001, we have switched to a resin tank that makes the fuel tank lead-free. Other areas in which we are working to reduce materials with environmental impact are the development of a substitute for chromic acid chromate that is used in preventing the corrosion of aluminum.

### Recyclable Designs

One product that is difficult to recycle is the outboard motor. FRP (glass fiber reinforced resin) used in the outboard design is a very difficult material to recycle but we are developing a method which makes its recycling possible. Suzuki has joined with the Ministry of Land, Infrastructure and Transport's "Recycling System for the Scrapping of FRP Boats" project in the development of a system that allows the recycling of FRP boats.

## Manufacturing and Purchasing

Environmental conservation in our manufacturing activities covers a wide range of activities. Reducing energy (reducing CO<sub>2</sub>), reducing waste (recycling), control of chemical substances, green procurement, compliance with environmental emergency procedures, communicating with the community, etc., are areas related to manufacturing and purchasing that we are actively working in.

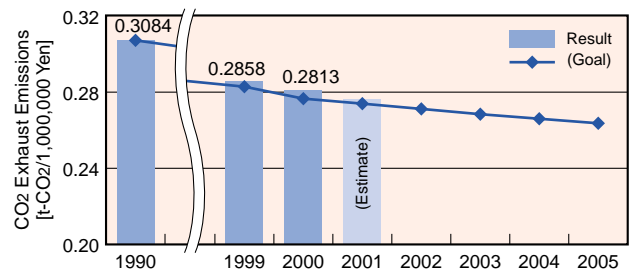


## CO<sub>2</sub>

As CO<sub>2</sub> exhaust emissions are responsible for global warming, we are working to reduce these emissions in the manufacturing process. The goal of the Suzuki Group is by the year 2010, to reduce the amount of CO<sub>2</sub> emissions per sales by 20%, as compared to 1990 levels.

CO<sub>2</sub> reduction measures that have been put into effect to this date are the use of co-generation, high efficiency air-conditioners, high efficiency compressor boilers, attaching inverters to motors on individual pump fans, insulating materials, natural lighting, etc. Through these efforts we could realize a 9% reduction in CO<sub>2</sub> emissions per sales compared to levels in 1990.

■ Trends in and Goals for CO<sub>2</sub> Exhaust Emissions

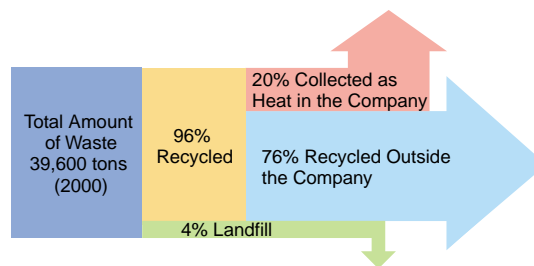
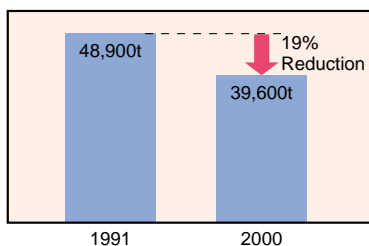


## Waste

### Amount of Waste

At Suzuki we are continuously working to reduce waste in all of our plants. In 1991, a total of 48,900 tons of waste was produced but by 2000 we had reduced the amount to 39,600 tons for a reduction in waste of 19%. Through utilization of the waste we could recycle about 96% of it, 20% of that being used as fuel for boilers at our Kosai plant.

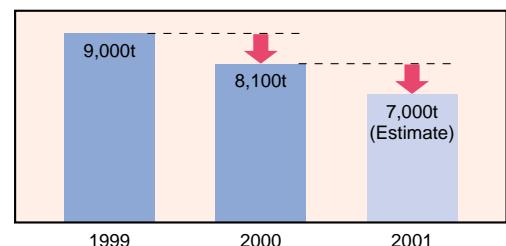
■ Amount of Waste



### Amount of Incinerated Waste

In our Kosai plant, the waste burned in our incinerators is used to produce steam (about 6 tons/h). We are also working to reduce the amount of waste that is burned in our incinerators. In 1999, we burned 9,000 tons of waste but by 2000, we could reduce the amount by 900 tons for a total of 8,100 tons. In 2001, we are planning a further reduction of 1,000 tons to bring the figure down to about 7,000 tons.

■ Amount of Incinerated Waste



## Dioxins

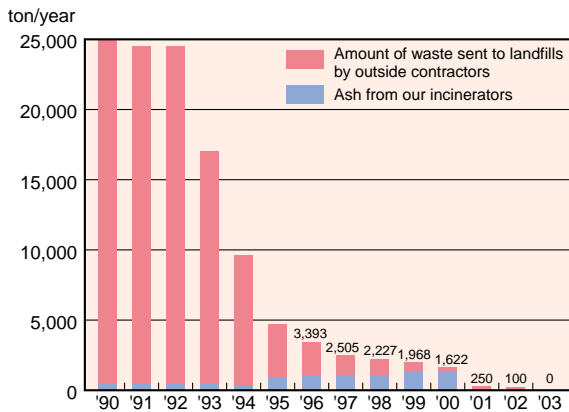
About our measures taken to reduce dioxins, control of the amount of O<sub>2</sub> through strict management of our incinerators has resulted in a reduction of dioxin to 0.017ngTEQ/Nm<sup>3</sup>. This is about 1/300 of the 2002 regulatory limit of 5ngTEQ/Nm<sup>3</sup>.

## Landfill Waste (Zero Level\*)

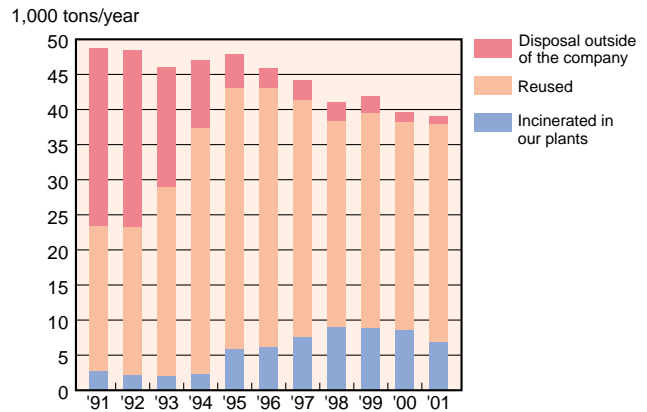
The 1,622 tons of landfill waste produced in fiscal 2000, represents a 94% reduction in landfill wastes compared to 1990. This reduction was achieved by recycling wastes from the casting process into materials for cement, and paint discharged from the paint process into damping materials that prevent vibration in car bodies, etc. By fiscal 2001, we could achieve zero emissions by converting all waste into usable material (see the TOPICS section below).

\* Zero Level: A reduction of 99% in landfill wastes compared to the amount sent in 1990. Less than 1%, less than 250 tons.

■ Trends in Landfill Waste (Results from 1990 to 2000)



■ Trends in the Amount of Waste (2001 Estimate)



## TOPICS

### Suzuki Greatly Reduces Landfill Waste to Achieve Zero Level. (August 7, 2001)

■ Waste Incinerator



Through reductions in landfill waste at the Takatsuka plant and all domestic plants, Suzuki has achieved their zero level goal of 1% of waste compared to 1990 levels by 2001.

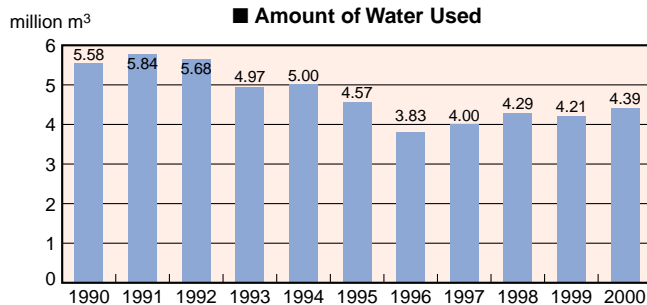
Waste sent to landfills from all domestic plants in 1990 totaled about 25,000t but this was drastically reduced through improvements in the manufacturing process, etc., and by separating and converting the wastes into usable materials.

To reduce the amount of waste and make the most effective use of heat energy, all burnable waste is incinerated at the incinerator at our Kosai Plant (Kosai City, Shizuoka Prefecture) which complies with dioxin regulations. An increase in efforts to reduce waste from 2001, led to the recycling of ash produced by the incinerator into cement materials, and soot into road paving materials. This drastic reduction in the amount of waste sent to landfills resulted in a 99.5% reduction in the amount of waste being sent compared to 1990.

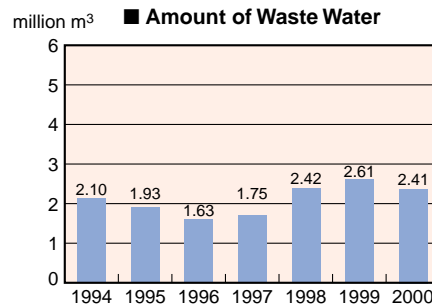
## Water Usage and Wastewater

We are working to conserve water and reuse wastewater in order to reduce the amount of water used in our manufacturing plants. Some methods we are utilizing are airtight cooling towers, compact air-conditioners, water conserving faucets, rainwater collection, collection of water from coolers, and reuse of wastewater. Also, in regards to discharging of wastewater, we have implemented a voluntary regulation that is stricter than current laws and purify the water at a treatment plant in the factory before release.

■ Amount of Water Used



■ Amount of Waste Water



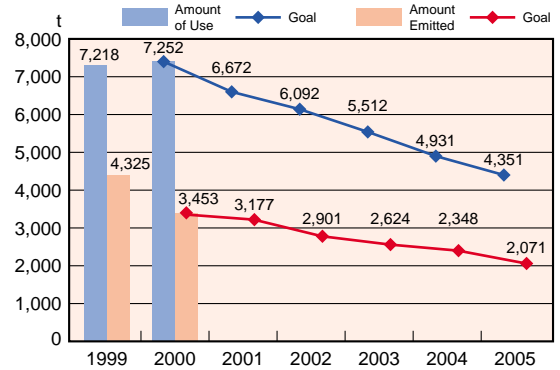
## Chemical Substances

### PRTR (Pollutant Release and Transfer Register) Specified Materials

To reduce materials with environmental impact, we are working toward a 40% reduction by the end of 2005 in both the use and emission of PRTR specified materials as compared to 2000.

The number of PRTR specified materials increased from 19 in 1999 to 40 in 2000 resulting in a slight increase in the amount of materials being used to 7,252t. However, the amount of materials emitted was reduced to 3,453t which is a 20% reduction compared to 1999 figures. To achieve this reduction we changed the top coat paint to middle solids, improved the process of collecting thinner, and installed odor scrubbers on finish dryers.

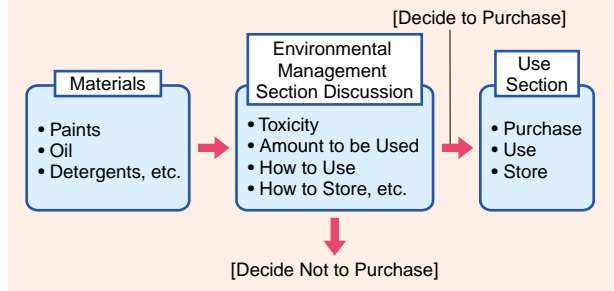
■ Amount of PRTR Materials that are Used and Emitted



### Purchasing New Substances

To keep the volume of substances with environmental impact to a minimum, we have curtailed the purchase of any new substances as much as possible. 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.

■ Management Flow for Purchasing New Substances



## Substances with Environmental Impact

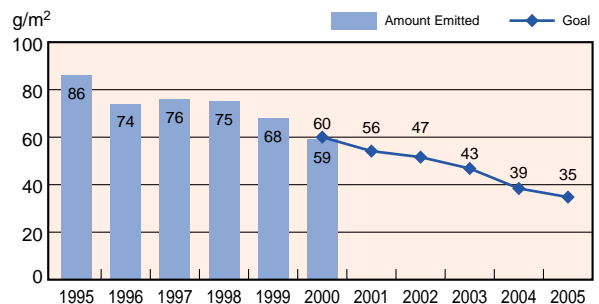
### VOC (Volatile Organic Compounds)

VOC materials are solvents mainly used in the painting process. We are working toward reducing the amount of VOCs to 35g/m<sup>2</sup> by fiscal 2005. In fiscal 2000, through improvements in the efficiency of our electro-static painting process, the collection of paint thinners, and reducing the amount of solvents used in the paint process we could achieve a 31% reduction in the use of VOC materials compared to fiscal 1995.

We have also reduced the amount of VOC in our overseas plants. At CAMI Automotive Inc. (Canada) we could achieve a greater than 30% reduction in organic solvents by utilizing a high-solid type paint (a paint that uses less organic solvent). By also controlling the color change timing we could reduce paint waste by 21 tons and organic solvent waste by 17 tons.

At our new ATV plant (SMAC) which, is currently under construction, we will eliminate the use of organic solvents by using powder paint on the top coat.

■ Amount of VOC Exhaust Emissions



■ CAMI Automotive Inc. (Canada)



### Specified Freon (CFC-12, CFC-22)

The use of freon (CFC-12) was abolished from our manufacturing process in order to protect the ozone layer. The specified freon (CFC-22) found in air-conditioning systems, etc., when performing repair work or disposing of these systems, is collected by licensed mechanics. Since 1969, we have utilized an absorbent type water-heater/cooler which does not use CFC-22. We are working to increase the number of these units in our plants. (Utilized at the Iwata Plant, Kosai Plant, Toyokawa Plant, our Takatsuka Plant, and the Sagara Plant)

### PCB (Polychlorinated Biphenyls)

Concerning transformers and condensers that use PCBs (polychlorinated biphenyls), we have a total of 1,097 such devices in our 5 plants. 12 of these are still being used in two of our plants while the remainder of the devices, 1,085 in all, are safely stored in a secure storage facility.

## Reducing the Usage of Lead

We are using a lead-free primer coat in the electro-static painting process for both motorcycles and automobiles in all of our domestic plants. Four overseas plants in four countries are currently converting to lead-free primers and by the end of 2002 seven plants in five countries will have completed the switch.



## TOPICS

### Suzuki Eliminates the Use of Lead in its Motorcycle and Automobile Painting Process. (January 25th, 2001)

Suzuki has eliminated the use of lead in its motorcycle and automobile painting process in all of its domestic plants. Until this change, lead chemical compounds were used in primer coat paints (electro-static painting) to provide resistance to corrosion or aid in the hardening of the paint. By moving to alternative chemical compounds and different painting techniques, the same results could be achieved without lead.

The first plant to make the change was the Kosai Plant (Kosai City, Shizuoka Prefecture) in September 1999 followed by the Iwata Plant, (Iwata City, Shizuoka Prefecture) in September 2000. The Toyokawa Plant (Toyokawa City, Aichi Prefecture) was the last plant to make the change and in doing so abolished the use of lead in the painting process in all domestic plants.

## Green Procurement

Even in our relationships with suppliers, we try to promote the production of products that are environmentally friendly, and purchase products and materials that have less impact on the environment. We are currently establishing "Green Procurement Guidelines", scheduled for completion by March 2002, that will be used when making purchasing decisions and evaluating the environmental management of our supplier's and other affiliated companies. We are also planning by September 2003 to create "Environmental Management Systems" for our suppliers and other affiliated companies to encourage their gaining of ISO14001 certification.

To reduce the amount of materials with environmental impact, found in materials and parts supplied to us, we are requesting that our suppliers cooperate with us, through meetings and investigation, to comply with regulations as soon as possible.

Through the exchange of information, the same movement is also taking place in our 20 manufacturing plants located in 18 overseas countries to reduce the amount of materials with environmental impact.

## Communication

We regularly hold meetings with residents in the local community to ask their opinions which are used to improve our company activities. In 2000, we held six community meetings.

## Environmental Incidents, Emergency Compliance, etc.

### Environmental Incidents

In 2000, we had three environmental incidents. Two of the incidents were related to water quality at our Takatsuka plant and received quick response with countermeasures. The other incident involved  $\text{Ca}(\text{OH})_2$  (calcium hydroxide), which was swept away from our water discharge disposal facility at our Iwata Plant. This incident also received a quick response with countermeasures.

We received six complaints. One concerned construction noise at our Takatsuka plant and was taken care of. The other five complaints concerned offensive odors at the Iwata Plant. We are working to improve this problem by utilizing a deodorizing tower, etc.

Environmental data for each of our plants can be found on page 46 - 48.

We are also creating environmental management systems for our overseas plants that protect against the occurrence of environmental incidents.

### Organic Chlorine Chemical Compound

In regards to the two cases in which greater than regulatory levels of trichloroethylene and cis-1, 2-dichloroethylene were found in the groundwater at our Takatsuka plant in January 1999, continued treatment of the underground water and soil has reduced the level of organic chlorine compounds by over 60%.

### Emergency Response Drills

Assuming that an environmental accident has the potential of occurring anywhere in the workplace we practice emergency procedures with our employees, transportation companies, etc. We also assume that in the event of an earthquake, the quake will cause a secondary disaster so we train accordingly. In 2000, we held a total of 74 emergency drills.

## Environmental Conservation in the Third World

At our manufacturing plants located in third world countries, we have implemented voluntary regulations that are equal to the environmental standards and emissions standards found in Japan. We also provide technical and employee training support, and provide information on environmental conservation.

## Distribution

The transport of manufactured materials, parts, and completed products is a necessary part of the manufacturing and retail business. Suzuki is working to reduce the environmental impact that is associated with distribution.

### Efficient Transportation

#### Transporting Vehicles Within the Plant (Automobiles)

A battery powered Automatic Guided Vehicle (AGV) system allows us to move completed vehicles and parts within our plant thereby eliminating the CO<sub>2</sub> that would be produced from driving the completed vehicles.

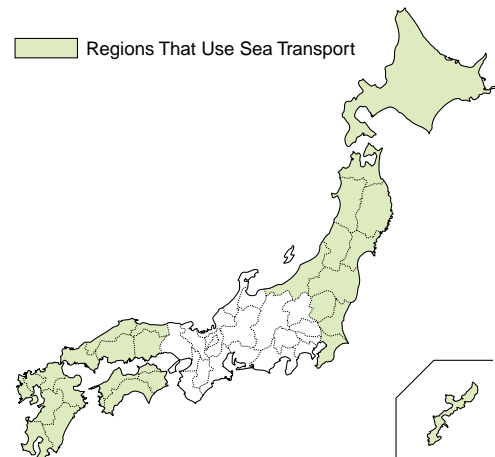


#### Transport by Sea (Automobiles)

We have encouraged the use of sea transport for automobiles being mainly sent to distant domestic locations. In fiscal 2000, approximately 40% of all automobiles were transported to Hokkaido, Tohoku, Chugoku, Shikoku, and Kyushu regions via ship.

With the completion of the Chiba Distribution Center in 2000, we started transporting automobiles by ship to Chiba Prefecture as well.

Compared to land transportation by truck, the utilization of sea transport produces about 25% of the CO<sub>2</sub> per ton. Compared to transporting everything by truck, the utilization of ship reduces the production of CO<sub>2</sub> by approximately 30%.



#### Direct Delivery System (Motorcycles)

To reduce environmental impact, we have rethought how our motorcycle distribution system works when shipping motorcycles manufactured at the plant, to the dealer.

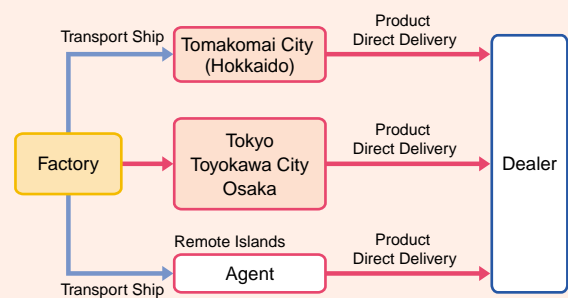
Up to this time, transporting finished motorcycles to dealers meant having to pass through many relay and distribution points. In order to reduce energy loss and to shorten transport time, we are working to introduce a direct delivery system, from the plant to the dealer, that merges distribution points, etc., to create a more rational and efficient distribution system.

##### < The Number of Vehicles Delivered Directly to Dealers >

(Unit: 1,000)

	1995 Results	2000 Results	2001 Results
Direct to Dealer	1	25	68
Pass Through Relay Point / Sales Office	165	90	38

##### ■ The Motorcycle Distribution System (Merging Distribution and Relay Points)





## Recycling

### Packing Materials

For KD (Knock Down) shipments to overseas locations, the use of warehouses—instead of storing the goods outside—and the utilization of containers allows us to use simplified packaging, which in turn reduces the amount of materials such as wood, steel, etc., used in packaging.

Utilizing returnable racks to transport engines from Japan to our CAMI Automotive Inc. in Canada eliminated the need for packing materials.

At our ATV plant (SMAC), which starts production in 2002, the utilization of the returnable racks to transport engines from Japan will reduce packing materials by 9kg per vehicle.

Each company will change its parts delivery system to a returnable box system to reduce the need for packing materials and simplify packing.

Packing materials that are used in the delivery of parts, etc. are reused to pack completed products or spare parts.



### TOPICS

#### The Packaging for Transport of Suzuki Senior Cars Wins the “World Star Prize” at the “World Packaging Contest” (November 1st, 2000)

##### ■ The packaging for transport of Senior Cars wins the “World Star Prize” and “Logistics” Prize



The packaging for transport of our three and four wheel “Suzuki Senior Cars” won the “World Star Prize” at the “World Packaging Contest (World Star 2000)” held in Sweden (organized by the World Packaging Organization (WPO))

##### ● Packaging Features that Won the Prize

- As the package is made up entirely of cardboard it makes for an easy to recycle package and eliminates the need for wood pallets (coniferous). This system allows Suzuki to reduce the amount of wood that Senior Cars use by about 110 tons per year.
- Compared with the older packaging, the new design offers a 12% reduction in capacity and weight. This reduces the amount of energy used for, and cost of transporting and distribution.
- The package is easy to dismantle and remove which improves operations.

## Sales and Service

The proper disposal and recycling of used products and parts that are collected in exchange for new ones is important, as is providing information related to those operations. Suzuki promotes environmental conservation in its retail and service operations, and works to achieve positive results in its activities.

## Recycling, Proper Disposal

### Used Parts, End-of-Life Vehicles

#### ● Collecting and Destroying Freon

The automobile industry is working to collect and destroy the CFC12 and HFC-134a, used as a refrigerant for air-conditioners, from cars that are being scrapped. From January 1994, Suzuki started collection and destruction through a non-centralized route, after which a route developed by the Japan Automobile Manufacturers Association, Inc. was also used to advance these activities. By April 2000, we had installed Freon collecting machines in all certified and designated service centers, and used car sales bases of our domestic distributors.

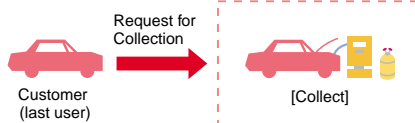
Freon Collecting Handbook



Reference from the Japan Automobile Manufacturers Association, Inc.

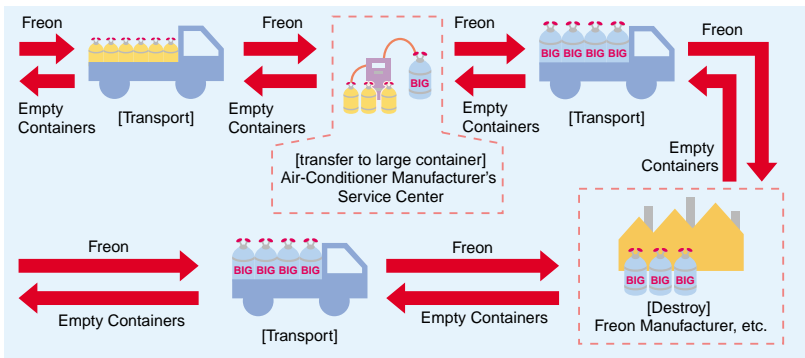
#### ■ Route A

##### Collection Using 1-Liter Containers



#### ■ Route B

##### Collection Using Large Containers



Reference from the Japan Automobile Manufacturers Association, Inc.

#### ● Collecting and Disposal of Air Bag Inflators\*

We collect and dispose air bag inflators since the automobile industry considers that the collection and disposal of unused air bag systems can be dangerous. From September 1999, Suzuki distributed to its dealers, a manual that fully explains the proper procedures for dismantling and handling these systems.

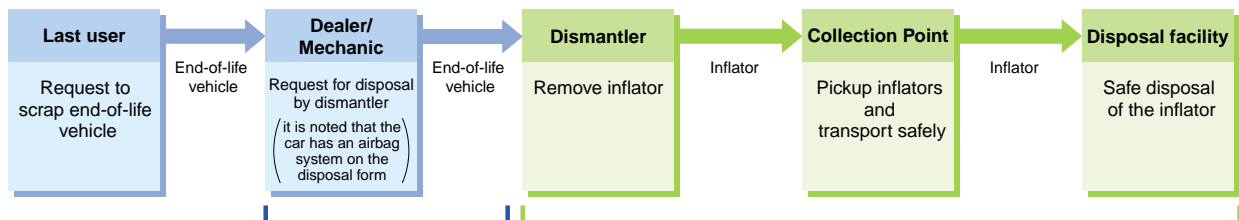
\* Air bag inflator: This unit is used to rapidly inflate the airbag using gas generated from gunpowder and an ignition system.

End-Of-Life Vehicle Inflator Removal Manual



Reference from the Japan Automobile Manufacturers Association, Inc.

#### ■ Airbag Disposal System



Note: Removal of the inflator can be performed at the dealer, service center, or other licensed business.

According to an experimental system performed as a trial

Reference from the Japan Automobile Manufacturers Association, Inc.

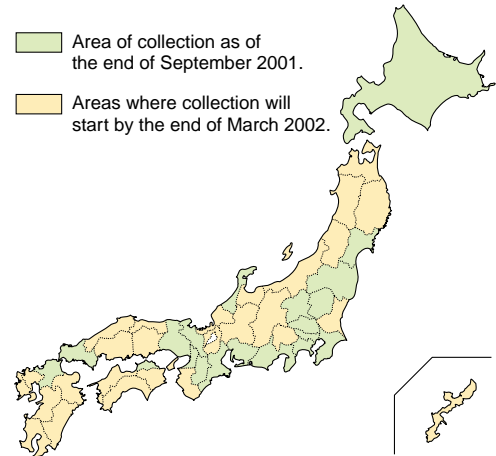
● **Collecting and Recycling Bumpers**

Used bumpers that have been removed due to repair or exchange are collected and recycled. From 1994, we started collection of these bumpers in Shizuoka Prefecture and parts of the Kanto region, increasing areas until the program went nationwide in 2001. From 2000, we introduced a bumper crushing machine to improve the efficiency of collecting. (Refer to the TOPICS section below.)

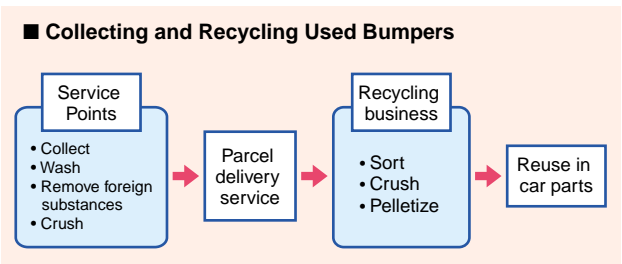
< **Bumper collecting Areas and Collection Points** >

(as of September 2001)

<b>Hokkaido Region</b>	Hokkaido	Suzuki Motor Sales Hokkaido Inc.
<b>Tohoku Region</b>	Miyagi Prefecture	Suzuki Motor Sales Miyagi Inc.
	Fukushima Prefecture	Suzuki Motor Sales Fukushima Inc.
<b>Kanto Region</b>	Saitama Prefecture	Suzuki Motor Sales Saitama Inc. Suzuki BP Center Saitama Inc.
	Tochigi Prefecture	Suzuki Motor Sales Tochigi Inc.
	Gunma Prefecture	Suzuki Motor Sales Gunma Inc.
	Chiba	Suzuki Motor Sales Chiba Inc.
	Tokyo	Suzuki Motor Sales Tokyo Inc.
	Kanagawa Prefecture	Suzuki Motor Sales Kanagawa Inc.
	<b>Chubu Region</b>	Ishikawa Prefecture
Shizuoka Prefecture		Suzuki Motor Sales Shizuoka Inc.
		Suzuki Motor Sales Hamamatsu Inc.
Aichi Prefecture		Suzuki Motor Sales Chubu Inc.
<b>Kinki Region</b>	Mie Prefecture	Suzuki Motor Sales Mie Inc.
	Nara Prefecture	Suzuki Motor Sales Nara Inc.
	Osaka	Suzuki Motor Sales Kinki Inc.
		Suzuki Motor Sales Kyoto Inc. Suzuki BP Center Kinki Inc.
	Hyogo Prefecture	Suzuki Motor Sales Hyogo Inc.
<b>Chugoku Region</b>	Hiroshima Prefecture	Suzuki Motor Sales Hiroshima Inc.
<b>Shikoku Region</b>	Kagawa Prefecture	Suzuki Motor Sales Kagawa Inc.
<b>Kyushu Region</b>	Fukuoka Prefecture	Suzuki Motor Sales Fukuoka Inc.



Note : Collecting at 23 points in 20 prefectures.  
 Collection in the remaining 27 prefectures will start by the end of March 2002.



**TOPICS**

**Development and Application of the Bumper Crushing Machine (March 8, 2001)**



In order to use our resources more effectively, we started a program in 1994 where used bumpers, removed from automobiles due to repair or exchange, are collected at our dealers for recycling. From January 2000, we introduced a newly developed bumper-crushing machine into the program to reduce the cost of transport. The recycled material is used as a new resource for new car parts.

The bumper-crushing machine is designed to accommodate bumpers of different sizes and materials thus providing a machine that is more compact and lower in cost than a regular crushing machine.

The crushing machine's compact size allows easy installation at dealer service centers, etc., and it can reduce the bumper to approximately 1/6 of its original size thereby reducing the cost of transportation.

● **How Recycled Bumpers are Used**

Seat under trays, battery trays, trunk room side boxes, fuel tank under covers, etc.

(See also page 19)

## The Manifest System (End-Of-Life Vehicle Management List)

To promote the proper disposal of end-of-life vehicles, a manifest system was introduced in December 1998. This system was revised and strengthened after disposal laws were amended in April 2001. The manifest system is used to manage and check whether the dismantling and disposal of end-of-life vehicles is properly carried out or not. Suzuki has distributed pamphlets to dealers and makes regular inspections to enforce the manifest system.

End of Life Automobile Management List (Manifest) Practical Manual



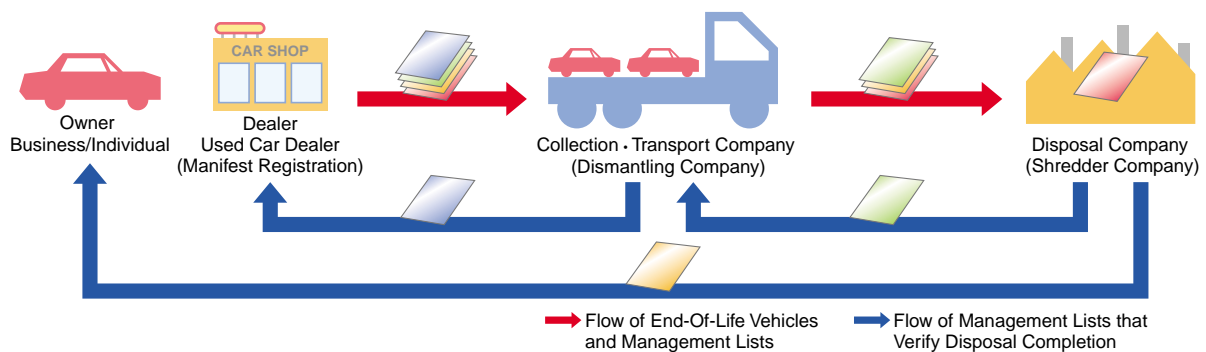
Reference from the Japan Automobile Manufacturers Association, Inc.

End of Life Motorcycle Management List (Manifest) Practical Manual



Reference from the Japan Automobile Manufacturers Association, Inc.

### ■ End-Of-Life Vehicle and Management List (Manifest System)



Reference from the Japan Automobile Manufacturers Association, Inc.

## Vehicle Dismantling Information

When dismantling vehicles, Suzuki follows the manual “Removal Manual Prior to Dismantling of Automobiles and Motorcycles” put out by the Japan Automobile Manufacturers Association, and its own manual “Dismantling Manual for Automobiles”, to properly dispose of end-of-life vehicles.

Also, to deal with ELV (End of Life Vehicle) laws in the EU, Suzuki, in 1999, cooperated with the IDIS (International Dismantling Information System) and provided dismantling businesses in the EU with dismantling information on CD-ROM.

Dismantling Manual for Automobiles



Reference from Suzuki

Removal Manual Prior to Dismantling of Automobiles and Motorcycles



Reference from the Japan Automobile Manufacturers Association, Inc.

## Management, General

In addition to manufacturing plants, the market place, production design, and development, conservation in the office place is just as important. Conservation efforts in the office place include raising the individual's level of environmental consciousness, green procurement, saving energy and resources.

### Zero Waste

Efforts to improve work efficiency in the office place started in 1985 and in 1992, the movement was named "Zero Waste Movement". Through increased work efficiency and waste reduction, our goal is to reduce the amount of energy and resources used in the office place, and recycle.

## Reducing Energy and Resources, Recycling in the Office

### Reducing Energy

To promote energy saving, we turn off lights, computers, and printers during the lunch break, after work, and when we are out.

- **Lights**

By attaching a pull switch to each fluorescent light, each of us do our part by turning off lights when people are not present. In 2000, we attached pull switches in our executive offices so our executives work to save energy as well.

We have also installed automatic ON-OFF devices, "Human Sensitive Sensors" in restrooms, etc., to save energy.

- **Short Sleeve, No Tie**

Short sleeve and no tie dress code in the summer allows us to work comfortably, even on hot days, without relying on air-conditioning. We inform our customers of our dress code and recommend that they visit our offices with short sleeves and no tie.

### Reducing Resources, Recycling

We strive to achieve a paperless office through the use of computer equipment and we use recycled paper in copy machines and printers as much as possible. We even use the reverse side of paper to get the most out of each sheet as possible.

Also, we sort and collect documents, newspapers, magazines and catalogs for recycling. (2000 Results: 31,130kg)

### Green Procurement

Our office paper, name cards, and catalogs all use recycled paper to reduce environmental impact. In the future we would like to increase the amount of environmentally friendly office supplies, office appliances, etc., that we use in our offices.

### Introducing Low Emission Vehicles

We are currently planning to introduce low emission vehicles into our fleet of office vehicles in 2001.

# Social Contributions

To interchange and work in harmony with the community, and communicate with our users, we participate in exhibitions that concern the environment and cleanup activities. We also actively support the development of new technologies that are related to the environment.

## Event Participation (Exhibitions, Cleanup Activities, etc.)

### Low Pollution Vehicle Exhibitions, etc.

We participated in the exhibitions below in Fiscal 2000.

Event Name	Description	Sponsor	Location	Date
Low Pollution Automobile Fair 2000	Exhibit natural gas powered vehicles	Tokyo Metropolitan Government Environmental Agency	Yoyogi Park	6/10 - 6/11
Promoting Clean Energy Automobiles, Exhibition & Test-Drive	Exhibit and test drive of natural gas powered vehicles	NEDO*1	Asian Pacific Trade Center (Osaka)	6/23 - 6/24
CEV Test Drive in Sapporo	Exhibit and test drive of natural gas powered vehicles	METI Hokkaido*2 / NEDO	Access Sapporo (Sapporo)	8/5 - 8/6
Low Pollution Automobile Fair	Exhibit natural gas powered vehicles	Tottori-city	Tottori City Eco Station	8/7
Volunteer Festival at Banpaku	Exhibit natural gas and electric powered vehicles	Osaka-fu Suita-city	Banpaku Memorial Park	8/27
Low Pollution Automobile Fair in Osaka	Exhibit and test drive of natural gas powered vehicles	Osaka city	Asia Pacific Trade Center (Osaka)	9/22 - 9/23
Low Pollution Automobile Fair in Nagoya 2000	Exhibit and test drive of natural gas powered vehicles	Nagoya Low Pollution Automobile Fair Organizing Committee	Nagoya City Hall Shyounai-Ryokuchi	9/30 - 10/1
Low Pollution Automobile Test Drive	Test drive of natural gas powered vehicles	Odawara-city	Odawara-city Flower Garden	10/7 - 10/8
NGV2000 (The 7th International Natural Gas Powered Automobile Meeting and Exhibition)	Exhibit natural gas powered vehicles	Japan Gas Association	Pacifico Yokohama	10/17 - 10/19
Clean Energy Festa in Osaka	Exhibit natural gas and electric powered vehicles	NEDO	Asia Pacific Trade Center (Osaka)	10/21 - 10/22
Shizuoka University Techno Festa in Hamamatsu	Exhibit and test drive of electric powered vehicles and exhibit of natural gas powered vehicles	Shizuoka University	Shizuoka University Hamamatsu Campus	November
Shizuoka Environment, Volunteer, Technology Exhibition	Exhibit of natural gas and electric powered vehicles / Exhibit and test ride of electric assist bicycle	Shizuoka Environment, Volunteer and Technology Exhibition Organizing Committee	Twin Messe Shizuoka (Shizuoka Prefecture)	11/23 - 11/25
Clean Energy Festa In Yokohama	Exhibit natural gas and electric powered vehicles	NEDO	Pacifico Yokohama	1/27 - 1/28, 2001
Clean Energy Festa in Hiroshima	Exhibit natural gas and electric powered vehicles	NEDO	Hiroshima Sun Plaza Hall	2/10 - 2/11

\*1 : New Energy and Industrial Technology Development Organization  
 \*2 : Ministry of Economic Trade and Industry, Hokkaido Bureau

**NGV2000  
 (The 7th International Natural Gas Powered Vehicle Meeting and Exhibition)**



**Shizuoka University Techno Festa in Hamamatsu**




**Shizuoka Environment, Volunteer, Technology Exhibition**



## Community Environmental Cleanup

To contribute to the environmental cleanup of our community, many of our employees join community cleanup activities such as beach cleanup, riverbed cleanup, park cleanup, etc. every year.

Event Name	Description	Sponsor	Location	Date	Number of Persons Joining
Archipelago Cleanup Campaign	Beach Cleanup	Shizuoka, Kosai Regional Alliance Committee	Shirasuka Beach	9/9	Participants: 400 Participating Employees: 60
	Beach Cleanup	Shizuoka, Shimada/Haibara Regional Alliance Committee	Shizunami Beach	October	Participants: 250 Participating Employees: 25
	Park Cleanup	Aichi/Higashi Mikawa Regional Alliance Committee	Akatsuka Yama Park	October	Participants: 150 Participating Employees: 15
	Curve Mirror Cleanup	Shizuoka, Chuuen Regional Alliance Committee	Fukuroi City	October	Participants: 200 Participating Employees: 10
Archipelago Cleanup Operation 	Operation #1 Hamamatsu Welkame Cleanup Operation, Beach Cleanup	"A Little Kindness" Movement, Main Office Shizuoka Prefecture	Nakatajima "Kite Festival" Park	May	Participants: 991 Participating Employees: 24
	Operation #2 Riverbed Cleanup		Tenryu River Ryokuchi Park (Right Shore)	August	Participants: 745 Participating Employees: 48
	Operation #3 Park Cleanup		Hamamatsu Castle Park	October	Participants: 500 Participating Employees: 27
	Operation #4 Riverbed Cleanup		Tenryu River Ryokuchi Park (Left Shore)	March, 2001	Participants: 480 Participating Employees: 45

\* In addition to the activities described above, we install signs around our Head office and Takatsuka plant that remind people not to litter as a part of the "A Little Kindness" movement.

## The Suzuki Foundation Contributes to Research

Every year, the Suzuki Foundation supports research related to environmental technologies. Recently we also established the “Suzuki Education and Culture Foundation” to contribute to the wholesome upbringing and education of our youth.



< A list of environmental themes that promoted by the Suzuki Foundation >

Term: 1996 - 2000

No.	Research Themes	Fiscal Year
1	Evaluating the ability of rubber chips recycled from waste tires to alleviate shocks	2000
2	Improving the characteristics of an ion exchange membrane for a solid high particle type fuel battery	
3	Unsteady spray characteristics and the air/fuel mixture process	
4	Enhancing the combustion of the pre-mixture under high pressure	
5	Analysis of an unsteady spray combustion system for the effective use of super low quality fuels	
6	Research and development into a manufacturing process using voluntary osmotic phenomenon for a compound strengthened piston used in high efficiency and high output engines	
7	High speed sintering of zirconium in a microwave for use in bulkhead fuel cells	1999
8	Basic research on the combustion of DME pressure ignitions system	
9	Analysis of the reaction system of a direct methanol fuel cell	
10	Researching the thermal fatigue properties in environmental friendly lead free solder	1998
11	Research and development into the prevention of global warming through the utilization of automobiles	
12	Increasing the efficiency of a non-toxic, non resource dependant new type Cu <sub>2</sub> ZnSnS <sub>4</sub> type film solar battery	
13	Public infrastructure system to promote fuel cell automobiles	1997
14	Exhaust emission purification system for diesel automobiles using pulse corona discharge	
15	Researching the characteristics of the load produced by fuel batteries	
16	Researching the disturbance in the engine cylinder the pre-mixture combustion system	
17	Research into the development of a perfect garbage disposal machine for zero emission society	
18	Influence on NO <sub>x</sub> formation by disturbance or mixture speed in the diffusion flame	1996
19	Analyzing the combustion conditions of super rarefied pre-mixture pressure auto ignition system	
20	Purifying recycled aluminum alloy by eliminating impurities	
21	Analysis and research for the modeling of the combustion event in an uneven pre-mixture chamber	

### TOPICS

#### In Celebration of its 80th Anniversary, Suzuki Establishes the “Suzuki Educational and Culture Foundation” to support the education and training of youth. (July 21, 2001)

##### ● Awarding the First Scholarships

In commemoration of its 80th Anniversary, Suzuki has established the “Suzuki Education and Culture Foundation” in October 2000, to contribute to the healthy upbringing and education of our youth. An awards ceremony was held on July 21, 2001, to give out the first scholarships to ten students.

After celebrating its 80th Anniversary in March 2000, Suzuki announced in May, 2000, that the foundation would be established. Working to setup the foundation as soon as possible, they gained permission for the Shizuoka Prefectural Board of Education on October 12, 2000, which finalized formal establishment of the foundation.

The Suzuki Group provided funding for the foundation with a ¥510,000,000 donation. Osamu Suzuki, Chairman & CEO of the Suzuki Motor Corporation, assumed the position of Chief Executive Officer and the foundation is located at Suzuki's headquarters in Hamamatsu-City.

This is the second foundation to be established by Suzuki. The first, the “Suzuki Foundation”, was established in commemoration of Suzuki's 60th Anniversary in 1980, to support research related to technology in both domestic and overseas universities (as of April 1, 2000 the foundation's total assets were ¥2,911,000,000).



# Environmental Data

## A List of Vehicles That Meet with Green Acquisition Laws

(As of March, 2001)

### < Mini Passenger Cars >

Model	Vehicle Type	Engine	Displacement (L)	Drive System	Transmission	Low Emission Level (See note)	Regulations Adopted	Comment
Alto	LA-HA23S	K6A	0.658	2WD	5MT	Excellent	2010 Fuel Economy Standard	3 Door
	LA-HA23S	K6A	0.658	2WD	5MT	Excellent	2010 Fuel Economy Standard	5 Door
	LA-HA23S	K6A	0.658	2WD	3AT	Excellent	2010 Fuel Economy Standard	5 Door
	LA-HA23S	K6A	0.658	2WD	4AT	Excellent	2010 Fuel Economy Standard	5 Door
	LA-HA23S	K6A	0.658	4WD	5MT	Excellent	2010 Fuel Economy Standard	5 Door
Wagon R	LA-MC22S	K6A	0.658	2WD	5MT	Excellent	2010 Fuel Economy Standard	5 Door
	LA-MC22S	K6A	0.658	2WD	4AT	Excellent	2010 Fuel Economy Standard	5 Door
	LA-MC22S	K6A	0.658	2WD	4AT Column	Excellent	2010 Fuel Economy Standard	5 Door
	LA-MC22S	K6A	0.658	4WD	5MT	Excellent	2010 Fuel Economy Standard	5 Door
	TA-MC22S	K6A	0.658	2WD	5MT	Good	2010 Fuel Economy Standard	5 Door
	TA-MC22S	K6A	0.658	4WD	5MT	Good	2010 Fuel Economy Standard	5 Door

### < Passenger Cars >

Model	Vehicle Type	Engine	Displacement (L)	Drive System	Transmission	Low Emission Level (See note)	Regulations Adopted	Comment
Wagon R Solio	LA-MA64S	K10A	0.996	2WD	4AT Column	Excellent	2010 Fuel Economy Standard	5 Door
	LA-MA64S	K10A	0.996	4WD	4AT Column	Excellent	2010 Fuel Economy Standard	5 Door
Aerio	LA-RB21S	M15A	1.49	2WD	5MT	Excellent	2010 Fuel Economy Standard	5 Door
	LA-RB21S	M15A	1.49	2WD	4AT	Excellent	2010 Fuel Economy Standard	5 Door
	LA-RB21S	M15A	1.49	4WD	5MT	Excellent	2010 Fuel Economy Standard	5 Door

### < Mini Commercial Vehicles >

Model	Vehicle Type	Engine	Displacement (L)	Drive System	Transmission	Low Emission Level (See note)	Regulations Adopted	Comment
Alto	LE-HA23V	K6A	0.658	2WD	5MT	Excellent	2010 Fuel Economy Standard	3 Door
	LE-HA23V	K6A	0.658	2WD	3AT	Excellent	2010 Fuel Economy Standard	3 Door
	LE-HA23V	K6A	0.658	4WD	5MT	Excellent	2010 Fuel Economy Standard	3 Door

### < Clean Energy Vehicles >

Model	Vehicle Type	Engine	Displacement (L)	Drive System	Transmission	Standards Judged By	Comment
Every	GD-DA52V (improved)	MEV40K	—	2WD	AT	Low Pollution Vehicles	Electric Vehicle
Wagon R	LA-MC22S (improved)	K6A (improved)	0.658	2WD	AT	Low Pollution Vehicles	Natural Gas Vehicle
Every	GD-DA52V (improved)	F6A (improved)	0.657	2WD	MT, AT	Low Pollution Vehicles	Natural Gas Vehicle
	GDDB52V (improved)	F6A (improved)	0.657	4WD	MT	Low Pollution Vehicles	Natural Gas Vehicle

(NOTE) Exhaust Emission Levels

Good: A 25% reduction compared to 2000 standards  
 Excellent: A 50% reduction compared to 2000 standards  
 Ultra: A 75% reduction compared to 2000 standards

• Standards

Ministry of the Environment: Green Acquisition Law Standard

## The Number of Low Pollution Vehicles Produced

(Actual results in fiscal 2000)

Suzuki is developing low pollution vehicles that utilize advanced environmental technologies reached a little over 92,000 units. The volume of shipments of the low pollution vehicles\* reached in 2000. We feel we have contributed to environmental conservation.

\* Including OEM

### < Shipment Results in 2000 >

Including OEM — denotes that there are no equivalent models

		Automobiles		Truck		Bus	Total
		Regular/Compact	Mini Vehicles	Regular/Compact	Mini Vehicles		
Low Pollution Vehicles	Electric Vehicles	—	—	—	11	—	11
	Natural Gas Vehicles	—	30	—	29	—	59
Low Fuel Economy and Low Exhaust Emission Certified Vehicles	☆☆	8,528	64,850	—	16,142	—	89,520
	☆	0	2,651	—	0	—	2,651
<b>Total</b>		<b>8,528</b>	<b>67,531</b>	<b>—</b>	<b>16,182</b>	<b>—</b>	<b>92,241</b>

\* These vehicles have achieved early conformity to fuel economy standards based on the Law concerning the Rational Use of Energy, and are certified as low exhaust emission gas vehicles based on low exhaust emission gas vehicle certification implementation guide lines.

• Vehicles with low exhaust gas certification

☆☆☆ (Ultra-Low Emission Gas): A 75% reduction compared to 2000 exhaust gas standards

☆☆ (Excellent-Low Emission Gas): A 50% reduction compared to 2000 exhaust gas standards

☆ (Good-Low Emission Gas): A 25% reduction compared to 2000 exhaust gas standards

## A List of Low Exhaust Emission Vehicles that were Delivered to the Market

(Actual results in fiscal 2000)

Vehicles with improved exhaust emission performance shown in the table below, were introduced into the market by Suzuki in 2000.

Model	Excellent-Low Emission Gas Vehicle	Good-Low Emission Gas Vehicle
Alto	1 Type	
Wagon R	1 Type	2 Types
Jimny		1 Type
Jimny Wide		1 Type
Wagon R Solio	2 Types	
Aerio	1 Type	
<b>Total</b>	<b>5 Types</b>	<b>4 Types</b>

# Environmental Data for New Products

(Actual results in fiscal 2000)

## Automobiles

### < Mini Passenger Cars >

Vehicle Name		Every Wagon	Kei				Wagon R			Jimny	Alto			
Date Sales Began		2000.5.17	2000.10.12				2000.12.5			2001.2.15	2001.2.15			
Vehicle Type		GF-DA52W	GF-HN11S	GF-HN21S		LA-MC22S	TA-MC12S	TA-MC22S	TA-JB23W	LA-HA23S		GF-HA22S		
Specifications	Model	F6A	F6A	K6A	K6A	K6A	F6A	K6A	K6A	K6A				
	Displacement (L)	657	657	658	658	658	657	658	658	658				
	Type	In-Line 3-Cylinder SOHC 6Valve Intercooler Turbo	In-Line 3-Cylinder SOHC 6Valve Intercooler Turbo	In-Line 3-Cylinder DOHC 12 Valve VVT	In-Line 3-Cylinder DOHC 12Valve Intercooler Turbo	In-Line 3-Cylinder DOHC 12 Valve VVT	In-Line 3-Cylinder SOHC 6Valve Intercooler Turbo	In-Line 3-Cylinder DOHC 12Valve Intercooler Turbo	In-Line 3-Cylinder DOHC 12Valve Intercooler Turbo	In-Line 3-Cylinder DOHC 12Valve	In-Line 3-Cylinder DOHC 12 Valve VVT	In-Line 3-Cylinder DOHC 12-Valve Lean Burn		
	Fuel Type	Unleaded Regular												
	Fuel System	EPI												
Drive Train	Drive System	2WD/4WD	2WD/4WD	2WD	2WD/4WD	2WD/4WD	2WD/4WD	2WD/4WD	2WD/4WD	2WD/4WD	2WD/4WD	2WD		
	Transmission	MT	5MT	5MT	5MT	5MT	—	5MT	5MT	5MT	—	5MT		
Weight (kg)	MT	890-940	750-790	730	760-800	780-830	—	810-860	940-980	650-730	—	680		
	AT	910-960	770-810	740	770-810	790-840	820-870	820-870	950-990	660-740	720-770	700		
Maximum Load Capacity (kg)		—	—	—	—	—	—	—	—	—	—	—		
Environmental Information	Fuel Consumption Rate	*10 - 15 Mode Fuel Economy (km/l)	MT	17.0	20.5	22.5	19.8	19.4-22.5	—	18.8-19.4	16.4	20.5-23.0	—	30.0
		AT	14.6-15.0	17.8	19.2	17.0-18.2	16.8-21.0	16.8-17.4	16.4-18.0	14.8	17.0-19.4	18.2-19.6	27.0	
		CO <sub>2</sub> Emissions (g/km)	139-162	115-133	105-123	119-139	105-140	136	122-144	144-159	103-139	120-130	79-87	
	2010 Fuel Economy Standard Achieved						Achieved*	Achieved	Achieved*		Achieved*	Achieved*	Achieved	
	Exhaust Emissions	Regulations Adopted		1978	1978			2000	2000	2000	2000	2000		1978
		Certification Level of Low Emission Vehicles	Good-Low Exhaust Emission						○	○	○			
			Excellent-Low Exhaust Emission					◎				◎		
		10 - 15 Mode Regulation Figures (g/km)	CO	2.10	2.10			0.67	0.67	0.67	0.67	0.67		2.10
			HC	0.25	0.25			0.04	0.06	0.06	0.06	0.04		0.25
	NO <sub>x</sub>		0.25	0.25			0.04	0.06	0.06	0.06	0.04		0.25	
	Noise	Regulations Adopted		1998	1998			1998			1998	1998		
		Acceleration Noise Regulation Figures (dB(A))		76	76			76			76	76		
	Amount of Refrigerant Used (g)		530	500			500			550	500			
	Use of Recycled Materials		Battery tray, engine under cover, radiator under cover	Battery tray, under seat box, dash silencer			Battery tray, under seat box, dash silencer			Battery tray	Battery tray, tank lower cover, dash silencer			
Amount of Lead Used (Achieved 1/2 Compared to 1996)		Achieved	Achieved			Achieved			Achieved	Achieved				

\* This mark indicates that not all vehicles are in compliance.

< Passenger Cars >

Vehicle Name		Escudo			Jimny Wide	Swift	Every Plus	Wagon R Solio		Grand Escudo	Aerio		
Date Sales Began		2000.4.13			2000.4.13	2000.9.1	2000.11.15	2000.11.29		2000.12.12	2001.1.23		
Specifications	Vehicle Type	LA-TA52W	LA-TL52W	LA-TD62W	TA-JB43W	GH-HT51S	GF-DA32W	LA-MA34S	LA-MA64S	LA-TX92W	LA-RB21S		
	Model	J20A		H25A	M13A	M13A	G13B	M13A	K10A	H27A	M15A		
	Displacement (L)	1,995		2,493	1,328	1,328	1,298	1,328	996	2,736	1,490		
	Type	In-Line 4-Cylinder DOHC 16V		V6 DOHC 24V	In-Line 4-Cylinder DOHC 16V VVT	In-Line 4-Cylinder DOHC 16V VVT	In-Line 4-Cylinder SOHC 16V	In-Line 4-Cylinder DOHC 16V VVT	In-Line 4-Cylinder DOHC 16V VVT	V6 DOHC 24V	In-Line 4-Cylinder DOHC 16V VVT		
	Fuel Type	Unleaded Regular											
	Fuel System	EPI											
Drive Train	Drive System	4WD			4WD	2WD/4WD	2WD/4WD	2WD/4WD	2WD/4WD	4WD	2WD/4WD		
	Transmission	MT	5-Speed	5-Speed	—	5-Speed	5-Speed	—	—	—	—	5-Speed	
		AT	4-Speed	4-Speed	4-Speed	4-Speed	4-Speed	4-Speed	4-Speed	4-Speed	4-Speed	4-Speed	
Weight (kg)	MT	1,260	1,360	—	1,060	880-920	990	—	—	—	1130-1200		
	AT	1,280	1,380	1,400	1,060	910-960	1,030	960-1,000	920-960	1,620	1,150 -		
Maximum Load Capacity (kg)		—	—	—	—	—	—	—	—	—	—		
Environmental Information	Fuel Consumption Rate	10 - 15 Mode Fuel Economy (km/l)	MT	13.2	12.4	—	14.0	18.0-18.6	15.4	—	—	—	16.0-18.0
			AT	11.6	11.6	10.2	12.8	15.6-16.2	13.6	16.4-17.4	18.0-19.6	8.8	14.4-16.0
		CO2 Emissions (10 - 15 Mode) (g/km)		179-203	190-203	231	168-184	131-151	153-173	136-144	120-131	268	147-164
		2010 Fuel Economy Standard Achieved									Achieved		Achieved*
	Exhaust Emissions	Regulations Adopted		2000			2000	2000	1978	2000		2000	2000
		Certification Level of Low Emission Vehicles	Good-Low Exhaust Emission				○						
			Excellent-Low Exhaust Emission	◎						◎	◎	◎	◎
		10 - 15 Mode Regulation Figures (g/km)	CO	0.67			0.67	0.67	2.10	0.67		0.67	0.67
			HC	0.04			0.06	0.08	0.25	0.04		0.04	0.04
			NOx	0.04			0.06	0.08	0.25	0.04		0.04	0.04
Noise	Regulations Adopted		1998			1998	1998	1998	1998		1998	1998	
	Acceleration Noise Regulation Figures (dB(A))		76			76	76	76	76		76	76	
Amount of Refrigerant Used (g)		450			550	360	530	480		750	500		
Use of Recycled Materials		Battery Tray			Battery Tray	Battery Tray, Under Seat Tray, Dash Silencer	Battery Tray, Under Seat Tray, Dash Silencer	Battery Tray, Under Seat Tray, Dash Silencer		Battery Tray	Foot Rest Pedal, Battery Tray, Dash Silencer		
Amount of Lead Used (Achieved 1/2 Compared to 1996)		Achieved			Achieved	Achieved	Achieved	Achieved		Achieved	Achieved		

\* This mark indicates that not all vehicles are in compliance.

**< Mini Truck (Mini Commercial Vehicle) >**

Vehicle Name		Every				Carry		Alto			
Date Sales Began		2000.5.17				2000.5.17		2001.2.15			
Specifications	Vehicle Type	GD-DA52V		GD-DB52V		GD-DA52T	GD-DB52T	LE-HA23V			
	Model	F6A				F6A		K6A			
	Displacement(L)	657				657		658			
	Type	In-Line 3 -Cylinder SOHC 12V	In-Line 3-Cylinder SOHC 6V Intercooler Turbo	In-Line 3-Cylinder SOHC 12V	In-Line 3-Cylinder SOHC 6V Intercooler Turbo	In-Line 3-Cylinder SOHC 12V		In-Line 3-Cylinder DOHC 12V			
	Fuel Type	Unleaded Regular									
	Fuel System	EPI									
Drive Train	Drive System	2WD		4WD		2WD	4WD	2WD/4WD			
	Transmission	MT	5MT	5MT	5MT	5MT	5MT	5MT			
		AT	3AT	4AT	3AT	4AT	3AT	3AT			
Weight (kg)	MT	820-850	880	870-900	930	690-700	740-750	630-680			
	AT	830-860	900	890-910	950	700-710	750-760	640-690			
Maximum Load Capacity		350				350		200			
Environmental Information	Fuel Consumption Rate	*10 · 15 Mode Fuel Economy (km/l)	MT	16.4-16.8	17.0	15.6	17.0	17.0	16.0	21.0-23.0	
			AT	15.0	15.0	14.6	14.6	15.4-15.8	15.2	17.6-9.4	
		CO2 Emissions (g/km)		140-144	140-159	151-162	140-164	139-149	139-155	103-134	
		2010 Fuel Economy Standard Achieved		Achieved	Achieved	Achieved*	Achieved*	Achieved*		Achieved*	
	Exhaust Emissions	Regulations Adopted		1998				1998		2002	
		Certification Level of Low Emission Vehicles	Good-Low Exhaust Emission								
			Excellent-Low Exhaust Emission								
		10 · 15 Mode Regulation Figures (g/km)	CO		6.50				6.50		3.30
			HC		0.25				0.25		0.13
	NOx			0.25				0.25		0.13	
	Noise	Regulations Adopted		1984	2000	1984	2000	1984		1999	
		Acceleration Noise Regulation Figures (dB(A))		78	76	78	76	78		76	
Amount of Refrigerant Used (g)		530				530		500			
Use of Recycled Materials		Battery Tray, Engine Under Cover, Radiator Under Cover				Battery Tray, Engine Under Cover, Radiator Under Cover		Battery Tray, Tank Lower Cover, Dash Silencer			
Amount of Lead Used (Achieved 1/2 Compared to 1996)		Achieved				Achieved		Achieved			

\* This mark indicates that not all vehicles are in compliance.

# Motorcycles

## < Motorcycles >

Vehicle Name		ZZ	DR-Z400S	Grass Tracker	Sky Wave	Sky Wave 400	Inazuma	Address V100	Address 110	
Date Sales Began		2000.4.1	2000.4.1	2000.4.20	2000.6.22	2000.7.27	2000.11.22	2000.11.30	2000.12.20	
Specifications	Vehicle Type	BB-CA1PB	BC-SK43A	BA-NJ47A	BA-CJ42A	BC-CK42A	BC-GK7BA	BD-CE11A	BD-CF11A	
	Engine Model	A155	K419	J424	J429	K415	K717	E111	F129	
	Type	Forced Air-Cooled 2-Stroke	Water-Cooled 4-Stroke	Air Cooled 4-Stroke	Water-Cooled 4-Stroke	Water-Cooled 4-Stroke	Oil-Cooled 4-Stroke	Forced Air-Cooled 2-Stroke	Forced Air-Cooled 2-Stroke	
	Displacement (cm3)	49	398	249	249	385	399	99	113	
	Transmission	Variable Ratio V-Belt	5-Speed Return	5-Speed Return	Variable Ratio V-Belt	Variable Ratio V-Belt	6-Speed with Return	Variable Ratio V-Belt	Variable Ratio V-Belt	
Weight (kg)	84	140	134	186	197	188	88	100		
Fuel Consumption Rate	60km Constant Speed Test Value (km/l)	—	40.0	54.5	39.0	35.0	36.5	43.0	41.0	
	30km Constant Speed Test Value (km/l)	54.0	—	—	—	—	—	—	—	
Exhaust Emissions	Regulations Adopted		1998 Regulations	1999 Regulations	1998 Regulations	1998 Regulations	1999 Regulations	1999 Regulations	1999 Regulations	
	Motorcycle Mode Regulation Figures (g/km)	CO	8.00	13.0	13.0	13.0	13.0	13.0	8.00	8.00
		HC	3.00	2.00	2.00	2.00	2.00	2.00	3.00	3.00
		NOx	0.10	0.30	0.30	0.30	0.30	0.30	0.10	0.10
Noise	Regulations Adopted		1998 Regulations	1987 Regulations	1998 Regulations	1998 Regulations	1987 Regulations	1998 Regulations	1998 Regulations	
	Acceleration Noise Regulation Figures (dB(A))		71	75	73	73	75	73	71	71
Other Environmental Information		Recyclability (use materials that are easy to recycle, labeling of resins, easy to dismantle structures, etc.) Reduce and control the amount of lead used.								

Vehicle Name		GS1200SS	SV400S	Intruder Classic	GSX1400	Intruder Classic 800	Verde	Vecstar 125	Grass Tracker Bigboy	
Date Sales Began		2001.1.22	2001.1.24	2001.2.27	2001.2.28	2001.3.22	2001.3.22	2001.3.24	2001.3.30	
Specifications	Vehicle Type	BC-GV78A	BC-VK53A	BC-VK54A	BC-GY71A	BC-VS54A	BB-CA1MB	BC-CF42A	BA-NJ47A	
	Engine Model	V719	K508	K509	Y701	S509	A196	F418	J424	
	Type	Oil-Cooled 4-Stroke	Water-Cooled 4-Stroke	Water-Cooled 4-Stroke	Oil-Cooled 4-Stroke	Water-Cooled 4-Stroke	Forced Air-Cooled 2-Stroke	Forced Air-Cooled 4-Stroke	Air-Cooled 4-Stroke	
	Displacement (cm3)	1,156	399	399	1,401	805	49	124	249	
	Transmission	5-Speed Return	6-Speed Return	5-Speed Return	6-Speed Return	5-Speed Return	Variable Ratio V-Belt	Variable Ratio V-Belt	5-Speed Return	
	Weight (kg)	232	188	285	255	277	75	111	137	
Fuel Consumption Rate	60km Constant Speed Test Value (km/l)	28.0	37.0	36.0	28.0	35.0	—	54.0	54.5	
	30km Constant Speed Test Value (km/l)	—	—	—	—	—	59.0	—	—	
Exhaust Emissions	Regulations Adopted		1999 Regulations	1999 Regulations	1999 Regulations	1999 Regulations	1999 Regulations	1998 Regulations	1999 Regulations	
	Motorcycle Mode Regulation Figures (g/km)	CO	13.0	13.0	13.0	13.0	13.0	8.00	13.0	13.0
		HC	2.00	2.00	2.00	2.00	2.00	3.00	2.00	2.00
		NOx	0.30	0.30	0.30	0.30	0.30	0.10	0.30	0.30
Noise	Regulations Adopted		1987 Regulations	1998 Regulations	1987 Regulations	1987 Regulations	1987 Regulations	1998 Regulations	1986 Regulations	
	Acceleration Noise Regulation Figures (dB(A))		75	73	75	75	75	71	71	73
Other Environmental Information		Recyclability (use materials that are easy to recycle, labeling of resins, easy to dismantle structures, etc.) Reduce and control the amount of lead used.								

## < Electric Assist Bicycles >

Vehicle Name		Love SNV24	Love SNV26
Battery	Type	Nickel Hydrogen Battery	
	Capacity	24V-2.8Ah	
Charging System	Refresh Function	Yes	
	Charging Time	Approximately 1.2-1.5 hours	
Approximate Operating Range with Assist Operation	On flat surfaces (low mode)	52km	
	Normal conditions (low mode)	32km	
	Normal conditions (high mode)	25km	

## Marine and Power Products

Category		Outboard Motor		Snowmobile (Equipped with Suzuki Engines)
Date Sales Began		December, 2000		June, 2000
Model Name		DF90	DF115	600-C-EID
Type		09001F	11501F	—
Engine Type		4-Stroke		2-Stroke
		4-Cylinder		2-Cylinder
		DOHC		Variable Valve Timing
		Fuel Injection		Fuel Injection
Displacement (cm <sup>2</sup> )		1,950		599
Weight (kg)		191 (Transom L)		
Exhaust Emission	Compliance with 2006 EPA Marine Engine Exhaust Emissions Regulations	○	○	Not Applicable
	Compliance with 2008 CARB Marine Engine Exhaust Emissions Regulations	○	○	Not Applicable
	Compliance with 2006 Japan Boat Manufacturer's Association Voluntary Engine Exhaust Emissions Regulations	○	○	Not Applicable
	Compliance with 2007 EPA Snowmobile Exhaust Emissions Regulations Phase 1 (Proposed)	Not Applicable	Not Applicable	○
	CO(g/kW-hr)	—	—	95 *2
	HC(g/kW-hr)	—	—	203 *2
	NOx(g/kW-hr)	—	—	1.3 *2
	HC+NOx(g/kW-hr)	14.6 *1		—
Fuel Economy	Fuel Consumption Rate at Maximum Output (g/kW-hr)	331	335	396 *2
Noise	Operator Noise (weighted calculation dBA)	—	84.7 *2	—

\*1 Data provided to the EPA, CARB, and Japan Boating Industry Association

\*2 In-house data

### < Motorized Wheelchair >

Model Name		AC22	MC3000		ET-4C
Battery	Type	20HR-D-SUZ	EV35-12	SC38-12	SC24-12
	Capacity	24V 7Ah	12V35Ah x 2	12V32Ah x 2	12V20Ah x 2
Charging System	Charge Time	4.5 hours	12 hours		12 hours
Approximate Operating Range		100% depletion 10 km	JIS Type 29km	JIS Type 26km	20km
Weight (w/o battery)		25kg	56kg		65kg
Inclination Tested To		6°	8°		10°

## Plant Site Environmental Data

- < Notations > ① Water Quality (Notations and Proper Names (Units))  
 pH: Hydrogen-ion concentration (none), BOD: Biochemical oxygen demand (mg/l),  
 SS: Concentration of suspended solids in water (mg/l). All other items are referred to as mg/l.
- ② Air Quality (Notations and Proper Names (Units))  
 NOx: Nitrogen Oxide (ppm), SOx: Sulfur Oxide (K value), Particulate (g/Nm<sup>3</sup>),  
 Chlorine/Hydrogen chloride/Fluoride/Hydrogen Fluoride (mg/Nm<sup>3</sup>), Dioxin: ng-TEQ/Nm<sup>3</sup>
- ③ The strictest regulations out of the Water Pollution Control Law, Air Pollution Control Law, Prefectural Ordinances, and Pollution Control Agreement are used.
- ④ There is no SOx measurement for the facilities that utilize sulfurless LPG for fuel.

### ● Takatsuka Plant



[Location]	300 Takatsuka-cho Hamamatsu-city, Shizuoka Prefecture
[Site Area (Building Area)]	205,000m <sup>2</sup> (125,000m <sup>2</sup> )
[Main Products]	Motorcycle Engine Assembly, Machine Processing
[Number of Employees]	8,070

#### < Water Pollution Data (Discharge) >

Items	Regulated Values	Results	Average
pH	5.8 - 8.6	7.0 - 7.9	7.5
BOD	20	32.1 or less*	3.56
SS	30	2.8 - 12.4	6.5
Oil Content	5.0	0.1 - 3.5	0.719
Lead	0.1	0.00	0.00
Hexavalent Chromium	0.1	under 0.005	under 0.005
Nitrogen	60	9.1 - 140*	40
Phosphorus	8	0.6 or less	0.25

\* Action taken and results achieved.

#### < Air Pollution Data (Discharge) >

Substance	Facilities	Regulated Values	Results	Average
NOx	Boiler (LPG)	150	14 - 74	46
	Small Boiler	—	58 - 110	84
	Melting Furnace	—	under 5	under 5
SOx (K value)	Small Boiler	7.0	0.54 - 3.17	1.47
	Boiler (LPG)	—	under 0.01	under 0.01
Particulates	Small Boiler	—	under 0.01	under 0.01
	Melting Furnace	0.2	under 0.01	under 0.01
Chlorine	AL Melting Furnace	30	under 1	under 1
Hydrogen Chloride	AL Melting Furnace	80	under 5	under 5
Fluoride/Hydrogen Fluoride	AL Melting Furnace	3	under 0.2	under 0.2

### ● Iwata Plant



[Location]	2500 Iwai Iwata-city, Shizuoka Prefecture
[Site Area (Building Area)]	298,000m <sup>2</sup> (167,000m <sup>2</sup> )
[Main Products]	Complete Assembly of CARRY, EVERY, JIMNY, EXCEED
[Number of Employees]	1,810

#### < Water Pollution Data (Discharge) >

Items	Regulated Values	Results	Average
pH	5.8 - 8.6	7.0 - 8.1	7.5
BOD	15	0.9 - 11.3	5.5
SS	30	0.5 - 5.7	2.4
Oil Content	3	2.43 or less	0.65
Cadmium	0.1	0.000	0.000
Lead	0.1	under 0.01	under 0.01
Hexavalent Chromium	0.5	under 0.005	under 0.005
Nitrogen	60	6.5 - 20.5	11.5
Phosphorus	8	0.34 - 6.8	2.23

#### < Air Pollution Data (Discharge) >

Substance	Facilities	Regulated Values	Results	Average
NOx	Boiler	130	110	110
	Small Boiler	—	85 - 120	96
	Hot Water Boiler, etc.	150	48 - 93	69
SOx (K value)	Boiler	17.5	3.16	3.16
	Small Boiler	17.5	0.46 - 0.81	0.67
Particulates	Boiler	0.1	under 0.01	under 0.01
	Small Boiler	—	under 0.01	under 0.01
	Hot Water Boiler, etc.	0.1	under 0.01	under 0.01



● Kosai Plant



[Location] 4520 Shirasuka Kosai-city, Shizuoka Prefecture  
 [Site Area (Building Area)] 1,101,000m<sup>2</sup> (363,000m<sup>2</sup>)  
 [Main Products] Complete Assembly of ALTO, WAGON R, KEI, WAGON R SOLIO, MR WAGON, CHEVROLET CRUZE, SWIFT  
 [Number of Employees] 2,600

< Water Pollution Data (Discharge) >  
 First Discharge (Plant #1, Plant #2)

Items	Regulated Values	Results	Average
pH	5.8 - 8.6	7.1 - 8	7.4
BOD	15	1.8 - 9.6	4.7
SS	15	1.5 - 10	4.2
Oil Content	2	1.6 or less	0.3
Cadmium	0.1	ND	ND
Lead	0.1	under 0.01	under 0.01
Hexavalent Chromium	0.1	ND	ND
Nitrogen	12	2 - 10.7	5.9
Phosphorus	2	0.22 - 1.7	0.65

Second Discharge (KD Plant)

Items	Regulated Values	Results	Average
pH	5.8 - 8.6	7 - 7.8	7.4
BOD	15	0.2 - 5.2	1.2
SS	15	6.8 or less	1.3
Oil Content	2	1.2 or less	0.2
Cadmium	0.1	ND	ND
Lead	0.1	under 0.01	under 0.01
Hexavalent Chromium	0.1	ND	ND
Nitrogen	12	1.2 - 6.4	3.4
Phosphorus	2	0.06 - 0.24	0.15

< Air Pollution Data (Discharged) >

Substance	Facilities	Regulated Values	Results	Average
NOx	Small Boiler	150	57 - 84	68
	Incinerator	200	80 - 120	108
	Gas Turbine 1	70	19 - 41	30
	Gas Turbine 2	70	12 - 31	26
	Drying Oven	230	64 - 77	71
	Water Heater/ Cooler 1	150	38	38
	Water Heater/ Cooler 2	150	50 - 53	52
	SOx (K value)	Small Boiler	7	under 0.09
Incinerator		7	0.11 - 0.86	0.52
Gas Turbine 1		7	under 0.18	under 0.18
Gas Turbine 2		7	under 0.18	under 0.18
Drying Oven		7	under 0.15	under 0.15
Particulates	Small Boiler	0.1	under 0.01	under 0.01
	Incinerator	0.3	under 0.01	under 0.01
	Gas Turbine 1	0.05	under 0.01	under 0.01
	Gas Turbine 2	0.05	under 0.01	under 0.01
	Drying Oven	0.2	under 0.01	under 0.01
	Water Heater/ Cooler 1	0.1	under 0.01	under 0.01
	Water Heater/ Cooler 2	0.1	under 0.01	under 0.01
Hydrogen Chloride	Incinerator	150	under 60	under 60
Dioxin	Incinerator	80	0.13	0.13

● Toyokawa Plant



[Location] 1-2 Utari Shiratori-cho Toyokawa-city, Aichi Prefecture  
 [Site Area (Building Area)] 185,000m<sup>2</sup> (70,000m<sup>2</sup>)  
 [Main Products] Motorcycle Assembly, Outboard Motor Assembly, Knock Down Components  
 [Number of Employees] 800

< Water Pollution Data (Discharge) >

Items	Regulated Values	Results	Average
pH	5.8 - 8.6	7.1 - 7.5	7.3
BOD	20	2.1 - 7.2	3.9
SS	20	1.2 - 6.6	2.9
Oil Content	5	0.2 - 1.6	1
Cadmium	0.1	ND	ND
Lead	0.1	0.01 or less	0
Hexavalent Chromium	0.5	ND	ND
Nitrogen	15	4.8 - 9.9	6.75
Phosphorus	2	0.23 - 1.94	0.87

< Air Pollution Data (Discharge) >

Substance	Facilities	Regulated Values	Results	Average
NOx	Boiler	150	79 - 92	85
	Oven	230	25	25
Particulates	Boiler	0.1	0.01	0.01
	Oven	0.2	0.01	0.01

● Osuka Plant



[Location] 6333 Nishi Obuchi Osuka-cho Ogasa-gun, Shizuoka Prefecture  
 [Site Area (Building Area)] 149,000m<sup>2</sup> (47,000m<sup>2</sup>)  
 [Main Products] Cast Parts Manufacturing  
 [Number of Employees] 450

< Water Pollution Data (Discharge) >

Items	Regulated Values	Results	Average
pH	5.8 - 8.6	6.7 - 7.3	7.1
BOD	10	1.5 - 8.7	4.8
SS	10	1.0 - 5.8	2.9
Oil Content	2	1.4 or less	0.8
Cadmium	0.1	0	0
Lead	0.1	0	0
Hexavalent Chromium	0.5	under 0.005	under 0.005
Nitrogen	60	1.9 - 4.6	3.34
Phosphorus	8	0.11 - 0.38	0.25

< Air Pollution Data (Discharged) >

Substance	Facilities	Regulated Values	Results	Average
NOx	Gas Turbine	70	24 or less	11.7
	Casting Furnace	0.1	under 0.01	under 0.01
Particulates	Gas Turbine	0.05	under 0.01	under 0.01
	Aluminum Melting Furnace	10	under 1	under 1
Chlorine	Aluminum Heating Furnace	10	under 1	under 1
	Aluminum Melting Furnace	20	under 5	under 5
Hydrogen Chloride	Aluminum Heating Furnace	20	under 5	under 5
	Aluminum Melting Furnace	1	under 0.2	under 0.2
Fluoride/Hydrogen Fluoride	Aluminum Heating Furnace	1	0.3 or less	0.2

● Sagara Plant



[Location] 1111 Shirai Sagara-cho Haibara-gun, Shizuoka Prefecture  
 [Site Area (Building Area)] 1,936,000m<sup>2</sup> (50,000m<sup>2</sup>)  
 [Main Products] Automobile Engine Assembly, Casting and Machine Processing of Main Components for Engine  
 [Number of Employees] 730

< Water Pollution Data (Discharge) >

Items	Regulated Values	Results	Average
pH	5.8 - 8.6	6.9 - 7.9	7.3
BOD	15	6.3 - 11.9	9.0
SS	30	12.0 or less	4.1
Oil Content	3	2.4 or less	1.1
Cadmium	0.05	0	0
Lead	0.05	0	0
Hexavalent Chromium	0.25	under 0.005	under 0.005
Nitrogen	60	0.4 - 66.4	11.4
Phosphorus	8	0.08 - 1.00	0.33

< Air Pollution Data (Discharged) >

Substance	Facilities	Regulated Values	Results	Average
NOx	Gas Turbine	70	11 - 24	18
	Heat Treatment	180	31 - 47	39
Particulates	Gas Turbine	0.05	under 0.01	under 0.01
	Heat Treatment	0.2	under 0.01	under 0.01
Chlorine	Aluminum Melting Furnace	10	under 1	under 1
Hydrogen Chloride	Aluminum Melting Furnace	20	under 5	under 5
Fluoride/Hydrogen Fluoride	Aluminum Melting Furnace	1	under 2	under 2

# A History of Suzuki's Environmental Activities

## Suzuki's Environmental Chronology

1970	March	Ten CARRY Van electric vehicles were used as the Osaka World's Fair Exhibition.
1971	July	The Environmental Protection Section is established within the Facilities Group of the Production Engineering Department as a section dedicated to environmental measures regarding production processes.
1977	April	Suzuki Group Safety, Hygiene and Pollution Issues Council is established.
1978	December	CARRY Van electric vehicle is developed.
1981	December	Symposium on Energy Conservation is held, sponsored by the Machinery Industry Fostering and Promoting Foundation (the current Suzuki Foundation).
1989	August	The Environmental Protection Council is established to strengthen the corporate-wide commitment to environmental issues, including products.
1990	March	Freon collectors are installed at dealers nationwide. Collection and recycling of specified Freon used for car air conditioners begins.
1991	December	Use of specified Freon for foaming (urethane form for seats, etc.) is abolished.
1992	January	The listing of the types of resinous materials used is begun. The SCVT continuously variable transmission is developed. (Mounted on a Cultus Convertible.)
	October	A natural gas powered scooter is developed.
	November	The Waste Countermeasure Group is established within the Production Engineering Department in order to reduce the volume of waste and to promote recycling.
	December	The Alto electric vehicle and Every electric vehicle are introduced.
1993	March	The "Environmental Protection Activities Plan" is established.
	May	The Environmental Protection Section and the Waste Countermeasure Group are unified to form the Environmental Industrial Waste Group.
	December	The replacement of car air conditioner refrigerant with a Freon substitute is complete.
1994	June	The collection and recycling of waste bumpers from distributors is begun.
	August	A facility is installed to recycle sludge contained in water discharge from the painting process, for reuse as asphalt sheet. Recycling of waste sand at a casting plant as cement material is begun.
1995	January	Waste incinerators are renewed and reduction in the volume of waste and use of discharged heat (steam) are expanded.
	August	Co-generation facilities are introduced at the Kosai Plant to promote the reduction of energy.
1996	April	The electric power-assist bicycle "LOVE" is introduced.
	May	The "Environmental Protection Action Plan (Follow Up Version)" is established
	December	Co-generation facilities are introduced at the Sagara Plant.
1997	March	A Wagon R mini vehicle which uses natural gas as fuel is developed.
	May	Greatly improved Alto electric vehicles and Every electric vehicles are introduced.
	October	Four-stroke outboard motor receives the "Technical Innovation Award" the Chicago Boat Show.
	December	Manual for the Disassembly of Vehicles is prepared and distributed to dealers.
1998	February	Co-generation facilities are introduced at the Osuka Plant. An Initiative Voluntary Action Plan for the Recycling of Used Automobiles is established.
	April	Magyar Suzuki, a plant in Hungary, gains ISO14001 certification.
	July	The Kosai Plant gains ISO14001 certification.
	October	A mini vehicle equipped with a lean burn engine, the "LEV" is introduced. For the second time in two years, a four-stroke outboard motor receives the "Technical Innovation Award" at the Chicago Boat Show.
	December	Develop an environmentally friendly pipe bending process.
	1999	March
May		A highly fuel efficient Alto, utilizing an "Sc Lean Burn" and CVT is introduced.
June		A Wagon R vehicle powered by natural gas (CNG) is introduced.
August		A new model Every electric vehicle is introduced.
September		The Osuka Plant and Sagara Plant gain ISO14001 certification.
October		An Alto equipped with the idling stop system is introduced. "Suzuki Pu-3 Commuter" receives special award for "The Best Concept Car" at the Tokyo Motor Show. Electric Assist bicycle "LOVE" series undergoes full model change.
November		Maruti Udyog Ltd. in India gains ISO14001 certification. Environmentally friendly table top industrial washers, the "SUC-300H, 600H" are introduced that cleanse using ultra sonic waves in place of organic solvents.
December		The "Every natural gas (CNG) powered bicycle" is introduced. Four-stroke outboard motors that deliver quiet operation and low vibration, the "DF25" and "DF30" are introduced.
2000		January
	February	Suzuki Motor Espana S.A. in Spain gains ISO14001 certification.
	June	Cami Automotive Inc. in Canada gains ISO14001 certification.
	July	Packaging for transport of Suzuki's three and four wheel, electric "Senior Car" receives the "Logistics Prize" at the 2000 Japan Packing Contest.
	October	Electric Assist bicycle "LOVE" series undergoes full model change.
	November	Packaging for transport of Suzuki's three and four wheel, electric "Senior Car" receives the "World Star" prize at the World Packaging Contest.
2001	December	Big four-stroke outboard motors that deliver quiet operation and low vibration, the "DF90" and "DF115" are introduced. The Toyokawa Plant gains ISO14001 certification.
	January	Lead is eliminated from the painting process in domestic motor cycle and automobile plants.
2001	March	The installation of bumper crushing machines in Japan is expanded.
	April	The Environment Planning Department is established to take responsibility for environmental problems related to technology, products, manufacturing, distribution, etc. Replacing the Environmental Issues Council, the Environmental Committee is established to strengthen environmental efforts.


# Company Overview

## Global recognition of the trademark — with acceptance and reputation.

Starting business in 1909 as Suzuki Loom Works, the firm was incorporated in 1920. Since its foundation in Hamamatsu, Japan, SUZUKI has steadily grown and expanded.

During the post-W.W.II period, our motorized bike “Power free” which earned a good reputation was followed by our 125cc motorcycle “Colleda”, and later by the pioneering “Suzulight” lightweight car that helped bring about Japan’s automotive revolution. Each of these was epoch-making in their own right as they were developed and manufactured by optimizing the most advanced technologies of that period. Today, constantly going forward to meet changing lifestyles, the SUZUKI name is seen on a full range of motorcycles, automobiles, outboard motors and related products such as generators, multipurpose engines and motorized wheelchairs, and even prefabricated storage sheds and houses.



The  trademark is recognized by people throughout the world as a brand of quality products that offer both reliability and originality. SUZUKI stands behind this global symbol with a sure determination to maintain this confidence in the future as well, never stopping in creating such advanced “value-packed products.”

- 
- ◆ **Company Name:** SUZUKI MOTOR CORPORATION
  - ◆ **Established:** March, 1920
  - ◆ **Paid-up Capital:** 119,629 million yen (end of March, 2001)
  - ◆ **Chairman & CEO:** Osamu Suzuki
  - ◆ **President & COO:** Masao Toda
  - ◆ **Employees:** 14,460 (end of March, 2001)
  - ◆ **Net Sales:** 1,600,300 million yen (Consolidated)  
1,294,700 million yen (Non-consolidated) (Fiscal 2000)
  - ◆ **Main Product Line:** Automobiles, motorcycles, outboard motors, generators, multipurpose engines, electric vehicles, and homes.
  - ◆ **Head Office/Plants/Branch Offices:**
    - Head Office & Takatsuka Plant: Hamamatsu, Shizuoka Pref.
    - Kosai Plant: Kosai, Shizuoka Pref.
    - Iwata Plant: Iwata, Shizuoka Pref.
    - Toyokawa Plant: Toyokawa, Aichi Pref.
    - Osuka Plant: Ogasa-gun, Shizuoka Pref.
    - Sagara Plant: Haibara-gun, Shizuoka Pref.
    - Tokyo Branch Office: Minato, Tokyo
    - Yokohama R&D: Yokohama, Kanagawa Pref.
    - Miyakoda R&D: Hamamatsu, Shizuoka Pref.

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## **We welcome your opinions and comments.**

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Thank you for reading this 2001 Suzuki Environmental Report.

This report focused mainly on the results of environmental activities in regards to our automobile, motorcycle, and marine and power products business sectors.

Future environmental reports will be published on an annual basis.

We'd like to know your opinions and comments to help us make these reports more complete.

So please take a moment to fill in the questionnaire on the reverse side of this page, and fax it to the Suzuki Environment Planning Department.

**FAX : 81-53-440-2457**

**SUZUKI MOTOR CORPORATION Environment Planning Department**

# Questionnaire

**1 How did you come to find out about this report?**

- Newspaper article
- Homepage
- Dealer
- Other ( )

**2 Was the report understandable?**

- Easy to understand
- Average
- Difficult to understand

**3 Was there enough information or data in this report?**

- Too much
- A little too much
- Good
- Not enough
- Too little

**4 What parts impressed you the most?**

- Introduction
- Design and Development (Automobiles)
- Design and Development (Marine and Power Products)
- Sales and Service
- Environmental Data
- Environmental Management
- Design and Development (Motorcycles)
- Manufacturing and Purchasing
- Management, General
- A History of Suzuki's Environmental Activities
- Distribution
- Social Contributions

**5 On what topics would you like more information in the future?**

- Introduction
- Design and Development (Automobiles)
- Design and Development (Marine and Power Products)
- Sales and Service
- Environmental Data
- Environmental Management
- Design and Development (Motorcycles)
- Manufacturing and Purchasing
- Management, General
- A History of Suzuki's Environmental Activities
- Distribution
- Social Contributions

**6 What other topics would you like added in the future? Please be specific.**

**7 How does this report compare with the report from last fiscal year?**

- Much better
- Better
- Same
- A little worse
- Much worse

**8 What is your opinion of Suzuki's environmental activities?**

**9 What would you like to see Suzuki do in regards to environmental conservation in the future? Please be specific.**

**10 If you have any other comments, opinions or requests, please let us know in the space below.**

**11 Thank you for your cooperation. Finally, we'd like to know a little about you. If you don't mind, please give some information about yourself.**

Name :	Age :	Sex : Male / Female
Address :		
Occupation/Company or Organization name :		
Department/Title :		

**FAX : 81-53-440-2457**

**SUZUKI MOTOR CORPORATION Environment Planning Department**

For all inquiries, please contact

**SUZUKI MOTOR CORPORATION**  
**Environment Planning Department**

**300 TAKATSUKA, HAMAMATSU, JAPAN**  
**FAX : 81-53-440-2457**

Published: March, 2002

This report is also available on our homepage.  
<http://www.globalsuzuki.com/>

**SUZUKI MOTOR CORPORATION**  
300 TAKATSUKA, HAMAMATSU, JAPAN