# Social and Environmental Report 2008



# MITSUBISHI MOTORS CORPORATION



Drive@earth



Corporate Philosophy (formulated in January 2005)

# "We are committed to providing the utmost driving pleasure and safety for our valued customers and our community. On these commitments we will never compromise. This is the Mitsubishi Motors way."

#### Customer-centric approach

Mitsubishi Motors will give the highest priority to earning the satisfaction of its customers, and by doing so, become a company that enjoys the trust and confidence of the community at large. To this end, Mitsubishi Motors will strive its utmost to tackle environmental issues, to raise the level of passenger and road safety and to address other issues of concern to car owners and the general public.

#### A clear direction for the development and manufacturing of Mitsubishi Motors vehicles

The cars that Mitsubishi Motors will manufacture will embody two major concepts: "driving pleasure" and "safety." Mitsubishi Motors will manufacture cars that deliver superior driving performance and superior levels of safety and durability, and as such, those who use them will enjoy peace of mind.

#### Going the extra mile

Mitsubishi Motors will pay close attention to even the smallest details in the belief that this approach will lead customers to discover new value in their cars, giving them a richer and more rewarding driving experience.

#### Importance of continuity

Mitsubishi Motors will continue to manufacture distinctive cars with the passion and conviction to overcome all challenges.

Corporate Tagline (formulated in June 2008)

# Drive@earth

#### Mitsubishi Motors corporate tagline "Drive@earth" holds two meanings

First, Drive@earth means that automobiles connect us to the world. Mitsubishi's 4WD legacy has catapulted a generation of drivers to every corner of the earth, from desert dunes to city streets. Rally-tested toughness, performance and reliability make Mitsubishi Motors a trusted name on five continents.

Second, Drive@earth means that no enterprise — automotive or otherwise — makes sense without the context of a healthy planet, and that MMC vehicles are designed to represent a synergy between dynamic and environmental performance.

Mitsubishi vehicles forge a connection to customers, to communities, and ultimately to the natural world around us.

#### Mitsubishi Motors Social and Environmental Report 2008

#### Note to Readers

Mitsubishi Motors Corp. (MMC) published an environmental sustainability report for six years from its inaugural publication in September 1999 through 2004. In 2005, the title was changed to the Mitsubishi Motors Social and Environmental Report to reflect a sharper focus on the reporting of matters related to the social aspects of MMC's activities.

The aim of this report is to provide all stakeholders with a full and honest account of MMC's environmental and social activities, and to deepen stakeholders understanding of MMC's initiatives in these areas.

#### Scope of Report

- Social and environmental activities: MMC in Japan (Note: The report also includes the activities of some MMC affiliates both in Japan and overseas)
- Corporate data: MMC, consolidated subsidiaries and affiliates

#### **Reporting Period**

• Fiscal 2007 (FY2007: April 1, 2007-March 31, 2008) (Note: The report also includes some recent information from April 2008 onward)

#### Publication Date

• September 2008 (last published September 2007)

#### **Coordination with Website Content**

Creating an easy-to-read report was a key consideration in compiling the Mitsubishi Motors Social and Environmental Report 2008. For this reason, certain content previously printed in the report through last year is now included on the MMC website.

At Mitsubishi Motors, we recognize the importance of consistent environmental and social reporting, which is why we intend to make a more robust range of data available on our corporate website. We invite all of our readers to take full advantage of what the website has to offer. See page 62 of this report for an overview of the website, and refer to the specific Web addresses on pages throughout the report for more detailed information on the topics listed.

Please also refer to:

 Web-based information on MMC's social and environmental activities

web http://www.mitsubishi-motors.com/ corporate/environment/e/index.html

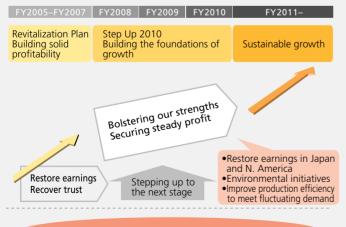
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Osamu Masuko President 8. masupo

Positioning of the New Mid-term Business Plan (FY2008-FY2010)



Continuing and enhancing CSR programs

# Mitsubishi vehicles help communities and

#### Progress of the Mitsubishi Motors Revitalization Plan

The Mitsubishi Motors Revitalization Plan, a three-year business plan running from fiscal 2005 to fiscal 2007, prioritized rebuilding customer trust and improving earnings.

Our work to rebuild trust is summarized by our three-priority policy: "Compliance First, Safety First, and Customers First" We received regular advice and guidance from a Business Ethics Committee, composed of external experts. We worked to change the employee mindset, improve quality management systems, and build a customercentered culture. As a result, the Business Ethics Committee has deemed that we have largely completed the initial stages of our plan.

In order to improve earnings we have: streamlined our businesses; reduced the number of locally specialized vehicles and expanded the number of global vehicles; addressed surplus production capacity; improved our sales networks; expanded strategic alliances with Nissan Motor Co., Ltd. and PSA Peugeot Citroën; and slimmed down our group organization through wide-ranging mergers of consolidated sales companies in Japan. As a result, we achieved the Revitalization Plan goal of building solid profitability in the last year of the plan, fiscal 2007, recording consolidated operating income of ¥108.6 billion (a 170% increase year on year), ordinary income of ¥85.7 billion, and net income of ¥34.7 billion. Both the operating and ordinary income results were the highest ever achieved by MMC since the company was founded in 1970.

Although we have achieved the goals set out in the Revitalization Plan, I consider this to be just a milestone in our journey towards sustainable growth for the future. In fiscal 2008, we will start working on the new mid-term business plan, Step Up 2010, which represents a further step into the future and an even greater challenge.

# New Mid-term Business Plan and New Tagline

The Step Up 2010 plan, running for three years from fiscal 2008, is based on the core policies of "bolstering our strengths" and "securing steady profits," through which we will build the foundations necessary for sustained growth in the future.

We plan to strengthen our sales base by launching SUVs and mid-size passenger vehicles, areas where we have particular expertise, in "focus" markets where MMC has a strong brand presence and demand is expected to increase. These include Russia, the Ukraine, the Middle East and Brazil. In mature markets like Japan, North America and Western Europe, we will work to improve and strengthen earnings structures by making sales systems more efficient and by expanding after-sales and other peripheral businesses.

We will build a production system that can respond flexibly to changes in automobile demand and improve production efficiency in line with our sales strategy. We recognize that automakers have

# forge a connection between customers, a sustainable future.

a responsibility to take the lead in developing environmental initiatives, in line with the growing global interest in environmental concerns. We view this as a significant business opportunity and will fulfill our responsibilities in this regard by commercializing environmental technologies.

Our goal is to provide unique driving pleasure and guaranteed safety. We have developed superior vehicle durability and efficiency through participation in the Dakar Rally; our advanced 4WD dynamics control system was developed through continual tuning of the high-performance *Lancer Evolution* 4WD sedan. Moving forward, we will make further improvements on these unique technologies and manufacture automobiles that provide an even better driving experience while enhancing environmental performance. In June 2008, we announced "Drive@earth" as our new corporate tagline as a way of communicating our corporate philosophy to the general public in a readily accessible way. We will launch this tagline in markets around the world.

# Continuing and Improving Compliance and CSR Programs

In light of the lessons learned from the recall scandal in 2004, we have made every effort to resolve deep-seated problems within our business structures and reform our corporate culture. As a company that prioritizes corporate social responsibility (CSR), we consider our trust-building programs to be an ongoing process. We are continually strengthening our compliance and CSR programs and working with the goal of contributing to a sustainable future for our business and for society.

We have launched various programs to build a solid compliance and CSR base — among these are backup systems to ensure compliance, improved business transparency through proactive disclosure to stakeholders, and enhanced training for employees. We have now established further internal controls in line with the enactment of the Financial Instruments and Exchange Law in April 2008. We will continue to improve our corporate governance. We will also continue to report to the Business Ethics Committee in order to obtain oversight from an external perspective.

MMC has for several years run the "Car School" safe driving clinic aimed at MMC customers, in the hope of reducing traffic accidents. Our "Hands-on Lesson Program" teaches elementary school students about the relation between cars and the environment in part by giving them the opportunity to ride in electric vehicles. Another project is the "Pajero Forest & Local Mountain Restoration Initiative," which was launched to conserve and cultivate Japan's declining forests and woodlands. Overseas, we planted Yoshino cherry trees in May 2008 on site at our engine plant in Shenyang, China as part of an environmental program. We plan future activities at other locations around the world. In April 2008, MMC established the Corporate Citizenship Promotion Office; the Office is working to lay the foundations for further initiatives and larger programs.

### **Prioritizing Environmental Initiatives**

We prioritize environmental initiatives as part of our mission as an automaker. In fiscal 2006, we launched our Environment Initiative Program 2010, and have used this to drive more globally integrated environmental management and the development of core environmental technologies.

MMC has already developed various environmental technologies aimed at reducing CO<sub>2</sub> emissions and improving fuel efficiency, including the development of the MIVEC engine<sup>\*1</sup> and the switch to lightweight car bodies. We are now working to improve these technologies as well as to develop future core environmental technologies such as the clean diesel engine and increased use of our new Twin Clutch SST automated manual transmission. We are engaged in the global development of our i MiEV zeroemissions electric vehicle, the ultimate environmentally friendly car, starting with the Japan-market launch in 2009. Our goal is to become a world leader in the reduction of CO<sub>2</sub> emissions on a global scale. We are currently running fleet tests with seven Japanese power companies, in three prefectures in the Hokuriku region, and in Kanagawa prefecture to bring the vehicle to market ahead of schedule. We plan to start fleet tests with two power companies in the U.S. in the fourth guarter of 2008. We will prepare for market launch based on the data obtained from the onroad tests in Japan and overseas gathered under various usage and weather conditions. We have already developed the *i MiEV* to a level of utility almost sufficient for launch and supplied ten test and support vehicles to the G8 Hokkaido Toyako summit in July 2008.

In order to play a part as a responsible corporate citizen, we are pursuing a policy of building on our strengths to bring more environmentally friendly products to market as quickly as possible.

### Mitsubishi Motors' Commitment

Mitsubishi Motors aims to be a company that continuously fulfills its responsibilities to society and to the environment. To that end, we are committed to working towards a sustainable future. In July 2008, we agreed to participate in the "Eco-First Program" organized by the Ministry of the Environment, Government of Japan as part of our plan to address global environmental issues. We will stand by our commitment to prioritize environmental concerns in our business and play a role in protecting the environment. Thank you for your continued support and I look forward to hearing your unreserved opinions regarding our endeavors.

\*1 Mitsubishi Innovative Valve timing Electronic Control (MIVEC)

\*2 A twin-clutch transmission that provides both fast gear changes and superior fuel economy through the use of a highly efficient automated manual transmission mechanism.

# **Achieving Solid Profitability and On to the**

MMC sold 1.36 million units globally in fiscal 2007 for 10.6% growth over the previous year. This result ensured that MMC generated a net profit for the second year running and attained its final-year Revitalization Plan goal of building solid profitability. Although Japan market sales were sluggish, MMC streamlined sales activities in the region to deliver a substantially improved operating profit. Sales grew year on year in the North America, Europe, and Asia and other regions segments on the back of global model launches and robust growth in emerging markets. In Europe, sales volume was up 21% year on year, led by growth markets such as Russia and Ukraine. In Asia and other regions, where MMC is traditionally strong, growth rates across Latin America, the Middle East, Africa and ASEAN nations boosted regional sales volume 17% over fiscal 2006. Going forward, MMC plans to expand sales in key markets such as Russia, Ukraine, the Middle East and Brazil by expanding the model lineup and by enhancing global models. At the same time, MMC will stabilize earnings in mature markets such as Japan, North America and Europe to develop a strong platform for sustained future growth.

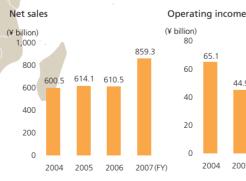
# Europe

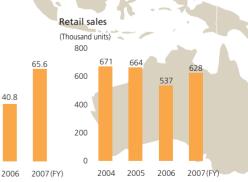




Lancer

# Asia & Others







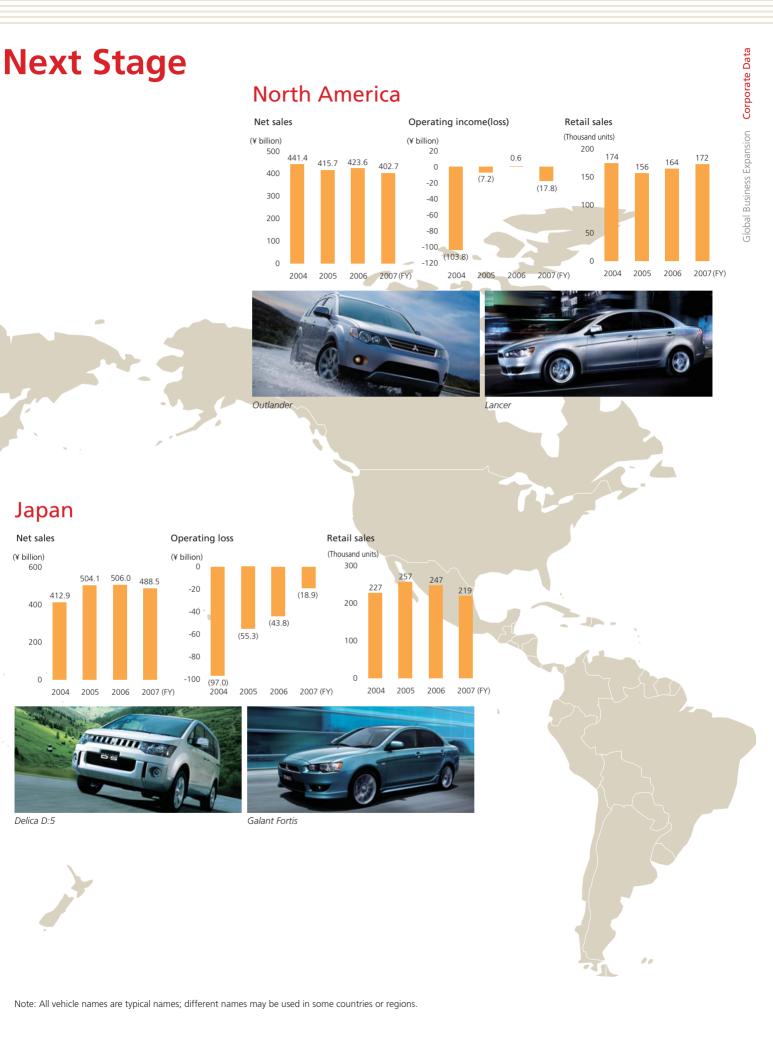


Triton

Lancer

44 9

2005



Main bases of MMC group



Country	Group company/facility	Main business activities
Japan     GTokachi Proving Ground: Otofuke-cho, Kawato-gun, Hok		Test drives and assessment
	BHead Office: Minato-ku, Tokyo	
	BMitsubishi Automotive Logistics Technology Co., Ltd.: Minato-ku, Tokyo	In Japan, vehicle transportation, storage and packaging, new vehicle inspection and servicing
	R&D Center: Okazaki-shi, Aichi	Basic research, product development
	Nagoya Plant: Okazaki-shi, Aichi	Manufacturing of automobiles
	Mitsubishi Automotive Engineering Co., Ltd.: Okazaki-shi, Aichi	Design and testing of vehicles and parts
Pajero Manufacturing Co., Ltd. (PMC): Sakahogi-cho, Kamo-gun, Gifu Manufacturing of a		Manufacturing of automobiles
	B&D Center: Kyoto-shi, Kyoto	Powertrain research and development
	😉 Powertrain Plant (Kyoto Factory): Kyoto-shi, Kyoto	Manufacturing of engines and transmissions
	Powertrain Plant (Shiga Factory): Konan-shi, Shiga	Manufacturing of engines
	❻Mizushima Plant: Kurashiki-shi, Okayama	Manufacturing of automobiles
	Kanto Mitsubishi Motors Sales Co., Ltd. and other companies (nationwide)	Sales of passenger cars and parts
	Mitsubishi Motors Parts Sales Co., Ltd. and other companies (nationwide)	Sales of components and spare parts in Japan
❷U.S.A.	Mitsubishi Motors North America, Inc. (MMNA)	Production
❸U.S.A.	Mitsubishi Motors North America, Inc. (MMNA)	Control of sales in North America
4 Australia	Mitsubishi Motors Australia Ltd. (MMAL)	Production and sales (*Production ceased on March 31, 2008)
Thailand	Mitsubishi Motors (Thailand) Co., Ltd. (MMTh)	Production and sales
Overheiten in Berlands	Netherlands Car B.V. (NedCar)	Production
Netherlands	Mitsubishi Motors Europe B.V. (MME)	Control of sales in Europe

Company name: MITSUBISHI MOTORS CORPORATION Established: April 22, 1970 Head office: 5-33-8, Shiba, Minato-ku, Tokyo 108-8410, Japan Capital: ¥657,349 million Shares of common stock issued: 5,537,897,840 Web http://www.mitsubishi-motors.com/

#### MMC Group (As of March 31, 2008)

Made up of Mitsubishi Motors Corporation, 50 subsidiaries, 4 equity method subsidiaries and 21 equity method affiliates, MMC Group develops, manufactures and sells passenger cars and related parts, and conducts financial enterprises. Development is primarily conducted by MMC.

#### Fiscal 2007 Performance

Consolidated net sales totaled ¥2,682.1 billion in fiscal 2007, an increase of ¥479.2 billion over the previous year. The substantial growth in sales reflected a number of factors, including higher sales volumes in overseas markets, the commencement of an OEM agreement to supply PSA Peugeot Citroën and the effects of a weaker yen.

Operating income increased by ¥68.4 billion to ¥108.6 billion. This marked a record high for MMC and the first time that consolidated operating income had exceeded the ¥100 billion mark. Factors depressing profits on a year-on-year basis included an increase in advertising and promotional expenses of ¥6.4 billion associated with the launch of new models in North America and a ¥9.5 billion reduction in the revenues earned by sales financing operations in the United States. Increased sales volumes, a better model mix and positive currency translation effects helped to outweigh these factors, resulting in significant growth in profits.

Although non-operating income declined by ¥1.2 billion compared with the previous year, ordinary income still improved by ¥67.2 billion in year-on-year terms, rising to ¥85.7 billion. This result also marked a new record high.

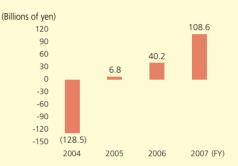
Consolidated net income improved by ¥26.0 billion compared with the previous year, rising to ¥34.7 billion despite a charge incurred relating to the closure of the plant in Australia and a larger loss on impairment of fixed assets.

	Non-consolidated	Consolidated
Net sales	¥1,903.5 billion	¥2,682.1 billion
Operating income	¥79.1 billion	¥108.6 billion
Ordinary income	¥66.9 billion	¥85.7 billion
Net income	¥20.7 billion	¥34.7 billion
Total assets	¥1,101.1 billion	¥1,609.4 billion
Total shareholders' equity	¥219.2 billion	¥387.6 billion
Unit sales	917 thousand units	1,337 thousand units
(Unit retail sales)	_	1,360 thousand units
Number of employees	12,761	33,202

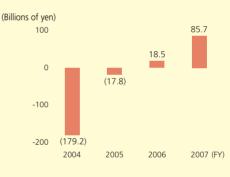
Please refer to Annual Report 2008 (scheduled to be published in September 2008) for more details about our performance.



#### Operating income (loss)



#### Ordinary income (loss)



#### Net income (loss)





Quality Gate (QG) inspection of a Delica D:5 (Pajero Manufacturing Co., Ltd.)

# **The Pursuit of Reliability**

### Corporate Social Responsibilities (CSR) as an Automaker

MMC's mission as an automaker is to provide satisfaction to its customers through the delivery of highquality products and services that are safe and reliable. MMC is diligent in building quality into vehicles from the planning stage onward. New models are assessed repeatedly during development to ensure high quality is maintained. At the manufacturing stage, MMC has developed systems to ensure quality remains at high levels for all mass-produced models.

In addition to high quality, MMC strives to provide reassurance to the public by making its products reliable. MMC regards this task as its most important responsibility as an automaker.

# Continuing and enhancing compliance and CSR activities

The Step Up 2010 mid-term business plan launched in April 2008 focuses on building the foundations of growth. Influenced mainly by the recall scandal that MMC experienced in 2004, the ongoing reinforcement of compliance and CSR activities is a major pillar of this plan.

One of the lessons learnt by MMC as a result of the recall scandal was the need to maintain constant external checks to ensure that compliance and CSR activities are being reinforced and that quality continues to improve. To this end, MMC set up the Business Ethics Committee as an advisory body composed of independent experts. Over the past three years, MMC has made steady progress in implementing compliance programs and other CSR initiatives to prevent any recurrence of previous problems and to help restore trust. **>>>P.17** 

#### Ensuring long-term coexistence with society

The Step Up 2010 plan includes a number of initiatives to take the next step forward in ensuring MMC's long-term coexistence with society.

MMC believes in the importance of the company's primary duty to serve customers and society in general through its core business: making cars. To put it another way, in addition to creating customer satisfaction through high-quality products, one of MMC's most vital tasks is to reassure the public by supplying products that are safe.

A second major goal is to fulfill environmental responsibilities. While cars provide people with convenient and comfortable transport options, they also have a significant impact on the environment due to CO<sub>2</sub> emissions. At a time when the world faces a common challenge in global warming, automakers have an important mission to contribute to the preservation of the global environment by helping to mitigate these effects. The third goal is to fulfill social responsibilities. As a member of society with production bases worldwide and global business activities, MMC believes that it has an important duty to contribute to local communities.

# Quality-enhancing initiatives in development

MMC is enhancing defect prevention as part of its program to deliver products of higher quality and safety. An important aspect of this is to take product variability and diverse usage conditions into account at the development stage so that every customer can feel confident in the safety of the final product. MMC has begun making greater use at the design stage of design methodologies such as the Taguchi methods<sup>\*1</sup> and FMEA<sup>\*2</sup> to address potential issues on the drawing board before the prototype vehicle is built. To help master these new methods, MMC has provided 120 employees with a total of 30 days each of training in the Taguchi methods and around 800 engineers with instruction in FMEA. Plans call for ongoing training in these areas for all MMC engineers.

# Quality-enhancing initiatives in manufacturing

MMC aims to achieve high levels of quality at each step within the manufacturing process. By progressively standardizing procedures and introducing quality assurance measures relating to structure, fabrication methods and equipment, MMC can ensure that quality is not dependent on the skill of operators. For example, process FMEA is used to analyze the factors that lead to quality defects. The results are then used to optimize the production process, equipment or related tools. In cases where a process could lead to human error, MMC is introducing equipment to safeguard against mistakes.

With those processes where it is not possible to systematize quality assurance using only equipment, MMC is stationing QG personnel<sup>\*3</sup> to make the necessary checks at each step so that defects are not allowed to carry over into the post-processing stage.

### Quality-enhancing initiatives for the market

Through these initiatives, MMC aims to achieve uncompromising quality at every stage from planning to mass production. However, once off the line and sold to a customer, automobiles may face a broad variety of harsh settings. One of the most important duties of an automaker is to respond quickly in the unlikely event that defects arise once a product is out on the market.

The CSR Promotion Office performs systematic follow-up checks on the Quality Affairs Office in order to ensure that product recalls are conducted correctly. In addition, all critical quality-related matters are reported to the Board of Directors to promote transparency. MMC has tightened decision-making criteria for product recalls and introduced measures aimed at speeding up recall processes.

During fiscal 2006, MMC initiated a new system for the Japanese market that aims to catch any problems that arise in vehicles after delivery to customers at as early a stage as possible. At the core of this initiative is a new quality-related information system referred to as SQM-BC.<sup>\*4</sup>

This system supplies service-related information such as repair methods and estimates from MMC to dealerships and collects information relating to any instances where customers are dissatisfied due to a breakdown, defect or other product-related issue. All of this information is available in real time to personnel at MMC and dealerships. The system is also equipped with statistical analysis functions to enable early detection of defects and provide accurate information for initiating a product recall where necessary based on the analysis of large amounts of data. MMC is currently developing this system for introduction to dealerships worldwide.

Going forward, MMC plans to make further progress with these kinds of initiatives to enhance product quality and provide reassurance to customers and the broader public.

\*1 Taguchi methods are a design methodology whose aim is to minimize the impact of varied usage conditions and methods on product performance.

\*2 Failure Modes and Effects Analysis (FMEA) is a method for identifying possible mechanisms and factors that can lead to failures and related probabilities and effects. \*3 Quality Gate (QG) personnel check that each product has reached the required level of quality before it can proceed to the next step in the manufacturing process.

\*4 SQM-BC: Strategic Quality Management-Backward Chain

### **Employee Message** — We will raise development quality further through the Taguchi methods

I first came across the science of the Taguchi methods in late 2005, by which time we had finally finished with the recall scandal. At that time I was pondering the frustrating question of how we could break the cycle of quality issues that were causing so many problems for customers. I found a lecture on the Taguchi methods, and I decided to attend because I thought that it was some sort of new QC approach and that I might get some useful pointers. Luckily for me, the topic turned out to be nothing like I expected — in fact, it was exactly what I had been looking for. Immediately after the lecture I wrote up a report for my seniors and we got the go-ahead to form a team to promote these activities inside MMC. Looking back now, I feel a little embarrassed because my report on the subject was not especially convincing.



Later we began assembling teams of colleagues to establish a full Taguchi methods program within MMC. It is now in its third year. The aim of the Taguchi methods is to find the optimal solution

from the customer's perspective so that you reduce waste for the company, for customers (the loss incurred by purchasing a product of inferior quality) and for society as a whole. There is a lot involved in the subject. I am still learning, but I am confident that our efforts to raise development quality will be successful if we approach the issue from the standpoint of the Taguchi methods. **Tatsuro Yokoo** (Expert, Taguchi methods Promotion Team & Reliability Testing Dept.)



A quick-charging i MiEV in front of the "Zero Emissions House" at the G8 Hokkaido Toyako Summit

# **Responsibility to the Environment**

### – Drive@earth

As summarized in the new "Drive@earth" corporate tagline, MMC's goal is to make cars that provide driving pleasure while at the same time providing good environmental performance. Vehicles must be a part of a sustainable future for people, society and the planet. MMC is currently focusing attention on its responsibility toward the environment as one of its most important management themes.

# Mi∈∨ helping to build a low-carbon society

International discussions are proceeding over what regulatory framework will succeed the Kyoto Protocol in the fight against global warming. At the Toyako Summit held in Hokkaido, Japan in July 2008, G8 leaders declared that all signatory nations to the United Nations Framework Convention on Climate Change should adopt a voluntary target of reducing global greenhouse gas emissions by at least 50% by 2050.

The transportation sector accounts for a little over 20% of all global CO<sub>2</sub> emissions. Of these emissions, around 70% are generated by vehicles on the world's roads. Since the number of such vehicles is projected to grow significantly in the future — led by the economic development of emerging nations — it is essential to improve vehicle fuel efficiency and cut CO<sub>2</sub> emissions. There is also an urgent need to find energy sources other than fossil fuels.

Against this backdrop, considerable attention is focusing on electric vehicles (EVs). EVs emit no CO<sub>2</sub> at all, and even when the

CO<sub>2</sub> emissions associated with power generation are included in the calculation (well to wheel), EVs still produce significantly less CO<sub>2</sub> than gasoline-powered vehicles. Moreover, if the electricity used to power an EV is generated from renewable sources such as hydroelectric or wind power, the net CO<sub>2</sub> emissions produced in EV use are near zero.

The energy crisis is becoming more serious, as has been made apparent by the skyrocketing price of crude oil. MMC believes that EVs powered by clean electricity can help replace fossil-fuel burning cars to realize a sustainable low-carbon transport society while still maintaining the convenience and independence of the automobile.

MMC is currently developing the *i MiEV* as a next generation EV. Soon these cars may be running on a road near you.

#### Mi EV development progressing steadily

This is actually the third time that EVs have been in the public spotlight. The first time was in the 1970s, when air pollution caused by automobile exhaust became a major social issue. In the 1990s, the U.S. state of California passed legislation making it mandatory for automakers to introduce EVs as a way of preventing air pollution due to smog. Both times, the inadequate performance and durability of batteries meant that EVs failed to succeed as a practical solution. At the same time, significant improvements were made to clean up exhaust emissions of gasoline-powered vehicles.

Today, however, large capacity, high-performance lithium-ion batteries are available and the world cannot wait any longer to solve its environmental and energy security problems. There are widespread expectations that the time is ripe for the full-scale development of these batteries as power sources for EVs.

To satisfy such expectations, MMC is seeking to accelerate the development of the *i MiEV* to launch it as early as possible.

The development of the electric vehicle is now in the final stages, including the testing of reliability under various conditions, and the ability to withstand extremes of temperature and vehicle safety in water.



New lithium-ion batteries developed for the *i MiEV* 



Water-crossing test at 30 cm depth



Cold-weather testing at minus 15°C

# Showing off the **(i) MiC'**'s capabilities in different ways

MMC is doing a number of things to promote widespread uptake of EVs. Exhibiting the *i MiEV* at various environmental events helps to advertise the benefits of EVs to the public. MMC is also actively seeking the cooperation of local governments to help introduce and popularize EVs as well as collaborating with other industries to build the necessary recharging infrastructure. MMC has held *i MiEV* free test-drive events across Japan; thus far over 10,000 people have gotten behind the wheel of an EV.

Promotional activities have not been limited to Japan. MMC has also exhibited the *i MiEV* at international motor shows in Frankfurt, Geneva and New York. Each time the *i MiEV* has generated an extremely positive reaction. At the free test-drive events, many people have been impressed with the *i MiEV*'s advanced degree of development and have expressed a desire to see the vehicle launched as soon as possible.

In 2008, MMC is pushing ahead with global development of the *i MiEV* in response to this positive feedback. A fleet roadtesting program is being initiated in partnership with a U.S. power utility, with a series of road trials also planned in Europe.



The chief judge at the Lake Biwa marathon used an *i MiEV* 



An *i MiEV* on the road in Manhattan, New York (with the Empire State Building in the background)

### ● M i ● V s help to deliver citizens' petitions on CO<sub>2</sub> reduction from Tokyo to G8 Summit in Hokkaido

To coincide with the G8 Summit held at Toyako in Hokkaido in 2008, the Japan EV Club organized a special convoy of EVs to take a local grassroots message about the need to cut CO2 emissions to the summit. The journey lasted from June 20 to June 26. MMC sponsored four staff to take part in this event using two *i MiEV* cars, visiting each prefectural office on the route as well as sponsoring firms and MMC dealerships to recharge, eventually covering 860 km without incident. The data collected from the event was astonishing: the total cost of the electricity required for the 860 km trip was about ¥1,700 (compared with about ¥10,000 for the gasoline consumed by a conventional car), while the total CO2 emitted per vehicle due to power generation was 35 kg (compared with about 175 kg emitted for a normal gasoline-powered vehicle).

During the event messages from the public asking world leaders to cut CO<sub>2</sub> emissions were collected. After arriving at the mayoral offices in Toyako on June 25 the convoy paid a courtesy call to the Hokkaido Government on the following day. All participants enjoyed driving the *i MiEV* and were again struck by its practicality. At the stops along the way,

local officials and corporate sponsors were also given a chance to see and experience the *i MiEV*. I appreciate the assistance to ensuring our safe journey provided by sponsors, MMC dealers and everybody else that we met on the journey.

Kenichi Tsutsumi (MiEV Business Management Office)



Commemorative photograph taken in front of the Hokkaido Government offices (author is second from the right in the second row)



Chopstick-Making Workshop, part of the arts and crafts program at Star Camp 2007

# **Responsibility to Society**

### - As a Corporate Citizen

MMC remains responsible to its valued customers and society at large by supplying safe, high-quality products and services. The company will also work to resolve community issues voluntarily and to act proactively as a good corporate citizen, so as to contribute to the development of a sound and sustainable society.

In April 2008, MMC established a Corporate Citizenship Promotion Office, and in the following June enacted a Corporate Citizenship Activity Policy.

#### **Corporate Citizenship Activity Policy**

Four key themes based on MMC's corporate philosophy form the base of the company's corporate citizenship activities, abbreviated by the acronym STEP: Support for the next generation, Traffic safety, Environmental preservation, and Participation in local communities.

- 1. Support for the next generation
- Supporting young people's education to create a prosperous future.
- 2. Traffic safety Contributing to traffic safety education and the spread of safe driving to realize a zero-accident society.
- 3. Environmental preservation Contributing to preservation of our natural environment.
- 4. Participation in local communities Contributing to the revitalization and development of regional communities.

Note: Related article on page 17.

# Support for the next generation

#### Mitsubishi Motors Hands-on Lesson Program

The Hands-on Lesson Program has been in effect since fiscal 2005, based on the concept of enjoying learning by experiencing the "real thing." MMC employees visit elementary schools, mainly those schools located close to our factories, to give lessons that enable children to learn about issues such as the environment (including test rides in the *i MiEV* electric vehicle) and design, with guidance from designers and modellers. In fiscal 2007, 1,444 students attended 29 courses. The company has also extended the lessons to regions where there are fewer opportunities for this sort of experience, including Hayakawa-cho in Yamanashi Prefecture, where the Pajero Forest is situated, and Izu Oshima, Tokyo.



Hands-on Lesson about the environment

#### KidZania and Star Camp

MMC has been exhibiting at KidZania Tokyo since it first opened in October 2006. KidZania is the first facility in Japan where children can get a taste of what it is to be an adult and part of the working community. The concept of KidZania Tokyo is to provide children - society's next generation - with a place and opportunity to discover their dreams and goals, and somewhere to enjoy working to realize those goals. MMC also plans to exhibit at KidZania Koshien (in western Japan), which is scheduled to open in March 2009. MMC believes that participation in KidZania allows us to demonstrate our corporate philosophy - placing customers first and contributing to society as a member of the community. At the MMC pavilion, children can have fun exploring the inherent appeal of cars and experiencing the joy of driving through various activities such as specific jobs and experiences. By thinking and acting for themselves, they can also learn such essential life skills as cooperation, assertiveness, and the ability to communicate with others, which are important skills for developing as an active member of society.

Additionally, in August 2007 we incorporated various programs around the theme of enhancing children's life skills in Star Camp, a family-directed outdoor camping program, which we revived for the first time in 10 years. Through activities such as these, we will continue helping to nurture children by enhancing their life skills, while providing children with opportunities to experience the enjoyment of cars.

# **raffic safety**

#### **Car School**

Car School is a driving program in which the instructors think, learn and enjoy driving together with all the participants. MMC has been running Car School since 1995 as part of its activities to promote safe driving. To ensure that each participant's concerns and questions are addressed, learning events involve a small number of participants and great emphasis is placed on communication. The courses are structured to suit the users' driving skills. The highly experienced team of instructors provides a basic course aimed at beginners, which includes helping the participants to overcome difficulties such as garage parking and parallel parking, a "silver course" to address the needs of aging drivers, emergency braking practice and risk anticipation using a driving simulator, and a hands-on course for users of high-performance sports cars that teaches the participants how to handle the car safely, using a test course.



Car School

# **E**nvironmental preservation

#### The Pajero Forest

MMC is working to preserve and rejuvenate a three-hectare area of mountain forest in a pet project called the "Pajero Forest," named after its iconic SUV. The forest is situated in Hayakawa-cho, Yamanashi Prefecture, and another aspect of the program is deepening exchanges with local residents through volunteer activities. In the first activity program in November 2007, about 50 MMC employees together with volunteers, friends and families, planted around 800 saplings, including zelkova trees.



"Pajero Forest" tree planting by volunteers (November 2007)

#### Overseas tree planting initiatives

In May 2008, 58 Yoshino cherry trees (Prunus x yedoensis) were planted on the premises of Shenyang Aerospace Mitsubishi Motors Engine Manufacturing Co., Ltd. (Shenyang, China).

At Mitsubishi Motors Australia, Ltd. (MMAL), trees have been planted by employees and volunteers along MMAL's test track, corresponding to the number of corporate vehicles sold to the South Australian state government. A total of 46,530 trees had been planted by fiscal 2007.

Since 1999, Mitsubishi Motors North America, Inc. (MMNA) has played an active part in the Illinois Department of Natural Resources' Prairie Restoration Project. As a result, natural prairie has been revived in an area of 3.9 acres (about 1.6 hectares) around the MMNA factory.



Tree planting by MMAL (left) and restored prarie near the MMNA (right)

# **D**articipation in local communities

#### **Factory tours**

The Nagoya Plant (Okazaki factory), Powertrain Plant (Kyoto and Shiga factories), Mizushima Plant and Pajero Manufacturing have opened up their production lines for visits by local elementary schools and other residents as a place for social study. In fiscal 2007, a total of about 39,000 people visited these plants.



Study tour of a vehicle production line (Nagoya Plant)

#### **Company learning visits**

Company learning visits provide opportunities for junior high school students to visit companies during time allocated for school trips and integrated study. The students themselves choose the company they wish to visit and make contact with the company. In fiscal 2007, 102 students from 13 schools visited MMC Head Office in Tokyo.



Company learning visit by junior high school students (Head Office)

ther

# Support for victims of the Myanmar cyclone and Sichuan earthquake

MMC made a donation to help victims of the Myanmar cyclone and Sichuan earthquake disasters of May 2008, and MMC employees also undertook fundraising activities to support those affected. Donations were also made by local affiliates in China, as well as by their employees, and ambulances were donated.

# Mitsubishi Motors' CSR Initiatives

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# **Making CSR Our Top Priority**

Recognizing that rebuilding trust is a continuing process, MMC is engaged in activities with a strong focus on building a prosperous and sustainable relationship with society, such as further strengthening social contribution activities and corporate governance, in addition to continuing conventional compliance and CSR initiatives.

We will also maintain a structure in which the status of these initiatives is reported to the Business Ethics Committee, which is made up of external experts, and monitored by this committee from a third-party perspective.

MMC will continue to make CSR its top priority to ensure that it steadfastly strives to be a good corporate citizen, with the aim of building a long and harmonious coexistence with society.

#### Toward the mutual benefit of the company and society

- Enhance social contribution activities
   Established Corporate Citizenship
   Promotion Office
   Strengthen corporate governance
- Build internal control systems and other structures
- Business Ethics Committee Continue third-party monitoring

Continue compliance/ CSR initiatives Make CSR Our Top Priority

## Maintaining and Strengthening CSR Activities

One of the pillars of MMC's business plans has been rebuilding trust in MMC. We remain dedicated to tackling this issue, in recognition of the importance of fulfilling our corporate social responsibilities.

#### **Initiatives Through Fiscal 2007**

In response to the recall problems of 2004, MMC implemented a thorough investigation of the causes, and based on the lessons learned from this investigation we adopted the policies of "Compliance First," "Safety First," and "Customers First." Based on these policies, the entire company has worked as one to restore trust in MMC.

We receive objective, common sense guidance and advice on these initiatives from the Business Ethics Committee, which acts as an advisory body to the Board of Directors and is made up solely of external experts.

With regard to "Compliance First," the major cause of the series of recall problems was a lack of compliance. Based on MMC's conviction that the company cannot survive without complying with business ethics, MMC is undertaking activities to entrench compliance in the minds of each and every employee so that it can regain society's trust and again be known and recognized as an enterprise with integrity. **>>P.20** 

With regard to "Safety First," in light of the past recall problems, MMC regards determining the need for market measures, such as appropriate and swift recalls based on the perspective of customers, as the most important management issue, in tandem with reliably preventing the recurrence of defects, and initiatives are being undertaken on this basis. We are also working to expedite quality improvements in the marketplace by introducing new quality information systems, while also building in quality at the development and production stages to further enhance the quality of our cars. **>>>P.23** 

With regard to our "Customers First" initiatives, MMC is working to improve customer service on the front line at dealerships, recognizing that it is extremely important not only to satisfy the users of MMC's products, but also to enable the general consumer to broadly understand MMC's corporate activities and approach. (>>>P.29-30 We are also taking steps to improve customer satisfaction, such as by reflecting valuable customer feedback in our products and services.

Based on these efforts to rebuild trust in MMC, the Business Ethics Committee has concluded that the initial stage of this work is virtually complete.

#### **Initiatives From Fiscal 2008**

Upon launching our new mid-term business plan, Step Up 2010, covering fiscal 2008 through fiscal 2010, MMC made the following commitment to society: Placing top priority on corporate social responsibility (CSR), MMC seeks, in addition to continuing conventional compliance and CSR activities, to actively engage in activities aimed at building a prosperous and sustainable relationship with society.

Recognizing that rebuilding trust is a continuing process, MMC believes it is important to engage in activities with a strong focus on building a prosperous and sustainable relationship with society, such as further strengthening social contribution activities and corporate governance, in addition to continuing conventional compliance and CSR initiatives.

We continue to build an infrastructure for enhancing and expanding our social contribution activities. Measures include establishing a Corporate Citizenship Promotion Office in April 2008, enacting a Corporate Citizenship Activity Policy, and building an internal company-wide structure for promoting these activities (see Topics).

With regard to corporate governance, we are implementing company-wide measures, including the establishment of internal controls.

And as before, we intend to maintain a structure in which the status of these initiatives is reported to the Business Ethics Committee, and checked by this committee from a third-party perspective.

# **Establishment of Corporate Citizenship Promotion Office**

MMC has been involved in corporate citizenship activities in various regions for some time, and in April 2008 a Corporate Citizenship Promotion Office was established within the CSR Promotion Office to promote unified social contribution activities at the company-wide level. In June 2008, a Corporate Citizenship Activity Policy was enacted, encompassing the results of the activities that have been carried out so far and the future direction.

Going forward, we are planning to establish an internal promotion structure based on the Corporate Citizenship Activity Policy, and to gradually extend these activities to our domestic and overseas affiliates.

#### Corporate Citizenship Activity Policy

opics

Four key themes based on MMC's corporate philosophy form the base of the company's corporate citizenship activities, abbreviated by the acronym STEP: Support for the next generation, Traffic safety, Environmental preservation, and Participation in local communities.

#### 1. Support for the next generation

Supporting young people's education to create a prosperous future.

#### 2. Traffic safety

Contributing to traffic safety education and the spread of safe driving to realize a zero-accident society.

- Environmental preservation Contributing to preservation of our natural environment.
- Participation in local communities Contributing to the revitalization and development of regional communities.

Note: See pages 13 to 15 for a related article.

## **Corporate Governance**

MMC is strengthening its corporate governance primarily by implementing compliance in practice, improving transparency through proactive information disclosure to stakeholders, and clarifying management responsibility.

#### **Corporate Governance Framework**

MMC employs the Statutory Auditor System pursuant to Japanese Corporate Law. In addition to mandatory organizations and governance systems, we are improving our corporate governance by adding an executive officer system and advisory committees.

MMC's Board of Directors is responsible for making decisions concerning important management issues and overseeing execution. In addition, the executive officer system clarifies the roles and responsibilities of directors and executive officers. Managing directors' meetings composed of directors, executive officers, and statutory auditors make decisions concerning company matters in meetings once every two weeks aimed at speedy decision-making.

# Status of Internal Audit and Statutory Auditors' Audit

Statutory auditors audit operations of MMC and its subsidiaries by attending important meetings such as the Board of Directors Meeting. They also review key internal documents, as well as reports received from the internal auditing groups, subsidiaries and accounting auditors.

Separate from the statutory auditors, MMC has also established two departments within the CSR Promotion Office: the Quality Audit Department and the Internal Audit Department Both are independent from operating units and conduct internal audits from an objective perspective.

The Quality Audit Department monitors whether the Quality Affairs Office is appropriately carrying out operations related to vehicle development and manufacturing based on laws and regulations in various countries. The department conducted a total of 80 audits in fiscal year 2007. The audit results are successively reported to top management and to the Business Ethics Committee twice a year.

The Internal Audit Dept. conducts regular company-wide audits, covering areas including subsidiaries and affiliates in Japan and overseas, to verify the appropriateness and effectiveness of internal control systems including compliance and risk management. The results are reported to the top management at MMC, its subsidiaries and affiliates.

The department is actively working to strengthen corporate governance and internal controls throughout the MMC group both in Japan and overseas. In fiscal year 2005, it established internal auditing divisions at all major overseas subsidiaries. In fiscal year 2007, the department used the opportunity of the consolidation of sales companies over large areas to establish CSR divisions at various companies in Japan.

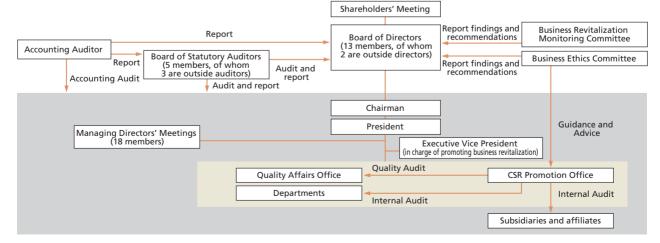
The statutory auditors, Internal Audit Department, Quality Audit Department, Compliance Department and accounting auditors regularly exchange information to strengthen cooperation.

#### Guidance and Advice from Advisory Committees

The Business Ethics Committee is an advisory body to the Board of Directors made up of 6 outside experts. The committee aims at spreading an awareness of compliance, and it provides MMC directors with guidance and advice from an external perspective.

In addition, MMC directors received advice from the Business Revitalization Monitoring Committee, made up of outside experts including Chairman Tomoo Tasaku and representatives of major shareholders (total of six members), to monitor progress against the aims of the Mitsubishi Motors Revitalization Plan. Established in April 2005, the committee held a total of 31 meetings, providing numerous important opinions and advice from an external perspective. This committee was dissolved on March 31, 2008 following the achievement of its initial aims.

#### Corporate Governance Framework (As of March 31, 2008)



Note: The Business Revitalization Monitoring Committee was dissolved on March 31, 2008 following the completion of the Mitsubishi Motors Revitalization Plan, the company's previous medium-term management plan.

As with this committee, the Executive Vice President was put in charge of the Step Up 2010 Office from April 2008. There were 14 directors as of June 19, 2008.

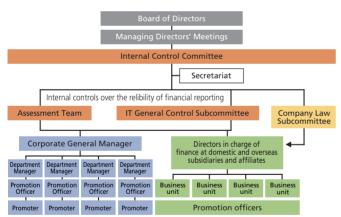
## Internal Control Systems and Risk Management

MMC is committed to conducting proper and consistent management of business operations by making a company-wide effort to develop internal control systems and a risk management system, as well as holding training programs for employees, among other measures.

#### **Development of Internal Control Systems**

Based on the "Basic Policy on the Establishment of Internal Control Systems," MMC is continually working to improve and upgrade systems to ensure compliance with laws and regulations and to promote proper, effective business execution, in line with changes in the domestic or overseas environment, in a drive to further strengthen corporate governance.

In April 2008, MMC augmented this Basic Policy with policies concerning financial reporting and the elimination of anti-social forces. With regards to ensuring the reliability of financial reporting pursuant to the Financial Instruments and Exchange Law, which came into force from fiscal year 2008, MMC is implementing Company-wide measures led by the Group Controlling & Accounting Department, Internal Audit Department, and risk management promotion teams under the leadership of the Internal Control Promotion Committee (renamed the Internal Control Committee from fiscal year 2008).



#### Internal Control Promotion Framework

### Development of Risk Management Framework

MMC is engaged in establishing infrastructure for companywide risk management systems centered on risk management promotion teams in administrative divisions, and is also promoting the sharing of risk information within the company.

To promote risk management systems more systematically and make initiatives continuous, MMC formulated the "Risk Management Rules" and appointed a total of 19 risk management officers (as of May 31, 2008) to each operational group.

Based on the core role of these officers, MMC is working to establish and bolster its risk management systems.

In addition, to prepare for unforeseen contingencies, MMC has developed systems that enable the rapid communication of information to directors and other key personnel, as well as a swift and accurate response. MMC has established the following basic policy on its response to natural disasters such as earthquakes, as well as other crises. The Company will conduct regular educational and training programs based on internal rules and standards to ensure safety and minimize damage in the event of a disaster.

#### [Basic Policies]

- 1. Fulfill corporate responsibilities to regional communities
- 2. Minimize damages as far as possible from negative impacts that hinder business operations
- 3. Work to continuously improve disaster countermeasures
- 4. The company will not pursue liability for temporary damages provided that a response taken during an emergency is a humanitarian measure
- 5. The company will prepare necessary resources to implement countermeasures

### Information Security Management

MMC recognizes that the protection of important information assets in business activities (information as well as information systems, machines, media, and equipment used to handle that information) is vital to fulfilling its social responsibility and earning the trust of stakeholders. Accordingly, we are striving to maintain a high level of information security management.

In April 2006, MMC established an information security policy and internal rules that conform to ISO 27001. We are also providing continued employee education through training sessions, e-learning and other methods, in an effort to achieve progressive improvements.

### Protection of Personal Information

MMC formulated a policy for the protection of personal information in April 2005, and built a management framework to establish internal rules. The company also appointed a person responsible for personal information management at each department under the direction of the Personal Information Officer. MMC educates staff on the subject through ongoing e-learning seminars and other programs, and makes efforts to safeguard personal information in practice.

### Security Trade Control

From the viewpoint of maintaining international peace and security, MMC profoundly believes in the importance of strict trade controls to prevent the proliferation of weapons of mass destruction and the excessive accumulation of conventional weapons.

In order to ensure the appropriate trade control, MMC has established an Internal Security Trade Control Standard as a management regulation. In accordance with the standard and in order to ensure compliance with laws and regulations regarding security trade control the "Supervisory Committee for Security Trade Control" was established under the direction of the president, who acts as Chief Security Trade Control Officer. Legality of export transactions is guaranteed by a management system centered on the committee.

# Compliance

To restore society's trust in the company and be recognized as an enterprise with integrity, MMC believes it is essential to ensure that all staff members thoroughly comply with business ethics.

#### Development of an Organizational Framework for Promoting Business Ethics

In June 2004, MMC established the CSR Promotion Office to ensure thorough compliance and promote a new corporate culture, while restructuring the compliance framework (diagram below). MMC has strengthened the organization to ensure that awareness of compliance spreads to every single employee. The company appointed a total of 19 compliance officers (as of fiscal year 2007) at each department to ensure compliance, under the direction of the Chief Business Ethics Officer (CBEO), and appointed department managers as code leaders in each department under the compliance officers.



#### Organizational Framework for Promoting Business Ethics

#### **Initiatives to Implement Compliance**

In fiscal year 2007, under the theme of "From revitalization to the future," MMC worked to encourage voluntary activities grounded on workplaces and operations by individual staff members, while holding training sessions and other events with the aim of sharing information within the group.

#### **Awareness-Raising Activities**

In fiscal year 2007, MMC held training sessions on compliance led by instructors from outside the company as part of training seminars for directors and corporate auditors, with a total of 24 fulltime directors at the executive officer level or above and statutory auditors taking part.

Meetings are held three times a year in each workplace at which familiar business ethics problems are examined and solutions reached through discussion. These meetings provide a good opportunity to enhance ethical awareness and improve communication through discussion using actual examples.

In addition to these types of discussions at each workplace, compliance measures specific to each department were formulated and implemented under the direction of compliance officers. In these and other ways, MMC worked to promote compliance with business ethics.

#### Establishment and Dissemination of Regulations

MMC is giving priority to its internal reporting system in order to

create a highly transparent workplace environment that is not conducive to scandals and promotes their early detection as well as self-correction. MMC has already established the Employee Counseling Office and external counseling channels through outside attorneys. In April 2006, in line with the enforcement of the Whistleblower Protection Act, MMC established operational criteria related to the internal reporting system, as well as internal regulations, including those prohibiting the disadvantageous treatment of whistleblowers. Furthermore, to create a framework that facilitates internal reporting, MMC is endeavoring to disseminate regulatory information within the company by holding briefings, including information in the company newsletter, and adopting other measures.

In April 2007, MMC fully revised its "Business Ethics of Mitsubishi Motors Corporation"— MMC's corporate ethics standards — to turn them into more practical guidelines for guiding employees' actions. The company is using opportunities such as meetings on business ethics issues at each workplace to help employees gain a full understanding of its content. At the same time, all employees and directors have signed oaths of compliance with these standards. Furthermore, in January 2008, we revised the "Mitsubishi Motors Corporation Code of Conduct," guidelines for conduct that all employees must keep in mind at all times. We distributed these booklets to all employees and directors, and by making use of them on a daily basis, we aim to ensure thorough compliance with business ethics.

# Activities to Spread Compliance Among MMC Group Companies

MMC believes that restoring trust in the company requires a concerted effort by the entire MMC group. To this end, domestic group companies (including exclusive dealers) have taken the lead in carrying out initiatives since fiscal 2005. In fiscal 2006, almost all companies completed the establishment of systems to ensure compliance with business ethics. They regularly conduct training on resolving corporate ethics problems and the development of precedents. In addition, major overseas affiliated companies have begun establishing concrete systems to promote compliance, following the completion of an evaluation of the status of their compliance systems and activities.

#### **Other Initiatives**

To prevent past errors such as the regrettable recall problems from being forgotten over time, January 10 and October 19 have been designated "Safety Pledge Days," since two fatal accidents occurred on those days involving large trucks manufactured by Mitsubishi Fuso, a former MMC division. All employees observe a moment of silence on these days, and the previously mentioned meetings to review business ethics problems are held around these times.

MMC reports on the status of these activities to the Business Ethics Committee, which acts as an advisory body to the Board of Directors and is made up of external experts. MMC directors receive objective, common-sense guidance and advice regarding these matters.

In fiscal year 2008 onward, MMC will continue to further develop and promote initiatives to ensure compliance based on the theme of "building a sustainable relationship with society."

## Activity Report by the Business Ethics Committee



 Members of the Business Ethics Committee

 Nobuyuki Yamamoto
 Kazuko Miyamoto
 Konoe Kawagishi

Noboru Matsuda (Chairman)

Takahiro Fujimoto

Kazuo Mura

### The Business Ethics Committee

The Mitsubishi Motors Business Ethics Committee was established in June 2004 as an advisory body to the Board of Directors of MMC. At that time, the recall problem had reignited and MMC faced a crisis concerning the company's survival due to the loss of confidence and trust of society in MMC. The Business Ethics Committee was established as one of the critical steps to restore trust in MMC and ensure its revitalization. The aims of this committee, which is made up solely of external experts, are to conduct monitoring, guidance and consultation from the viewpoint of external oversight and "common sense" with respect to MMC's overall activities to restore trust, especially in terms of the establishment of compliance. The scope of the committee's activity is not limited to business ethics; but also includes matters broadly related to quality problems and corporate culture.

#### Review of the Committee's Activities Since its Establishment

Since the committee convened its first meeting in July 2004 through to June 2008, it has held a total of 47 meetings and has considered as many as 112 issues in total. During this period, the members of the committee have raised frank questions and expressed candid opinions regarding each of these issues from the standpoint of external oversight and common sense. The general categories of topics considered by the committee are shown below. A variety of issues were considered based on each topic (the figures in brackets indicate the number or frequency of these issues).

- 1. Response to recall problems [23]
- 2. Recall process reform and quality improvement initiatives [15]
- 3. Initiatives to entrench compliance [31]
- 4. Other initiatives, including corporate culture reforms [38]
- 5. Fact-finding visits to plants and dealers [5]



Plant visit (July 28, 2004, Nagoya Plant)

### **Overview of Activities in Fiscal 2007**

On May 21, 2007, the Board of Directors of MMC received a report from the committee comprising a summary of MMC's activities toward restoring trust in the company, as well as an evaluation and proposals regarding these activities. The report generally gives high marks to MMC activities in this regard. For example, looking back on the measures that MMC had taken so far, the report concluded that earnest and steady progress had been made in activities to restore trust in the company, based on the unwavering stance of top executives, and that the initial stage had been accomplished. At the same time, the report also pointed out issues and made proposals aimed at providing further support for MMC's revitalization, indicating the following: "the job of restoring trust in MMC is only half completed. It is still necessary to stay fully committed to activities to restore trust."

MMC's initiatives in response to the report's evaluations and proposals are also explained to the committee on a case-by-case basis, and the committee is asked for its views. All departments will continue to implement specific measures in the future based on the committee's advice.

The committee convened 12 times during fiscal year 2007, considering 31 issues including the company's response to the aforementioned report, a review of "Business Ethics of Mitsubishi Motors Corporation," and the fiscal year 2007 business ethics compliance promotion program. As well as formal committee meetings, committee members attend the Compliance Officers Meeting in July and Quality Meeting in September as observers, at which they are asked for their views and any queries they may have. During a visit to the Okazaki district, the committee gained an appreciation of MMC's environmental initiatives through an explanation of electric vehicles and test drive of the *i MiEV*. In addition, the committee's views and guidance are requested on any urgent issues, which are explained to the committee on a case-by-case basis.



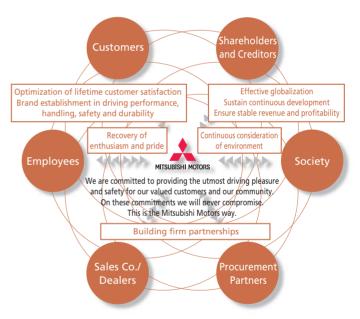
i MiEV test drive (September 20, 2007, R&D Center)

# Mitsubishi Motors' Social Initiatives

## **Together with Stakeholders**

MMC regards customers, shareholders and creditors, society at large, procurement partners, sales companies and dealers, and employees as its stakeholders. MMC is conducting business activities that pay full consideration to the environment and society.





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## With Our Customers

MMC is implementing a range of initiatives to ensure that we deliver high-quality products to our customers, and that our products can be used with confidence.

#### Aiming to Provide High-quality Products

MMC regards determining the need for post-market measures, such as appropriate and swift recalls based on the viewpoint of customers, as the most important management issue, in tandem with reliably preventing the recurrence of defects and taking steps to prevent such defects in advance.

#### Decision-making Processes for Swift and Rigorous Market Measures

#### Initial Response System Based on Specialists and Making Decisions from the Customer's Perspective

MMC has developed a system in which a Primary Inspection Team, made up of technical specialists in the areas of product development and manufacturing, is able to immediately launch an investigation as soon as information on defects is received from dealers. Moreover, the Customer Relations Department voices the opinions of customers at meetings to determine whether a campaign to repair the vehicles is necessary.

Checks by Top Management and the CSR Promotion Office

All cases, whether or not they have been determined to require post-market measures, are reported to the Board of Directors. In this way, top management checks all cases. In addition, the Quality Audit Department within the CSR Promotion Office attends all meetings associated with the determination of market measures and audits the decision process, checking the validity of decisions. Recall audit meetings, which are held by the CSR Promotion Office every three months, bring together representatives from quality, development, purchasing, manufacturing, and sales departments, who work together to optimize and expedite recall operations. **Expediting Quality Improvements in the Marketplace** Introduction of New System (SQM-BC<sup>\*1</sup>)

MMC completed the nationwide development of the SQM-BC system in October 2006. As a result, it has now become possible to obtain market defect information from dealers via electronic media in real time. Through the use of SQM-BC, MMC is striving to shorten the time taken to obtain information, share information

**Customer Center** 

Flow of Quality Information from Customers

Customers

with dealers, promote verification on actual vehicles when defects arise, and rapidly investigate the causes of defects.

#### Building in Development and Manufacturing Quality MMDS (Mitsubishi Motors Development System)

MMC has introduced the Mitsubishi Motors Development System (MMDS) to assure and improve the quality of all product development processes. Using seven quality gates, the system checks and assesses the degree of attainment of predetermined standards that must be met by every development and manufacturing process at every stage.

#### ISQC (In Stage Quality Creation)

ISQC is a system for verifying quality in each process on manufacturing lines. MMC operates this system at all of its manufacturing sites. ISQC staff members with extensive experience and knowledge are deployed for each important process of welding, painting, and assembly, and if a vehicle does not pass checks by these staff, it does not proceed to the next process.

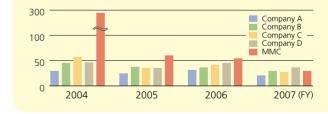
#### Cultivating Our Workforce

Taking a page from improvement measures for enhancing quality, MMC is providing practical internal training based on the themes of the Taguchi Methods and FMEA/FTA.<sup>\*2</sup> It is essential to improve the quality of people associated with quality enhancement and firmly establish quality awareness within the company. These people, in turn, become the foundation upon which good manufacturing is built.

# **OPICS** Reduction in Problems Experienced by Owners

As a result of these ongoing initiatives, the number of problems reported by our users to the Ministry of Land, Infrastructure and Transport's "Automobile Fault Information Hotline"<sup>\*3</sup> has been falling, and in fiscal 2007 the figure was in line with our industry peers.

Problems reported to the Ministry of Land, Infrastructure and Transport Hotline (per 1 million vehicles owned)





\*1 SQM-BC: Strategic Quality Management-Backward Chain

\*2 FMEA: Failure Mode Effect Analysis, FTA: Fault Tree Analysis

\*3 Automobile Fault Information Hotline: The Ministry of Land, Infrastructure and Transport collects and analyzes fault information, which helps to implement swift recalls.

#### To Ensure Communication with **Customers**

MMC established the Customer Center in 1968 as a point of contact for directly receiving customer opinions. Since then, a variety of initiatives have been implemented based on the desire to respond to customers speedily, precisely and kindly.

Open all year round except for the December 31-January 3 national holidays, the Customer Center aims to be an extremely convenient resource for customers



MMC Customer Center

0120-324-860 (Toll free in Japan) Open 09:00-17:00 (Saturdays and Sundays 09:00-12:00 13:00-17:00) Requests for catalogs can be accepted 24 hours a day

#### **Relaying Customers' Comments**

MMC provides feedback on customer opinions and comments within the company via the company intranet and an e-mail newsletter issued to all employees. Depending on the content of the information, the company provides individual feedback to relevant departments, and reflects customers' opinions in improvements to products and services.

For example, customers' direct opinions are relayed in detail to R&D departments, and they use these as a reference for improving products and developing subsequent vehicles. In addition, MMC produces Product Quality Reports based on information on defects that has been directly conveyed by customers to the company, and we use these reports to support documents for deciding on market measures such as vehicle recalls.

#### Providing Information on the MMC Website

MMC has set up an inquiry page on its corporate website for customers who use the Internet. This is designed to enhance convenience outside telephone service hours. For example, customers can check matters that are unclear to them in the FAQ section, and can send in questions by e-mail.



Inquiry page



#### Bringing Mobility to as Many Customers as Possible

Based on the desire to bring the convenience and comfort of traveling by car to as many people as possible, MMC started sales of the "Hearty Run" series of welfare vehicles in Japan in 1991. MMC currently offers a lineup of four models that accommodate wheelchairs and seven models with seats that can be rotated to make it easy to get in and out of the vehicle. We are also providing opportunities for people to actually experience and easily select "Hearty Run" vehicles. We have established the Mitsubishi Barrier-Free Lounge in Tama as a permanent showroom, and we are actively exhibiting these vehicles at welfare exhibitions in various locations nationwide.

http://www.mitsubishi-motors.co.jp/ heartyrun/index.html (Japanese only)



Delica D:5 equipped with a side-moving passenger seat

Mitsubishi Motors Deutschland GmbH, MMC's German sales company, sold 450 welfare vehicles in fiscal 2007. Also, the company provides various programs to support the participation of disabled people in society. It is also a sponsor of the German Wheelchair Sports Association.



## With Shareholders and Creditors

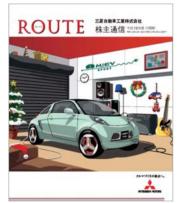
MMC discloses information by issuing a variety of publications, by arranging informative factory visits, and by other actions.

### **General Shareholders' Meetings**

MMC regards general shareholders' meetings as an opportunity for all shareholders and investors to gain a better understanding of MMC's activities. We are attempting to provide highly accessible meetings by making every effort to avoid holding them on common meeting days and choosing venues that accommodate as many people as possible. Furthermore, we strive to conduct vigorous question and answer sessions in an effort to deepen understanding regarding MMC.

### ROUTE, a Shareholders' Magazine

In June 2007 and December 2007, MMC published ROUTE, a shortform magazine for shareholders. By explaining such matters as the company's business performance, corporate activities, and targets in a way that is easy to understand, the company hopes to maintain and enhance shareholders' interest in MMC. MMC has adopted a format with enhanced product information to encourage as many individual shareholders as possible to support MMC and Mitsubishi vehicles; the company plans to publish this magazine twice a year.



December 2007 edition of ROUTE, a shareholders' magazine



#### Other Measures to Strengthen Information Disclosure

- Publication of annual reports in Japanese and English
- Publication of fact books in Japanese and English





Annual Report

Fact Book



http://www.mitsubishi-motors.com/ corporate/ir/irlibrary/e/index.html

### **Factory Visits**

In order to further deepen understanding of MMC, in March 2008 the Nagoya plant (Okazaki factory) held a factory visit for individual shareholders. Around 100 participants chosen at random from a large number of applications were able to observe the process of vehicle assembly. We hope to hold similar events in the future to promote better understanding of MMC.



Factory visit at the Nagoya plant, March 2008

## With Procurement Partners

MMC is building trust-based relationships and systems for cooperation with suppliers, and implementing various initiatives including improvement activities.

#### Procurement Policy and Systems to Foster Trust and Cooperation

Strengthening trust and cooperation with suppliers is a vital part of developing and producing cars.

MMC is working to establish relationships of trust through a variety of activities, based on its procurement policy of "Establishing greater mutually cooperative relationships based on the assumption of long-term business transactions."

One specific activity is Plant Performance Improvement Activity, an initiative we began with suppliers. This initiative involves the participation of specialists from various MMC departments including purchasing. The personnel visit suppliers' plants and work with them to develop proposals for improving the plant's performance. To make these activities even more effective, from fiscal 2008 MMC is starting Monozukuri<sup>\*1</sup> Enhancement Activity which integrates Plant Performance Improvement Activity and other activities with suppliers, e.g. VE<sup>\*2</sup> activities.

Monozukuri Enhancement Activity is conducted with cooperation between suppliers and related MMC departments, while the Procurement Group Headquarters serves as point of contact for the activity.

In June 2005, MMC established a Suppliers Council to build new trust relationships, foster a feeling of solidarity, and realize strong partnerships. The Council has four vigorously active subcommittees: the Subcommittee of Commodity Suppliers, the Subcommittee of Raw Materials Suppliers, the Subcommittee of Production Facility Suppliers, and the Subcommittee of Processed Components Suppliers. As of May 31, 2008, the Council consisted of 167 major suppliers.

Through mutual brainstorming amid the work being performed by each subcommittee, MMC intends to deepen mutual understanding with these suppliers and strengthen its systems to foster trust and cooperation.

#### Organization of MMC Suppliers Council 167 Major Suppliers MITSUBISHI MOTORS **MMC Suppliers Council** The The The Subcommittee The Subcommittee of Production Subcommittee of Processed Subcommittee Commodity Suppliers of Raw Materials Components Suppliers Facility **Suppliers** Suppliers

\*1 Monozukuri: This word means craftsmanship in Japanese.

\*2 VE:Value Engineering

### Collaboration with Suppliers in Environmental Activities

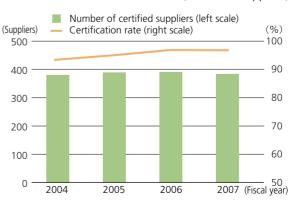
#### Green Procurement\*3

Since November 2000, MMC has been engaged in environmental conservation activities in procurement, otherwise known as "Green Procurement."

As part of this initiative, MMC asks all of its suppliers of components and products to acquire ISO 14001 certification (the international standard for environmental management systems). Our target is a 100% rate of certification.

It takes more than one year to carry out the activities to acquire certification, and as a result of our efforts to encourage suppliers to understand the value of certification and carry out the necessary activities, the rate of certification stood at 96.7% at the end of fiscal 2007.

#### Status of ISO 14001 Certification (number of suppliers)



\*3 Green Procurement: Defined here as environmental conservation activities at the procurement stage, and does not include environmental conservation activities associated with purchasing office supplies or equipment and other such functions.

# With Society and Local Communities

MMC seeks to work with society and the community in a spirit of harmony through various activities such as donations and fundraising, and safe driving initiatives, and by opening up its facilities to local residents.

### **Donations and Contributions**

MMC endorses the activities of the Foundation for Orphans from Automobile Accidents, which is operated mainly for the purpose of supporting children orphaned by traffic accidents. MMC also contributes financially to the Foundation.

In addition, MMC provides assistance for regions that have been hit hard by natural disasters and other incidents. In fiscal 2007, MMC donated aid supplies and made a contribution to assist the area in Japan struck by the Niigataken Chuetsu-oki earthquake.

#### Automobile Information Service for Elementary School Children

Every year since 1993, we have provided a toll-free telephone information service for elementary school children — an initiative that is unique in the auto industry. We also publish a pamphlet ("Hello, we are Mitsubishi Motors Corporation") targeted at elementary school children that explains the car-making process using illustrations and explains our environmental initiatives.



Pamphlet provided to elementary school children ("Hello, we are Mitsubishi Motors Corporation")

On a website specifically for children called Children's Car Museum, we have also added an environmental page called Let's Protect the Global Environment! that explains in simple terms the relationship between cars and the environment.



Children's Car Museum website for children



#### Initiatives by the Mizushima Plant (Okayama Prefecture)

When the cherry blossom season arrives, MMC opens up its grounds in front of the Mizushima Plant for cherry blossom viewing.

The Mizushima Plant's grounds are well known for their beautiful cherry blossoms, and local residents have been able to enjoy viewing the blossoms annually for more than 20 years. This event remains a spring feature in Mizushima even today.

The 100-plus Yoshino cherry trees growing in the grounds create a backdrop for get-togethers with colleagues, parties with local companies, and cheerful gatherings of local families, with more than 3,000 people savoring the beautiful scenery each year.



Mitsubishi Motors cherry blossom viewing

### Initiatives by the Nagoya Plant (Aichi Prefecture)

Employees in the Okazaki district (Nagoya Plant, R&D Center, etc.) participate in the "Mitsubishi Motors Safe Drivers' Club," an organization for voluntary activities. Throughout the year, the club undertakes activities such as early morning traffic safety monitoring at crossroads close to the company premises, and donation of safe driving merchandise to various organizations.

The club has also developed activities aimed at enhancing the appearance of the area around the plant, and is working to strengthen communication with local residents.



Early morning traffic safety monitoring by employees

### Initiatives by the Powertrain Plant (Kyoto Prefecture)

The Powertrain Plant provides the parking lot in front of its main building as part of "Park and Ride." This policy initiative, carried out by the Kyoto Municipal Government during the season when leaves change color in the fall, aims to reduce the number of cars traveling to Arashiyama and other tourist sites for this annual event.

Through this initiative, MMC is helping to ease traffic congestion in the region. This initiative is an attempt to resolve problems such as traffic jams that occur mainly at tourist sites. As part of the initiative, companies in the vicinity of tourist site railway stations provide parking lots, from which tourists can get on shuttle buses and transfer to public transport, which takes them to the sites they wish to visit. This service was started in 2005 and has been operating on Saturdays and Sundays in November every year.

The Powertrain Plant has also cooperated in this initiative since 2006 as one of its regional contribution activities.



Parking lot used for tourists' vehicles.

#### **Tokyo Air Pollution Lawsuits**

On August 8, 2007, the settlements were reached regarding the Tokyo Air Pollution Lawsuits at the Tokyo District Court and the Tokyo Appeal Court.

Based on these settlements, together with the other six automobile manufacturers as defendants, MMC has paid a settlement amount to the plaintiffs and has made some financial contribution to the medical assistance program promoted and established by the Tokyo Metropolitan Government.

#### Initiatives by Mitsubishi Motors North America

Employees at Mitsubishi Motors North America, Inc. founded Kids Safety First, a national, non-profit organization dedicated to promoting automotive child safety. Kids Safety First accepts funds from MMC and other parties and produces easy-to-understand educational materials regarding car safety in English and Spanish. It distributes these materials free of charge to police stations, fire stations, hospitals, elementary schools and other places in all 50 U.S. states.

Various educational materials, including videos and coloring books, are provided so that even young children can enjoy themselves while learning about the importance of using seat belts and child seats, and the correct methods of wearing and installing them.



The front and back of a Kids Safety First T-shirt.

# With Sales Companies and Dealers

MMC is undertaking measures such as renewing dealer stores and enhancing the capabilities of sales companies and dealers. The aim of these measures is to provide greater satisfaction to customers in a variety of aspects, including new vehicle sales, repairs, inspections, and the handling of inquiries and complaints.

# Creating Stores Where Customers Feel Comfortable

MMC is successively renovating dealer stores throughout Japan to ensure that they have an atmosphere that facilitates discussion between staff and customers, making them feel inclined to visit the stores at any time. In fiscal 2007, MMC renovated 20 dealer stores.



Interior of Kitano Outlet of Hokkaido Mitsubishi Motors Sales Co., Ltd.

# Training to Enhance the Comprehensive Capabilities of Stores

MMC provides various kinds of training programs for the sales and service departments of sales companies and dealers that are aimed at enhancing their deal negotiating capabilities and technical capabilities.

In fiscal 2007, we conducted the "National Role Play Contest," which entailed competing in the comprehensive capabilities of basic customer service, product knowledge, and deal negotiation skills, with the aim of ensuring customer service that results in customer satisfaction.



Fiscal 2007 National Role Play Contest

# Cooperation Between After-sales Service and Sales

In the past, MMC had integrated its after-sales service functions with the quality affairs departments in the Quality Affairs & Technical After sales Service Group Headquarters. On April 1, 2008, this was merged with the domestic Sales Department to create the "Domestic Sales & After sales Service Group Headquarters." By achieving closer cooperation with the Sales Department, we are aiming to offer lifetime support to our customers throughout the life of their cars, and to further enhance customer satisfaction.

#### Improving Service Technology Capabilities and Customer Response Capabilities

In fiscal 2005, MMC revised the Mitsubishi Service Technical Skill Qualification System, MMC's qualification system for service staff, in order to maintain and improve the technical capabilities of service staff. By implementing training for service staff, we are also aiming to raise the overall service level of dealers and enhance customer service so that service staff have an excellent understanding of customer service issues, as well as purely technical issues, and so that ultimately they can also explain to customers the details of maintenance work carried out by the service engineers, to the satisfaction of their customers.

In addition, 37 staff members acquired the First Class Vehicle Mechanic certificate in fiscal 2007, the highest public vehicle maintenance qualification in Japan, bringing the total number of staff holding this qualification at the end of fiscal 2007 to 110. In this way, we are striving to achieve an even higher level of service support.

#### Activities to Disseminate and Firmly Establish the

**Mitsubishi Standard Vehicle Maintenance Reception Style** MMC established the Mitsubishi Standard Vehicle Maintenance Reception Style in fiscal 2004 to ensure a standardized style in the process of vehicle maintenance reception, customer handover and subsequent follow-up. To disseminate and firmly establish this Standard Vehicle Maintenance Reception Style, training sessions for dealers have been held across the country. In fiscal 2007, MMC held 121 training sessions for 2,513 people, with the benefits of the training then being reflected in the actual practice at dealers.

In addition, to follow up on actual practice at dealers and thereby ensure customer satisfaction, MMC carries out surveys on the degree of penetration based on an in-store 10-item checklist every three months. The company compiles and analyzes these results, leading to further improvements.

#### Initiatives to Enhance Customer Satisfaction (CS)

In fiscal 2007, MMC launched a customer service improvement campaign based around the concepts of *kikubari* (sensitivity to others' feelings), *mekubari* (paying attention to others' actions), and *ashikubari* (taking time to interact with others), and in cooperation with dealers nationwide, we have been working to enhance customer satisfaction. This action plan focuses on three specific areas:

Greet customers in a spirit of *kikubari*, *mekubari* and *ashikubari*.
 Be good listeners.

3. Take time to respond to customers' queries.

As a result of these activities, a customer service survey carried out by MMC showed that there had been a 1.7-point improvement in customers' willingness to use their dealer for vehicle maintenance inspections.

MMC also interviewed those dealers that gained high marks for customer satisfaction as positive CS case studies, and we have been aiming to further raise customer satisfaction by disseminating this information among dealers nationwide.

In fiscal 2008, we have continued with our customer satisfaction campaign initiatives, and we have also been promoting "regular customer creation" activities to develop dealers that win praise from their customers. We are also aiming to strengthen customer support in general, from the individual staff member level through to initiatives among dealers, so that we can help our customers to get the most from their motoring experience. **Strengthening Technical Support Capabilities and Supporting Customer Service at Dealers** 

In order to strengthen dealer support and on-the-ground research capabilities, the Domestic Service Support & Engineering Department, which previously formed part of the After sales Service Office, was relocated to the Domestic Sales Office & After sales Service Group Headquarters following reform of the job classification system in April 2008. By achieving closer cooperation with the sales departments, we are working to provide greater guidance to dealers and strengthen service support for dealers, while also providing support to our customers.

# Cooperation Aimed at Environmental Conservation

MMC is encouraging its domestic sales companies to introduce Eco Action 21 (EA21),<sup>\*1</sup>an environmental management system established by Japan's Ministry of the Environment, in order to enhance environmental management systems at these companies. Following the regional integrations implemented in April and July 2007, which created 5 consolidated sales companies <sup>\*2</sup> from the previous 29, accreditation was obtained by 4 companies across 208 branches, including at the business unit level. Among non-consolidated sales companies, Zama Mitsubishi Motors Sales Co., Ltd. achieved accreditation in April 2008.

MMC is aiming to introduce this system at all of its domestic sales companies in the future, and the entire MMC Group will work proactively to encourage environmental conservation and reduce MMC's environmental impact by cutting CO<sub>2</sub> emissions and industrial waste, and by promoting recycling.

\*1 Eco Action 21 (EA21) : Guidelines from the Ministry of the Environment for environmental management systems based on the ISO 14001 standard. A registration system using third-party certification started in October 2004.

\*2 Six companies from March 2008, with the addition of Niigata Mitsubishi Motors Sales Co., Ltd.

## With Employees

At MMC, we are creating a framework so that employees can get fulfillment from their work.

#### Personnel Policies

At MMC, we believe that a workplace should enable an employee to realize their full potential and allow them to express creativity. Based on this belief, since 2002, we have reformed the personnel system for managerial and ordinary employees based on the stance of treating employees as independent individuals who share equal relationships and the same lofty aspirations for the company. At the same time, we place emphasis on staff education, and the Human Resources Department, which is responsible for promoting these initiatives, executes a PDCA cycle with respect to all personnel policies and also supports staff.

#### **Employee System and Assignment**

MMC evaluates, remunerates and promotes employees on the basis of market principles, not age or past achievements. The basis of this system is the concept that there is a role expected of each position and job, and employees are rewarded according to their performance and achievement of targets within that role.

Furthermore, based on the aim of "personnel liquidity" for the purpose of reforming the corporate culture, MMC implements personnel transfers and rotation that will lead to the company's future growth. In fiscal 2007, about 400 people were transferred (out of approximately 6,000 applicable employees).

MMC is also promoting increasingly active roles for female employees to create a workplace where female employees can work dynamically and for a long time while making use of their special characteristics and abilities.

#### **Professional Development Policy**

MMC supports employees in their professional development with the aim of fostering self-reliant professionals. We offer numerous training programs in this regard. These include "leadership training" to nurture future strategic business leaders, "management training" to equip employees with systematic managerial skills, "engineering training" aimed at refining specialized knowledge skills, "quality training," and "professional and manufacturing training" designed to enhance and pass on technology.

# Employment of Elderly Staff and Disabled People

Today, the demand to employ elderly staff in Japan is growing. Recognizing that an increasing number of its employees are reaching retirement age, MMC adopted a re-employment system for elderly staff on April 1, 2006. The aim of this system is to pass on important skills and technology, as well as to secure valuable human resources. In fiscal 2006, 70 elderly staff were re-employed, and 82 in fiscal 2007.

MMC is also focusing its efforts on employing disabled people. For example, as we have stepped up cooperation with nearby welfare facilities, organizations, and public employment security offices, we are proactively hiring disabled people. In April 2007, MMC established a subsidiary called MMC Wing to create a new opportunity for intellectually disabled people to play an active role.

#### Creating a Pleasant Workplace Environment

MMC, guided by a basic policy of creating environments that help employees realize their potential, offers a "menu" of welfare services, including dormitories for singles and company housing that employees can select from freely according to their particular requirements. Also, MMC has been working to establish conditions that enable employees to balance the dual demands of work and childcare, in line with the objectives of the "Law to promote measures to support the development of the next generation." Initiatives have included greater provision of childcare leave and the extended

rollout of a system of shortened working hours for childcare, as well as a new maternity leave scheme. In recognition of these initiatives, in June 2006 MMC obtained a childcarefriendly accreditation mark (popularly known as Kurumin) from the Ministry of Health, Labor and Welfare.



#### Health and Safety Occupational Safety

Safety comes first at MMC. With this fundamental philosophy in mind, MMC pursues initiatives that enable every employee to work side by side with their colleagues in workplaces conducive to their health and safety. In fiscal 2007, the rate of lost time injuries (LTI)<sup>\*1</sup> was 0.26.

#### **Road Safety**

Automaker employees have a particular obligation to follow traffic rules. To ensure this happens, we offer all employees safe-driving courses and undertake hazard-awareness tests for new employees. Furthermore, employees are required to report any traffic accidents or infringements to share information and raise awareness of safety.

We take a hard line on serious infringements and accidents and all members of MMC are working toward their elimination.

#### Positive Health

We conduct ongoing activities based on the concept that individual health is an individual responsibility.

- We offer voluntary proactive health-management campaigns
- We offer health guidance and consultation with hygienists and dieticians, disease prevention education and physical examinations Mental Health

Communication with others has an important role to play in the early detection and treatment of mental health problems. We have therefore created an environment that makes it easy for employees to seek advice on these issues.

- On-site visits by psychiatrists and counselors
- Telephone counseling with a health insurance society
- Mental health education for managerial employees

\*1 Rate of lost time injuries (LTI): Number of people taking leave due to labor accidents per million hours worked.

### In-house Communication

In-house communication between MMC and its employees plays an important role in creating a vibrant workplace and ensuring the seamless execution of business. MMC uses various tools including internal newsletters and intranets to share internal and external information and top management policy, thereby ensuring proactive internal communication.

#### Internal Newsletter Renewed With Enriched Content

MMC has launched Evolution Spirit, a new monthly internal newsletter with enriched content to replace REBORN, which had been issued monthly until fiscal 2007. Both domestic and overseas editions are being issued to share internal group information on a global basis.



Evolution Spirit internal newsletter.

#### **MMC's Intranet Revamped**

A wide range of information is posted on MMC's intranet, from recent events to basic information such as company work standards. In this way, the company's intranet provides multifaceted support to employees in the work that they do. In March 2007, the intranet's webpages were revamped to improve its user-friendliness.

#### Intranet Streaming Video News

MMC uses its in-house intranet to post carefully selected information and news that cannot be communicated by print and photographs alone. This includes comments from customers and news about employees' activities. Thanks partly to employees providing material, 22 editions were distributed in fiscal 2007.

#### **Employee Meetings With Top Management**

Top MMC management proactively hold meetings with employees. For example, FLAT<sup>\*2</sup> is the name MMC has given to a series of faceto-face meetings between the president and employees, in which the president visits the workplace. MMC believes that this opportunity for face-to-face communication both enables top management to directly convey to employees their convictions and ideas, and employees to say what they really think, including expressing workplace problems.



President Masuko holding a face-to-face meeting with employees at the Kyoto Factory.

# Establishment of Contact Points for Employee Proposals

All MMC employees have the "ear" of the president. MMC has contact points that allow employees to present ideas and opinions directly to the president. The president and relevant departments respond to these opinions and ideas, and submissions are used to change various aspects of the company.

Since fiscal 2006, employees have been able to make proposals on personnel and welfare issues, and since fiscal 2007 contact points have been established so that the relevant departments can receive proposals directly by e-mail concerning products, domestic sales and other issues.

# Topics

## MMC Female Employee Participates in National Skills Competition

Yui Taniguchi, a female employee in MMC's Powertrain Plant, took part in the 45th National Skills Competition held between February and March 2008, representing Kyoto Prefecture in the machine assembly category. As well as being the first time for MMC to enter a female employee, it was also the first time that a female competitor had taken part in the machine assembly category. Although she was not

placed among the prizewinners this time, she continues to hone her skills on a daily basis so that she can make her own contribution to Japanese manufacturing.



Yui Taniguchi (the Powertrain Plant)

# Mitsubishi Motors' Environmental Initiatives

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# "Drive@earth" MMC aims to fulfill its responsibility toward the environment, contributing to a sustainable society.

As summarized in the new "Drive@earth" corporate tagline, MMC's goal is to make cars that provide driving pleasure while at the same time providing good environmental performance.

Vehicles must be a part of a sustainable future for people, society and the planet. MMC is currently focusing attention on its responsibility toward the environment as one of its most important management themes.

We are developing and commercializing a range of environmentally friendly technologies. We also ensure environmental factors are taken into account in all our business operations, including manufacturing and sales, and work to support society through external activities.



# **Environmental Policy**

MMC formulated a specific Environmental Policy in 1999 to clarify the aims of environmental protection activities.

This policy affirms environmental protection as one of the most important issues for management and declares MMC's commitment to undertake environmental protection activities on a continuous basis while adopting a proactive stance on environmental management and performance issues.

#### **Basic Policy**

Mitsubishi Motors recognizes that protection of the global environment is a priority for humanity and as such makes the following pledges: 1. Taking a global perspective, we are committed to harnessing all our resources to achieve continuous reductions in the environmental

- impact of all our corporate activities, spanning development, procurement, production, sales, and after-sales servicing of vehicles.
- 2. As a good corporate citizen, we are committed to take actions that protect the environment at the level of local communities and society as a whole.

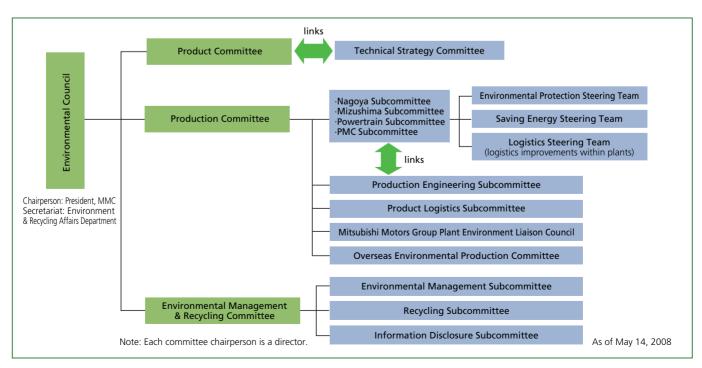
#### **Behavioral Standards**

- 1. We will endeavor to protect the environment by forecasting and assessing the environmental impact of our products at all stages in their life cycle. Priority is given to the following areas:
  - •Prevention of global warming by reducing emissions of greenhouse gases
  - •Prevention of pollution by restricting emissions of substances harmful to the environment
  - •Reduction of waste and maximizing efficient use of resources by promoting conservation of resources and recycling
- 2. We will endeavor to improve our environment management practices as part of ongoing efforts to ameliorate the impact on the environment.
- 3. We will comply with environmental regulations and agreements, and will work to protect the environment by establishing voluntary management targets.
- 4. We will encourage our affiliates and suppliers, both in Japan and overseas, to cooperate in working to protect the environment.
- 5. We will actively disclose environment-related information and will seek the understanding of local communities and of society at large.

# **Environmental Organization**

MMC's Environmental Council was formed in 1993 and is chaired by the president. The council meets once a year to determine basic medium- and long-term corporate policies on measures to protect the environment and to review progress against the Environment Initiative Program 2010 and annual targets. Three cross-organizational subcommittees use the PDCA cycle<sup>\*1</sup> to manage their activities in achieving these goals, while the secretariat monitors progress through quarterly follow-up.

The Environmental Council meeting in May 2008 discussed improving environmental management across the Group and measures to reduce CO<sub>2</sub> emissions in all business areas. The Council also decided on the direction of future activities.



\*1 Plan, Do, Check, Action management cycle

# Mitsubishi Motors Environment Initiative Program 2010

In fiscal 2006, MMC announced the Mitsubishi Motors Environment Initiative Program 2010 (EIP 2010) to guide its environmental initiatives until fiscal 2010. Mitsubishi Motors Group companies are working together in acts designed to achieve the goals of EIP 2010.

		Item continued from before
	Category	Activities and Goals (Target deadline is 2010 unless otherwise specified)
Environmental	Build up global environmental management	• Expand environmental management system to cover non-production subsidiaries and affiliates, including overseas companies
Management	framework	<ul> <li>Promote acquisition of EA21 environmental management certification for domestic sales companies</li> </ul>
		Enhance in-house Environmental Management System (EMS) initiatives
	Collaboration with suppliers	Promote acquisition of ISO14001 and other environmental management certification by suppliers
	Establish DfE promotional organization	Utilize for LCA evaluation of all products and for design and development
	Expanding and improving training/increasing	Raise environmental awareness throughout MMC Group
	awareness and information disclosure	Expand and improve information disclosure about environmental initiative activities
	Expanding and improving social contribution	Expand lecture program at elementary schools
	activities and environmental activities	Develop Pajero Forest tree-planting activities
Prevention of	Improve automobile fuel economy	Progressively enhance fuel economy by incorporating low-fuel consumption technology into new vehicles (worldwide)
Global Warming		<ul> <li>Japan: Achieve domestic fuel economy standard targets for 2010 in all vehicle categories ahead of schedule by 2007 (gasoline vehicles)</li> </ul>
2	Development of next generation of low-fuel	Develop and commercialize next-generation clean diesel engines
	consumption core technologies	Develop and commercialize next-generation high-efficiency transmissions
	Compatibility with diverse energy sources	Develop and launch biofuel compatible vehicles
	Development and practical application of plant-based resin	Develop and practically apply "Green Plastic" derived from proprietary vegetable-oil based resin
	Development of air conditioners using refrigerants with low global-warming factors	s
	Reduction in $CO_2$ emissions from production and logistics	Total CO <sub>2</sub> emissions from production: At least 20% lower than fiscal 1990
		$\bigcirc$ CO2 emissions per unit shipped from logistics: Annual reduction of at least 1%
Prevention of	Development of next-generation electric vehicles	Target R&D with a view to launching a next-generation electric vehicle based on the minicar platform by 2010
Environmental Pollution	Promoting propagation of low emission vehicles	Raise most registered passenger automobiles to the four-star level by 2010
	Reduction of VOCs in cabins	<ul> <li>Step-by-step achievement of the JAMA voluntary cabin VOC emission standards ahead of target deadline, starting with the introduction of new models</li> </ul>
	Strengthen management and reduce use of substances with an adverse impact on the environment	Improve management of information on adverse-impact substances used in components and materials
		Achieve early elimination of use of restricted adverse-impact substances
	used in products	Convert to lead-free solder
	Reduce use of environmentally impacting	<ul> <li>Reduction of VOC emission unit use by at least 30% compared with fiscal 2000</li> </ul>
	substances in production (VOCs, PRTR)	Reduce emissions and transfers of PRTR-listed substances
		Promote proper disposal of waste containing PCBs
		Prevention of asbestos-caused damage to people's health
Recycling and Resource	Automobile recycling	<ul> <li>Japan: Early achievement of fiscal 2015 statutory minimum ASR recycling rate of 70% Promote total recycling (End of fiscal 2009: total recycling rate of at least 8%)</li> </ul>
Conservation		Europe: Build ELV take-back systems. Respond to recyclability directives
	Development and increased application of	Increase ease of removing wiring harnesses and motors
	3R technology	Use more parts made from recycled materials
	3R in context of production process	Maintain zero emissions of landfill waste at all manufacturing sites
		Maintain a waste recycling rate at each operation stage of at least 98%
		<ul> <li>Reduce emissions of such by-products as metal scrap and waste casting sand (reduce ratio of emissions to net sales by 1.0% in fiscal 2011 compared with fiscal 2006)</li> </ul>
		<ul> <li>Reduction of water use (at least 5% reduction compared with fiscal 2000)</li> </ul>

In fiscal 2007, MMC addressed many items. Although some items failed to meet the target or progress was behind schedule, progress with most items was largely in line with the plan and the company achieved the goals it had set for itself.

Fiscal	2007 Results	Evaluation	Fiscal 2008 Plans	See page
Establishe	ed independent performance targets, follow-up system at non-manufacturing affiliates	$\odot$	Pursue cross-organizational activities and develop performance targets for each type of business initiative	►►► P.39
	nches of our consolidated sales companies obtained EA21 tion, compared with the target of 223 branches (79% success rate)	8	100 sales company branches targeted for certification (goal of approximately 90% of our 346 sales company branches becoming certified)	▶▶▶ P.39
ISO1400	01 accreditation for our Tokyo head offices	$\odot$	Integrated and cross-organizational environmental management in each region	
383 of 3	396 companies are accredited (96.7% of total)	$\odot$	Strengthen ties with business partners based on green purchasing guidelines	▶▶▶ P.26
	A system for new environmentally friendly components (10 items); and used an LCA data collection manual	Ö	Improve methods and systems for full-scale use of LCA	▶▶▶ P.41
Held Enviro	nmental Initiative Seminars in seven regions including at three affiliates, attended by approx. 800 employees	$\odot$	Expand program to include consolidated sales companies, overseas affiliates	►►► P.42
Continued re	eleasing social and environmental reports, improved website content, started commercials as an environmental company	$\odot$	Improve disclosure of environmental impact results, take on board opinions from outside the company	►►► P.42
Run in 2	9 schools versus the target of 25 schools; approx. 1,400 students attended	$\odot$	Continue program, targeting at least 30 schools	▶▶▶ P.14
Started	tree-planting program through staff volunteers	Ö	Continue initiative, expand forest area covered	▶▶ P.15
Main ne	w models launched in 2007 were best in their class for fuel consumption	$\odot$	Targeting best-in-class fuel consumption for new models by including low fuel consumption technologies	▶▶▶ P.44
Met 1,5	00 kg category for the first time, but not the 1,000 kg category	8	Work to improve fuel consumption by new and existing models in a bid to achieve 2010 targets for all categories ahead of schedule	▶▶▶ P.44
Develop	ing for commercialization	Ö	Develop for commercialization	▶►► P.45
Used th	e Twin Clutch SST in the Lancer Evolution	$\odot$	Develop and expand usage	▶▶▶ P.46
Launche	ed flexible fuel vehicles in Brazil, developing for Europe, the US	$\odot$	Develop for launch in Europe, the US	►►► P.45
Used ba	mboo fiber and PBS interior parts in the <i>i MiEV</i> prototype	$\odot$	Develop new plastics of plant origin	▶▶▶ P.46
Current	ly evaluating a number of new refrigerants	$\odot$	Complete new refrigerant evaluation. Develop air-conditioning systems using the new refrigerants	
Fiscal 20	007 levels down by 26% over fiscal 1990	$\odot$	Work to achieve targets, including at manufacturing companies	►►► P.47
-	not achieved because of management transfer for some product manu- g. Currently considering strategies to improve this area		Work to reduce emissions by at least 4% by 2010	►►► P.48
Started	prototype testing of the <i>i MiEV</i> with a number of power companies	0	Run prototype tests with power companies, develop for launch in 2009	►►► P.50
	ed four-star vehicles in line with plan; four-star vehicles account rox. 85% of registered passenger vehicles	٢	Continue four-star vehicle launches	▶▶▶ P.50
All new	models launched in fiscal 2007 met target levels	0	(Targets already achieved ahead of schedule) Continue to achieve targets	· · · · · · · · · · · · · · · · · · ·
Researc	hed, managed amount of hazardous substances used in new models	0	Research amounts of hazardous substances used in new models in fiscal 2008	▶▶▶ P.51
Complie	ed with regulations on hazardous substances ahead of schedule	Ö	Continue to comply with regulations	••• P.51
Set targ	ets for substitutions, made contractors aware of change	$\odot$	Gradually change to lead-free solder where possible	▶ ▶ P.51
Achieve	d a 45% cut in VOC emission levels versus fiscal 2000	$\odot$	Continue to achieve target levels	▶ ► P.52
Achieved	a 4% year-on-year reduction in emissions and transfers of PRTR-listed substances	$\odot$	Continue to make cuts	▶ ► P.52
Defined	disposal plans, signed contract with vendor for PCB disposal	$\odot$	Work towards ongoing disposal in line with plans	▶ ► P.52
Comple	ted plans to deal with buildings, machinery	$\odot$	(Completed disposal plans)	▶▶▶ P.52
ASR rec	ycling rate fell below 70%, at 68.8%	8	Improve ASR recycling rate by opening up new processing facilities	▶▶ P.56
Complete	ed building ELV take-back systems; building data collection systems on recycling rates	$\odot$	Establish systems to collect data on recyclability	▶▶▶ P.56
Establis	ned design guidelines on wiring harness recycling	$\odot$	Engage in new activities such as recycling batteries used in electric vehicles	▶ ▶ ₽.54
Increased	the number of components using recycled bumper materials to 47 (from 40 in fiscal 2006)	$\odot$	Further expand use of recycled materials	▶▶▶ P.54
Achieve	d since fiscal 2002	$\odot$	Maintain zero landfill waste including at manufacturing companies	►►► P.55
Achieve	d since fiscal 2001	$\odot$	Performance targets for external emissions	••• P.55
An 18%	b reduction year on year to 9.2 t/¥100 million	$\odot$	Continue to achieve targets	••• P.55

Achieved since fiscal 2001

Evaluation: Degree of goal achievement compared with plan for the year

😳 Goal achieved (steady progress) 😑 Delays, but rapid recovery possible 🛞 Annual target not met and goals need to be changed

(Ongoing as a continuous management task)

# Environmental Management Environmental Management

### **Program Overview**

Automobiles have an impact on the environment, obviously while they are being driven, but also at other stages of their lifecycle from development and manufacturing through to disposal. MMC is developing its business worldwide, encompassing development, manufacturing, sales, and other operations. MMC works together with its group of companies on global environmental management to reduce the environmental impact of its activities worldwide.

One example is our promotion of the Eco Action 21 (EA21) environmental management system (EMS), as defined by the Ministry of the Environment, at our sales companies in Japan. During fiscal 2007, 175 branches obtained certification of this EMS.

MMC has already gained ISO14001 accreditation at its manufacturing plants in Japan and overseas, as part of its efforts to reduce the environmental impact of its business operations. From fiscal 2007, MMC extended its efforts on analyzing and reducing environmental impact to its non-manufacturing businesses, including development and sales.



Companies in fiscal 2007 global environmental management program

	Development	Production	Logistics/Services	Sales
Domestic	<ul> <li>Mitsubishi Automotive Engineering</li> </ul>	Pajero Manufacturing	Mitsubishi Automotive Logistics	Mitsubishi Automotive Accessories & Products
		•Suiryo Plastics		<ul> <li>Sales companies (5)</li> </ul>
		<ul> <li>Mizushima Industries</li> </ul>		•Automotive parts sales companies (3)
Overseas	•MRDA (US)	•MMNA (US)		•MMNA (US)
	•MRDE (Germany)	<ul> <li>NedCar (Netherlands)</li> </ul>		<ul> <li>MME (Netherlands)</li> </ul>
		<ul> <li>MMAL (Australia)*1</li> </ul>		<ul> <li>MMNZ (New Zealand)</li> </ul>
		•MMTh/MEC (Thailand)		•MMSC (Puerto Rico)
		<ul> <li>MMPC/ATC (Philippines)</li> </ul>		•MMGF (U.A.E.)

In fiscal 2007, the Group companies in the global environmental management program comprised 28 consolidated subsidiaries in Japan and overseas.

<sup>\*1</sup> MMAL: Production ceased in March 2008

### **Global Environmental Management: Manufacturing Initiatives**

### Plan! Fiscal 2007 Goals

- Establish joint environmental information exchanges with domestic manufacturing companies
- Obtain environmental impact data in order to set targets for the reduction of environmental footprints at overseas manufacturing companies

#### **Do!** Fiscal 2007 Activities and Results

## Collaboration with domestic manufacturing companies

MMC's main manufacturing affiliate Pajero Manufacturing Co., Ltd. is a member of the manufacturing committee of MMC's Environmental Council and is engaged in integrated environmental activities with MMC.

MMC held two meetings of the MMC Group Plant Environment Liaison Council with Mizushima Industries Co., Ltd. and Suiryo Plastics Co., Ltd. during fiscal 2007. The meetings provided a platform for discussion on environmental target setting by the Mitsubishi Motors Group and for the exchange of information by MMC Group companies on such environmental initiatives as reduced CO<sub>2</sub> emissions or reduced waste.

## Collaboration with overseas manufacturing companies

Two meetings of the Overseas Environmental Production Committee were held, in July 2007 and February 2008, as part of MMC's international production meeting program. The meetings had previously been attended by MMC's five main overseas plants: MMNA (US), NedCar (Netherlands), MMAL (Australia), MMTh (Thailand), and MMPC (Philippines). In fiscal 2007, MEC (Thailand) and ATC (Philippines) began participating. The meetings clarified environmental conservation activities in each country and compliance with environmental laws.



An international production conference in progress (meeting of the Overseas Environmental Production Committee)

The Overseas Environmental Production Committee decided to focus on the following activities:

- Integrated performance target setting with overseas plants
   Target setting for energy usage
  - 2) Target setting for the amount of waste materials produced and valuable materials recovered
- Construction of a system to manage environmentally hazardous substances (introduce IMDS <sup>\*2</sup>)

MMC also held local discussion meetings with MMNA (US) and NedCar (Netherlands) on Group environmental policy and integrating environmental activities across the Group. The meetings underlined MMC's greater efforts as the MMC Group.



The Environmental Annual Report issued by NedCar (Netherlands)

## Check! Fiscal 2007 Self-Evaluation

Domestic manufacturing companies attended meetings of the MMC Group Plant Environment Liaison Council to discuss environmental impact data and common challenges.

Overseas production companies decided on priority activities and MMC Group goal setting at the Overseas Environmental Production Committee and were able to build more collaborative systems.

## Action! Future Plans and Issues

MMC will maintain close connections with domestic manufacturing companies and work on integrating performance targets.

For MMC's major overseas production companies, MMC will monitor progress versus goals set by each plant to reduce its environmental impact. MMC will also work to reduce its environmental impact in cross-organizational and integrated activities.

### **Global Environmental Management: Office and Sales Company Initiatives**

#### Plan! Fiscal 2007 Goals

- Analyze environmental footprints and set reduction targets
- Gain certification under the environmental management system Eco Action 21 (EA21) at more consolidated sales companies in Japan

#### **Do!** Fiscal 2007 Activities and Results

#### Analyzing environmental footprints (>>>P.48)

MMC Group offices and development, sales, and other sites in Japan and overseas are all working to reduce CO<sub>2</sub> emissions as a common activity. MMC's sites in Japan are also working to reduce the amount of waste matter produced.

Since April 2007, the management of environmental impact data has involved the setting of the common indicators listed below and efforts to reduce MMC's environmental footprint. 1) Energy consumption

2) Waste material production (Japan only)

## Setting performance targets to reduce environmental footprints

MMC will be setting linked performance targets for all Group companies in fiscal 2008, so MMC has worked to prepare for fiscal 2008 target setting and achievement. In Japan, MMC held a meeting of the Cross-Japan Environmental Management Liaison Council in February 2008. Overseas, MMC ran policy briefings in March 2008 at our companies in North America, Central America, Europe, and the Middle East on MMC Group activities to reduce environmental footprints and implement required initiatives for fiscal 2008.

## EA21 certification at domestic sales companies

**ODICS** 

Domestic sales companies are adopting the Eco Action 21 (EA21) environmental management system defined by the Ministry of

the Environment (MOE) and are working to build environmental management systems, as well as reduce CO<sub>2</sub> emissions, waste materials, and water consumption.

A total of 208 branches at four consolidated sales companies have been awarded EA21 certification, in line with the sales company mergers in July 2007 (when 29 companies were merged into five companies).

## Check! Fiscal 2007 Self-Evaluation

As a Group, MMC has built a structure for environmental targets and follow-up for its offices and sales companies, even though these businesses have a smaller environmental footprint than its manufacturing operations. Overseas, MMC has analyzed actual environmental footprints and compliance with environmental regulations in each country and region.

A total of 175 branches have obtained EA21 certification compared with our fiscal 2007 target of 223 branches (79% of MMC's performance target), partly due to mergers between sales companies.

## **Action!** Future Plans and Issues

When working to achieve environmental targets, MMC engages in different activities in each business area to reduce the environmental impact of its operations because the environmental footprints and risks differ according to each company's operations (R&D, parts storage and delivery, maintenance technology training, administrative operations, etc.). MMC will also promote each company's activities across the organization, for example by sharing examples where effective improvements have been made.

MMC is continuing to work on acquiring EA21 certification, with the goal of obtaining certification at all its Japanese consolidated sales companies (346 branches).

## Eco Action 21 (EA21) certification and registration

In July 2006, Aichi Chuo Mitsubishi Motors Sales Co., Ltd. was the first automobile sales company to acquire EA21 certification. MMC has been working on this program, acquiring further certifications at 208 branches of four consolidated sales companies as of May 2008.

One of the most recent certifications was for Zama Mitsubishi Motors Sales Co., Ltd., which was accredited in April 2008.

Company	Certified at	No. of branches*1	Certification date
Higashi Nihon	Iwate Division	14	July 2007
Mitsubishi Motors Sales Co., Ltd.	Tochigi/Gunma Division	14	June 2007
	Fukushima Division	16	May 2008
Kanto Mitsubishi Motors	Tokyo Sales Divisions 1 and 2	45	September 2007
Sales Co., Ltd.	Kanagawa Sales Division	31	July 2007
	Saitama Sales Division	13	February 2007
Chubu Mitsubishi Motors Sales Co., Ltd.	Aichi Sales Department	20	July 2006
Nishi Nihon Mitsubishi Motors Co., Ltd.	Sales Division 1 (Osaka)	30	April 2008
	Sales Division 2 (Okayama, Shimane)	25	September 2007



\*1 "No. of branches" includes branches selling new vehicles, branches selling used vehicles, and service centers

EA21 Certificate of Registration and Certification

## **Environmental Accounting**

MMC has been adopting environmental accounting since fiscal 1998 to quantify the cost and benefit of our environmental conservation initiatives. MMC compiles data using internal standards based on the 2005 environmental accounting guidelines issued by the MOE.

#### Fiscal 2007 environmental conservation costs and benefits

Category		Main initiatives	Investment (¥ million)	Cost (¥ million)	Conservation effect
	Costs for preventing environmental damage	Prevent atmospheric pollution, water pollution, soil pollution, noise/vibration, etc.	94	1,804	Prevention of global
Business area costs	Cost of global environ- mental conservation	Prevent global warming through energy savings, etc.; prevent damage to the ozone layer through fluorocarbon recovery, etc.	24	46	warming <b>&gt;&gt;&gt;P.43-48</b>
	Cost of resource recycling	Reduce waste volumes, promote optimal disposal/reuse, etc.	0	981	Prevention of environmental pollution
Up/downstream costs		Recover used bumpers, comply with vehicle recycling laws, etc.	0	401	Recycling, and
Management costs		ISO14001 accreditation/maintenance, employee training, disclosure of environmental information, environmental advertising, etc.	2	1,888	resource conservation
R&D costs		R&D to reduce the environmental impact of products, including improved fuel consumption, exhaust gas emissions	542	21,810	
Social initiative costs		"Pajero Forest" tree-planting program, regional environmental initiatives, contributions to environ- mental groups, etc.	0	55	
Costs to compensate environmental damage		Compensation for environmental damage caused by business operations	0	881	
Total			662	27,866	

•Period covered: April 2007-March 2008

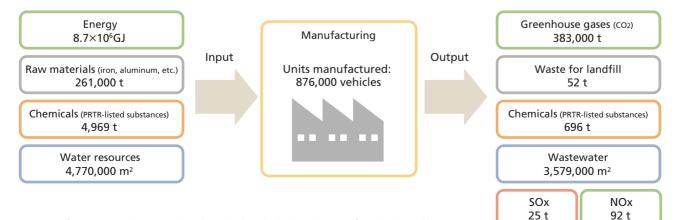
•Data compiled for: MMC on its own

#### Fiscal 2007 economical benefit from environmental conservation initiatives (actual effect)

Category	Details	Amount (¥ million)
Earnings	Business revenue from the recycling of waste materials or used products	3,617
Reduced costs	Reduced energy spending because of energy-saving initiatives	404
	Reduced costs for handling waste materials because of reduced resource usage or recycling	4
Total		4,025

#### Material Balance in Manufacturing

The flowchart below provides an overview of resource inputs and waste outputs at our manufacturing operations (domestic) in fiscal 2007



Note: Manufacturing operations covered are domestic plants (including Pajero Manufacturing Co., Ltd.)

## Design for Environment (DfE)

## Plan! Fiscal 2007 Goals

**Topics** 

**GREEN PLASTIC** 

• Evaluate components using LCA\*1 and apply to design/develop-

#### **Do!** Fiscal 2007 Activities and Results

LCA is a method to quantify the environmental impact of a product across its entire lifecycle from manufacturing to disposal. MMC's goal is to create products that are truly environmentally friendly, by utilizing this method at the product development stage.

In fiscal 2007, MMC used LCA for 10 components at the advanced stages of development, quantitatively assessing the impact on environmental performance at the design and development stages and confirming the effect and any issues.

MMC has also compiled a manual of data collected from our business partners in order to make LCA calculations more efficient.

#### Fiscal 2007 LCA results

No. of items assessed	10
Main focus	<ul> <li>Products at advanced stages of development with environmental focus</li> <li>Components for electric vehicles</li> </ul>
Actual examples	•Floor mats using materials of plant origin •Electric vehicle motors
Main assessment objectives	<ul> <li>Decision on whether to continue development, confirmation of reduced CO<sub>2</sub> emissions over product lifecycle</li> <li>Quantification, confirmation of effect of reduced weight over entire lifecycle</li> </ul>

## Check! Fiscal 2007 Self-Evaluation

LCA results for components were utilized in development and MMC's fiscal 2007 targets were achieved.

## **Action!** Future Plans and Issues

Apply LCA to all products, work towards the full-scale application of LCA in design and development, continue using LCA for components and vehicles, and work to improve methods and systems.

#### LCA for "Green Plastic" PTT fiber floor mats that use plastic of plant origin

MMC compared CO<sub>2</sub> emissions over the product lifecycle for floor mats made of polytrimethylene terephthalate (PTT) fiber and conventional products.

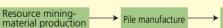
With PTT fiber floor mats, the mat pile uses PTT fiber made from terephthalic acid from oil and 1,3-propanediol manufactured from plant raw materials using a fermentation process. Compared with conventional products that have a nylon pile, the PTT fiber floor mats generate significantly less CO<sub>2</sub> emissions over the product lifecycle.

MMC plans to make PTT fiber floor mats available for minicars from fall 2008.

#### Item assessed (floor mat pile)

Conventional floor mat		PTT fiber floor mat	
Material Nylon fiber		PTT fiber	
Weight 1.6 kg		1.6 kg	
Raw materials Nylon (oil origin)		1,3-propanediol (plant origin), terephthalic acid (oil origin)	

#### Scope of assessment



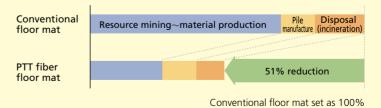
•For disposal (incineration), MMC has calculated the theoretical CO<sub>2</sub> emissions based on the molecular structure. MMC used zero CO<sub>2</sub> emissions for the material of plant origin, based on the carbon neutral<sup>\*2</sup> concept.

Disposal

(incineration)

•A prototype PTT fiber floor mat was used for assessment.

Comparison of CO<sub>2</sub> emissions over the lifecycle (results of calculation)



\*1 Lifecycle assessment (LCA) is a method to assess the product's environmental impact across its entire lifecycle. LCA is used to collate and evaluate the environmental burden from production to disposal.

\*2 Carbon neutral: CO2 is emitted when plants are burned, but plants capture CO2 from the atmosphere through the process of photosynthesis during plant growth, so the CO2 balance is considered to be zero in terms of the carbon cycle.

### **Environmental Communications**

### Plan! Fiscal 2007 Goals

- Information disclosure: Release information on environmental activities on an ongoing basis
- Training and education: Broaden the scope of seminars on environmental activities

#### **Do!** Fiscal 2007 Activities and Results

#### Information disclosure through reports and websites

MMC has published this environmental report every year since 1999. MMC also provides information on its website, including overviews of its environmental technologies and environmental data from its manufacturing plants. Each manufacturing site produces its own environmental pamphlet. MMC is also engaged in customer communication programs through seminars for local communities or factory visits.

MMC is distributing "*i MiEV* News" to its business partners and an *i MiEV* pamphlet to the general public to provide a better understanding of the performance of this new-generation electric car currently under development for commercialization.



Social and Environmental Report 2007, *i MiEV* pamphlets, environmental pamphlet produced by a MMC manufacturing site

## Active participation in environmental events

MMC actively participated in various environmental events in order to promote its environmental activities. MMC's new-generation electric car, the *i MiEV*, has been taken for numerous test rides by members of the general public to experience its practicality.



Demonstrating the electric-car technology and performance. More than 10,000 people have taken a test ride in this vehicle. (Photograph shows the Eco Products 2007 Fair.)

#### Accidents and complaints

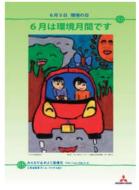
In fiscal 2007, there was an oil leak inside MMC's Shiga Plant. No oil leaked outside the site. MMC collected the oil through suction pumping, replaced the polluted soil, cleaned the affected area, and took measures to prevent any reoccurrence.

There were 14 complaints over bad odors and noise at MMC's domestic plants. MMC confirmed the situation on site and identified the cause, and is continuing to communicate with local residents while taking steps to improve the problem.

#### Employee training and educational activities

MMC has been holding environmental seminars at sites in Japan since 2004 in order to promote active participation by company employees in its environmental activities and further the common understanding of the environmental challenges faced by MMC. In fiscal 2007, MMC held these seminars in seven sites including three domestic affiliates, attended by approximately 800 employees. MMC is also working to broaden the scope of this program, through seminars at domestic sales companies and local briefings at overseas affiliates.

In Japan, June each year is designated as Environment Month. During Environment Month, the president delivers an environmental message, beautification projects are undertaken at MMC sites and MMC holds a poster campaign whereby children of its employees design environmental posters for display at MCC in order to generate greater interest in environmental issues among employee families.





A poster for Environment Month in fiscal 2008 (the third year of the campaign) and posters on display at a manufacturing site

## Check! Fiscal 2007 Self-Evaluation

MMC developed its communications activities through the ongoing release of environmental information, mainly through the Social and Environment Report, and actively participated in environmental events.

#### Action! Future Plans and Issues

Rather than a focus on one-way communication, MMC will take on board customer feedback and the opinions of external specialists in the planning of future environmental activities.

# Prevention of Global Warming Prevention of Global Warming

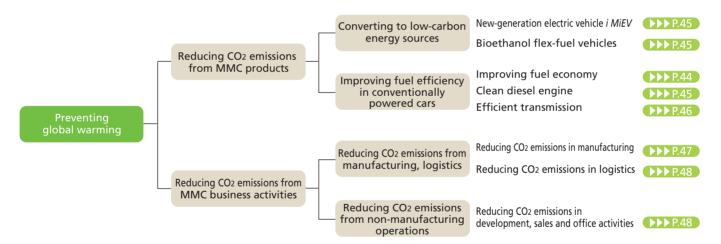
### **Program Overview**

The transport sector is responsible for just over 20% of global CO<sub>2</sub> emissions, of which some 70% are from road traffic.

Automobile ownership is expected to continue increasing globally in the future. Obviously automobile fuel efficiencies must improve substantially if MMC is to achieve significant cuts in CO<sub>2</sub> emissions in the future, but MMC also needs to change to automobiles powered by energy sources other than fossil fuels. Expectations for new non-oil-based energy supplies are also being driven by the recent jump in crude oil prices.

MMC is therefore stepping up its efforts to support the development of a low-carbon transport society for the future, for example by developing the *i MiEV* new-generation electric vehicle or commercializing flex-fuel vehicles (FFVs) that can also run on biofuels (ethanol). MMC is also developing more fuel-efficient gasoline engines and efficient transmissions. In 2009, MMC plans to commercialize a clean diesel engine that should prove useful in reducing CO<sub>2</sub> emissions.

MMC is also reducing CO<sub>2</sub> emissions at its plants, through such measures as installing energy-saving equipment and machinery and switching fuels from heavy fuel oil to city gas. In fiscal 2007, MMC achieved a 26% reduction in CO<sub>2</sub> emissions from its domestic plants compared with fiscal 1990 levels.





Cut-away diagram of the highly efficient Twin Clutch SST transmission

#### **Initiatives to Improve Fuel Economy**

#### Plan! Fiscal 2007 Goals

- Achieve goal of meeting 2010 domestic fuel economy standards in all categories during fiscal 2007, ahead of target deadline
- Reduce average CO2 emissions for new models sold in Europe
- Develop next-generation technologies (clean diesel engines and high-efficiency transmissions)

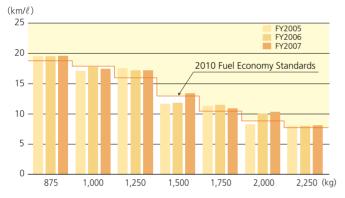
## **Do!** Fiscal 2007 Activities and Results

#### Status of activities in Japan

MMC introduced various fuel economy improvements with the launch of new models to try to meet the domestic fuel economy standards for 2010 ahead of schedule. These included improved engines and drive trains and reductions in weight, rolling resistance and aerodynamic drag.

The launch of the *Galant Fortis* in fiscal 2007 enabled the company to meet the 2010 standard in the 1,500 kg vehicle category. MMC's domestic gasoline passenger car models now meet the standards in six out of seven categories.

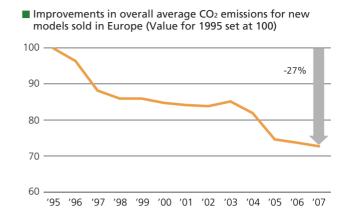
Average fuel economy for gasoline passenger car categories (10•15 mode)



#### Status of activities in Europe

In Europe, MMC is working towards a voluntary target set by the Japan Automobile Manufacturers Association (JAMA) of average overall CO<sub>2</sub> emissions for all new models sold of 140 g/km by 2009 (the JAMA target was part of an environmental cooperation agreement made by the industry with the European Commission and equals a 25% reduction in overall average emissions relative to 1995).

Besides progressively improving the fuel economy of new models, the company is also trying to hit the target by developing and expanding its range of diesel models. The average overall CO<sub>2</sub> emissions of MMC models in 2007 marked an improvement of roughly 27% compared with 1995.



#### Development of fuel-efficient technologies

Alongside improvements in fuel economy due to the development of next-generation gasoline engines, MMC is also seeking to boost engine efficiency by developing better valve systems. Also, the company has positioned clean diesel engines and the Twin Clutch SST<sup>\*1</sup> high-efficiency transmission as core next-generation environmental technologies. Efforts continue to bring these improved technologies to market and further develop them. **>>P.46** 

## Check! Fiscal 2007 Self-Evaluation

In Japan, MMC improved average fuel economy in the 1,500 kg vehicle category with the launch of the *Galant Fortis*. The company made steady progress in attaining the domestic fuel economy standards for 2010 in all categories, but was one step short of meeting the standards in all categories during fiscal 2007, ahead of schedule. In Europe, MMC steadily reduced average CO<sub>2</sub> emissions.

## **Action!** Future Plans and Issues

In Japan, Europe and North America, regulations regarding fuel economy and CO<sub>2</sub> emissions are being further strengthened to reduce CO<sub>2</sub> emissions. In response, MMC will continue to make further improvements in fuel economy through the introduction and development of low fuel consumption technologies in new models.

\*1 The Twin Clutch Sport Shift Transmission (SST) is a manual transmission without a clutch pedal that also features an automatic transmission function.

### **Reducing CO<sub>2</sub> Emissions From Products**

#### Converting to low-carbon energy sources

#### i MiEV new-generation electric vehicle

MMC's *i MiEV* new-generation electric vehicle, currently under development, emits zero CO<sub>2</sub> while operating and emits 72% less CO<sub>2</sub> than gasoline-powered cars of the same class even if CO<sub>2</sub> emissions from electricity generation are included. The *i MiEV* enables CO<sub>2</sub> emissions to be reduced by approximately 1 t when used to drive 10,000 km per annum.

This new-generation electric vehicle may also prove useful as a countermeasure to the energy crisis currently symbolized by high crude oil prices. It will also allow drivers to achieve a significant cut in running costs.



i MiEV

■ CO<sub>2</sub> emissions per kilometer traveled (10•15 mode)



Costs for driving the same distance (10•15 mode)



Gasoline price: ¥170/ℓ

Electricity fees: ¥24/kWh during the daytime, ¥9/kWh during the nighttime

#### Launching the flex-fuel vehicle Pajero TR4 Flex

Bioethanol fuel, which is produced from plants that absorb CO<sub>2</sub> in the atmosphere as they grow, has been designated a zeroemission fuel under the carbon neutral <sup>\*1</sup> concept.

MMC has been developing a flex-fuel vehicle (FFV) that can run on gasoline, bioethanol, or a mixture of the two. MMC launched this FFV in Brazil in June 2007. MMC is continuing to develop this vehicle for the US market, targeting launch during fiscal 2009.

This FFV system achieves optimal fuel combustion by estimating the ratio of ethanol in the fuel based on the output of an exhaust gas density sensor fitted in the exhaust system. As a result, the engine can handle gasoline-ethanol fuel mixtures with proportions of ethanol ranging between 0% and 100%, while achieving performance and exhaust emissions on a par with gasoline vehicles.



The Pajero TR4 Flex is available in Brazil

## Improving fuel economy in conventionally powered cars

#### Developing clean diesel technology

Diesel engines are more fuel-efficient and emit less CO<sub>2</sub> than gasoline engines, so they have potential in the fight against global warming.

MMC has developed a new clean diesel engine technology for passenger cars. MMC plans to launch this engine in 2009, rolling it out across Europe first where diesel engine demand is on the rise. The  $1.8\ell$  diesel engine, which is being readied for mass production, produces superior exhaust gas performance and maximum power output compared to conventional diesel engines through the use of our proprietary MIVEC<sup>\*2</sup> system. This technology features single-valve stoppage and a variable valve timing mechanism at the inlet valve.

The engine is also lighter in weight, which combined with the greater fuel efficiency makes a significant contribution to improved driving performance, for example by allowing optimal front-rear distribution of the vehicle weight.



 $1.8\,\ell\,$  clean diesel engine exhibit (at the Tokyo Motor Show 2007)

\*1 Carbon neutral: CO2 is emitted when plants are burned, but plants capture CO2 from the atmosphere through the process of photosynthesis during plant growth, so the CO2 balance is considered to be zero in terms of the carbon cycle.

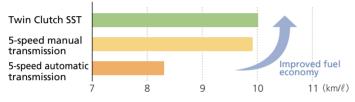
<sup>\*2</sup> Mitsubishi Innovative Valve timing Electronic Control (MIVEC)

#### Utilizing the highly efficient Twin Clutch SST transmission

MMC used the highly efficient Twin Clutch SST<sup>\*3</sup> transmission in the *Lancer Evolution X* launched in Japan in 2007 as part of its efforts to develop fuel-efficient high-performance cars. MMC will now roll this transmission system out across global markets.

The Twin Clutch SST combines a mechanically efficient manual transmission with two wet multi-plate clutches that enable less drop-off in engine power compared with conventional torque converters. The system therefore allows extremely fast, smooth, and lag-free gear changes, as well as fuel economy that is equivalent to or better than that with manual transmissions (see photograph on page 43).

Greater fuel economy with the Twin Clutch SST



## Developing and applying plant-based plastics

#### Developing "Green Plastic"

"Green Plastic" is the generic name given to plant-based resins that MMC is developing with a view to expanding practical applications.

Since these resins are made from plant matter, they conserve petroleum resources. As a carbon-neutral <sup>\*1</sup> material, Green Plastic enables reductions in CO<sub>2</sub> emissions over the course of the product lifecycle.

To date, MMC has used Green Plastics in automotive interior components that use bamboo fiber and polybutylene succinate (PBS) and in car floor mats that use polylactic acid (PLA) fiber. MMC also plans to use floor mats made from polytrimethylene terphthalate (PTT) in future car launches.



Green Plastic applications: Interior parts made from bamboo fiber in an *i MIEV* research vehicle (fleet monitor)

#### **Promoting Eco Driving**

Equipping more cars with fuel consumption display gauges

MMC encourages drivers to be environmentally minded by accelerating gently. MMC has also equipped more of its cars with fuel consumption display gauges to support eco driving.

MMC has included the fuel consumption display gauges in a multi-information display in an easily visible location between the instrument panel meters in our *Outlander*, *Galant Fortis*, *Delica D:5* and *Lancer Evolution X* models. Drivers use a button to toggle between the following information displays:

Average fuel consumption	Average fuel consumption since the display was reset to the present time
Instant fuel consumption	Bar graph display of fuel consumption at that point of the journey
Travel distance possible	Approximate distance that can be traveled

Note: The fuel consumption display gauge can also display other information, including various alerts, odometer/trip, fuel remaining, service reminder, water temperature, external temperature and shift position.



Average fuel consumption (upper figure)





Instant fuel consumption (lower bar graph)

Travel distance possible

\*3: The Twin Clutch Sport Shift Transmission (SST) is a manual transmission without a clutch pedal that also features an automatic transmission function.

## **Reducing CO<sub>2</sub> Emissions in Manufacturing**

#### Plan! Fiscal 2007 Goals

• Maintain reduction of at least 20% in (energy-related) CO2 emissions from MMC plants compared with fiscal 1990

#### **Do!** Fiscal 2007 Activities and Results

MMC engaged in the following programs to reduce consumption of power and fuels and to reduce emissions of CO<sub>2</sub> and other greenhouse gases.

- 1. Switching to clean fuels (expanded use of city gas and other clean fuels)
- 2. Reductions in outlet pressure with motive power sources (air, steam)
- 3. Minimization of energy consumption outside production hours (stoppage of intake and exhaust fans, etc.)
- 4. Installation of high-efficiency equipment
- 5. Revision of operational and operating conditions (temperature settings, firing times for drying ovens, etc.)
- 6. Thermal recycling of waste heat from incinerators (steam recovery)
- 7. Promotion of real-time energy management at plants

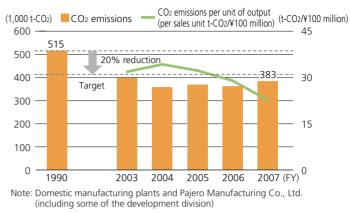
#### Installation of high-efficiency equipment

MMC is working on planned equipment upgrades when renovating facilities, for example by installing efficient transformers and high-energy-saving lighting.

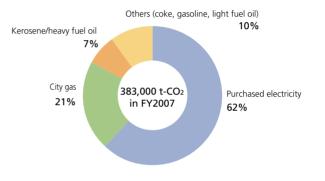


Efficient plant lighting: More efficient lighting installed

#### ■ CO<sub>2</sub> emissions<sup>\*1</sup> and CO<sub>2</sub> emissions per unit of output



#### ■ Breakdown of FY2007 energy consumption (CO<sub>2</sub> equivalents)



## Check! Fiscal 2007 Self-Evaluation

Total CO2 emissions rose compared with fiscal 2006, because production volumes increased. However, MMC achieved its target as the company reduced CO2 emissions due to production activities by 26% over fiscal 1990 levels. MMC continued to achieve a year-on-year reduction in CO2 emissions per unit of output.

## Action! Future Plans and Issues

MMC expects total CO<sub>2</sub> emissions to rise through fiscal 2010 due to production levels and other factors, but the company will work to reduce energy usage further in order to keep achieving its target of a 20% reduction relative to the reference year of fiscal 1990.

MMC will also improve its company-wide management systems in order to comply with the amended Energy Conservation Law.

<sup>\*1</sup> The following indices were used to convert each fuel type to CO2: Purchased electricity 0.381 kg-CO2/kWh, city gas 2.348 kg-CO2/m<sup>3</sup>, kerosene 2.491 kg-CO2/\ell, /heavy fuel oil 2.709 kg-CO2/\ell.

#### **Reducing CO<sub>2</sub> Emissions in Logistics**

#### Plan! Fiscal 2007 Goals

Cut CO<sub>2</sub> emissions per output unit by 1% over fiscal 2006

#### **DO** Fiscal 2007 Activities and Results

#### Complying with the amended Energy Conservation Law

Amendments to the Japanese Energy Conservation Law came into force in April 2006.

MMC is a designated shipper under the new regulations. Over the medium-to-long term, the company is targeting an annual reduction of at least 1% in CO<sub>2</sub> emissions per unit of output. To achieve this, MMC pursued the following initiatives in fiscal 2007:

- Improved systems to assess, compile, analyze, and discuss actual data relating to the transport of finished vehicles, parts for production, spare parts, and knockdown parts.
- Meetings to raise employee awareness of ongoing efforts to reduce CO<sub>2</sub> emissions per unit of output based on actual transport data and proposals for new initiatives (examples of CO<sub>2</sub> emissions cuts: improved loading rates, review of truck transport routes and frequency, modal shift for parts transport implemented, and improved part packing).

## Improved efficiency in the transport of bumpers for repair

MMC halved the weight of packaging materials and achieved a 40% reduction in the volume of packaged parts by changing packaging from cardboard to bubble-wrap materials (see photograph above). This resulted in improved transport efficiency for the eight large truck shipments each month.



New packaging

## Check! Fiscal 2007 Self-Evaluation

Truck transportation increased due to increased export of finished vehicles and greater parts transport following changes in the plants used to manufacture some car models. As a result, MMC was unable to reduce CO<sub>2</sub> emissions per unit of output in fiscal 2007.

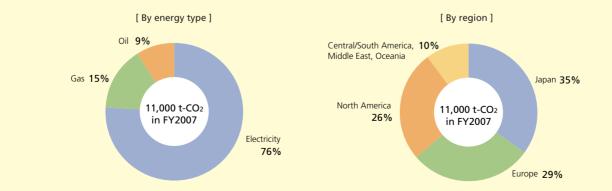
### Action! Future Plans and Issues

Having failed to make our target in fiscal 2007, MMC will continue the measures put into place in fiscal 2007 to reduce emissions and work to make further improvements (including measures to shorten truck driving distances, consolidate truck journeys, and implement a modal shift in finished vehicle transport).

## **OPICS** Reducing CO<sub>2</sub> emissions in offices and sales bases

MMC is working to reduce CO<sub>2</sub> emissions at all its offices and development and sales bases both in Japan and overseas. The figures below show actual CO<sub>2</sub> emissions by MMC's 13 Group companies<sup>\*2</sup> in Japan and overseas in fiscal 2007. MMC will continue its efforts to reduce CO<sub>2</sub> emissions further.

#### CO2 emissions by MMC's 13 Group companies in Japan and overseas



\*2 6 Japanese Group companies: Mitsubishi Automotive Engineering Co., Ltd., Mitsubishi Automotive Logistics Technology Co., Ltd., Mitsubishi Automotive Accessories & Products Co., Ltd., Mitsubishi Motors Parts Sales Co., Ltd., Higashi Kanto MMC Parts Sales Co., Ltd., Shikoku MMC Parts Sales Co., Ltd. 7 overseas Group companies: Mitsubishi Motors North America, Inc. (MMNA), Mitsubishi Motors R&D of America, Inc. (MRDA), Mitsubishi Motors Europe B.V. (MME), Mitsubishi Motor R&D Europe GmbH (MRDE), Mitsubishi Motor Sales of Caribbean, Inc. (MMSC), Mitsubishi Motor Parts Sales of Gulf FZE (MMGF), Mitsubishi Motors New Zealand Limited (MMNZ)

# Prevention of Environmental Pollution Prevention of Environmental Pollution

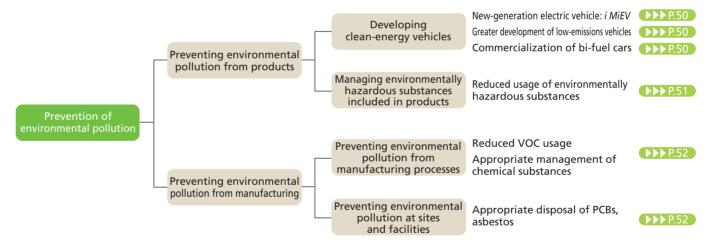
## **Program Overview**

Wide-ranging measures are needed to prevent environmental pollution from automobiles, including reduced exhaust gas emissions from vehicles, a reduction in the amount of environmentally hazardous substances used in the vehicle and or emitted during the manufacturing process, or compliance with the Soil Contamination Prevention Law.

In Japan, MMC is working to launch and grow sales of automobiles with a four-star rating for exhaust gas emissions (at least 75% less than Japan's official emissions standards). MMC has also launched the Minicab Bi-fuel, a clean-energy vehicle that can use both compressed natural gas (CNG) and gasoline. Overseas, the company is developing low-emission vehicles compliant with emission regulations, such as the strict zero emission vehicle (ZEV) regulations in the US.

MMC has eliminated the use of environmentally hazardous substances, such as mercury, cadmium, and hexavalent chromium, in its automobile line-up. The company is also switching to lead-free solder for use in electronic components.

MMC has moved to reduce volatile organic compound (VOC) emissions at its plants, for example through the switch to water-based paint facilities at the Mizushima plant from August 2004. The company is also working to reduce emissions of substances designated as hazardous under Japan's Pollutant Release and Transfer Register (PRTR).





The new-generation electric car i MiEV

## Stepping Up Development of Clean-energy Cars and Low-emission Vehicles

### Plan! Fiscal 2007 Goals

Further development of *i MiEV*, MMC's new-generation electric vehicle
 Promote adoption of low-emission vehicles

Increase the proportion of sales accounted for by four-star vehicles, in line with MMC's 2010 target of four-star vehicles making up the majority of MMC's registered passenger car line-up

### **Do!** Fiscal 2007 Activities and Results New-generation electric vehicle *i MiEV*

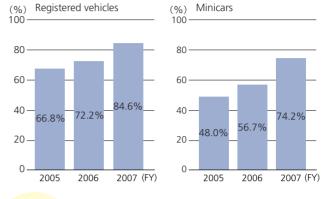
Electric vehicles emit absolutely no exhaust gases while they are running and have potential in the fight against global warming and environmental pollution. MMC is developing a next-generation electric vehicle, the *i MiEV*, for market launch. MMC began joint research with power companies in fiscal 2007 and has confirmed its utility in road testing under real-life conditions. (For more details, please see Special Feature 2: Contribution to the Environment)

In December 2007, MMC established Lithium Energy Japan Co., Ltd. in collaboration with GS Yuasa Corporation and Mitsubishi Corporation in order to mass-produce the large lithium-ion batteries that form the core technology for next-generation electric vehicles. The company plans to begin mass production in 2009.

## Greater development of low-emissions vehicles

MMC has gained accreditation for a number of its new lowemission vehicles launched in fiscal 2007, such as the *Lancer Evolution X* and *Galant Fortis*. The *Galant Fortis* was given a fourstar rating to indicate it produces 75% less emissions than the 2005 Japanese standard. Twenty models were awarded a four-star rating.

Four-star models accounted for 84.6% of registered vehicle and 74.2% of minicar sales in the gasoline-powered passenger car segment in fiscal 2007.  Sales ratios of MMC low-emission four-star vehicles (gasoline-powered passenger cars)



## **Check!** Fiscal 2007 Self-Evaluation

MMC is making progress as planned with the development for commercialization of the *i MiEV*.

The company made further steady progress toward achieving its fiscal 2010 target by continuing to increase its sales ratio of four-star low-emission vehicles.

## Action! Future Plans and Issues

For *i MiEV*, MMC will continue road testing the vehicle and developing it for commercialization. The company will work to resolve issues that may hinder electric vehicle usage, such as the availability of charging facilities.

MMC will also try to further increase the sales ratio of four-star models by actively introducing new vehicles that meet these emissions criteria.

## **OPICS** Commercialization of the Minicab Bi-fuel

MMC collaborated with Mitsubishi Automotive Logistics Technology Co., Ltd. on the joint development of the *Minicab Bi-fuel*, a specialty vehicle, based on the minicab van, that can use both CNG and gasoline as fuel. The vehicle was launched in October 2007.

When running on CNG, the vehicle has a good environmental profile equivalent to a four-star rating of a 75% reduction in emissions versus the 2005 emissions standard for a gasoline-powered car.

The vehicle can also run on gasoline, so it can be driven over long distances even in areas where CNG supply facilities are scarce without concerns over running out of fuel.



Minicab Bi-fuel

## **Reducing and Controlling Hazardous Substances in Products**

### Plan! Fiscal 2007 Goals

Research the amounts of hazardous substances used in new models

 Reduce the use of lead to comply with EU's End of Life Vehicles (ELV) Directive

#### **Do!** Fiscal 2007 Activities and Results

#### Reduce hazardous substance usage

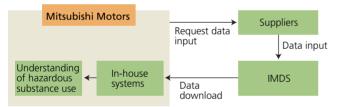
MMC is working to reduce the use of four substances (lead, mercury, cadmium, and hexavalent chromium) based on the EU's ELV Directive and targets from the Japan Automobile Manufacturers Association (JAMA). MMC has also established its own guidelines on the management of environmentally hazardous substances and is working to voluntarily reduce the use of hazardous substances.

In order to understand what hazardous substances are used in components, MMC is collecting data on the hazardous substances contained in parts delivered by its suppliers through the International Material Data System (IMDS). The data collected on hazardous substances is consolidated in MMC's in-house system and used to reduce the amount of hazardous substances included in its products.

#### Hazardous substance data collection flow

Topics

compliance with this system.



REACH, the EU's comprehensive system for the registration, evaluation, authorization, and restriction of

chemicals, came into force in June 2007. The basic

principle underpinning this system is "No Data, No Market" such that all chemical substances used in

the EU must be registered. As shown in the figure to the right, the system has different registration dead-

lines depending on the amounts of the chemical handled each year. MMC is making preparations to

ensure that chemicals used in MMC products are in

This system requires two-way information shar-

ing across the whole supply chain. MMC is therefore

building a framework for transmitting information

and working to strengthen its ties with suppliers.

MMC investigated the use of hazardous substances in the *Galant Fortis* (launched in August 2007) and the *Lancer Evolution X* (launched in October 2007) and confirmed that these products met the JAMA target reductions.

Substance	JAMA target reductions (passenger vehicles)			
Lead	1/10th of 1996 levels from January 2006			
Mercury	Ban on usage from January 2005, with the exception of			
	the following components:			
	LCDs for navigation systems etc.			
	Combination meters			
	Discharge headlamps			
	• In-car lights			
Cadmium	Ban on usage from January 2007			
Hexavalent chromium	Ban on usage from January 2008			

For vehicles intended for the European market, MMC has worked on eliminating the use of lead, for example by stopping the inclusion of lead in bearings and bushings, and has successfully complied with regulations within the specified timeframe.

MMC has also drawn up plans to switch to lead-free solder and has communicated this plan to its suppliers.

## Check! Fiscal 2007 Self-Evaluation

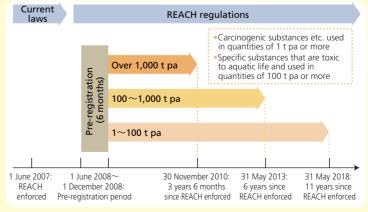
MMC assessed the use of environmentally hazardous substances in all new models launched in fiscal 2007. The company also eliminated the use of lead in bearings/bushings and aluminum for all models sold in EU markets and complied with the EU ELV Directive.

## Action! Future Plans and Issues

MMC plans to compile hazardous substance data for all new models while also ensuring that such models are compliant with the JAMA usage reduction targets as well as EU rules on hazardous substance usage from the ELV Directive.

## **REACH**<sup>\*1</sup>: The EU's chemical substance registration system

Registration schedule



Note: Based on data from the Ministry of Economy, Trade and Industry (METI)

## Reducing and Controlling Hazardous Substances in Manufacturing

#### Plan! Fiscal 2007 Goals

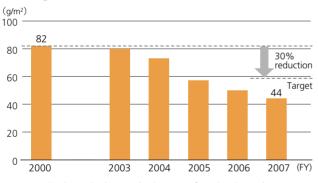
- Promote measures to achieve fiscal 2010 target of reducing per-unit VOC emissions by at least 30% compared with fiscal 2000 levels
- Apply proper controls for chemical substances (PRTR\*2-listed substances)
- Reduce use of hazardous substances and ensure relevant regulatory compliance

#### **Do!** Fiscal 2007 Activities and Results

## Reduction in volatile organic compounds (VOCs)

MMC's efforts to reduce VOC emissions have focused on a major revision of painting methods to reduce paint consumption along with a program to boost the volume of washing thinner compounds recycled during production. As a result, VOC emissions as measured on an entire vehicle basis (including bumpers) are now 44 g/m<sup>2</sup>, just over half the level of emissions in fiscal 2000.

To achieve further reductions, MMC has defined an action plan to achieve its fiscal 2010 target, including the introduction of high-efficiency equipment and new painting methods, use of lower quantities of solvent for cleaning paint guns, and improving recovery rates for washing thinners.



Note: MMC's domestic plants and Pajero Manufacturing Co., Ltd.

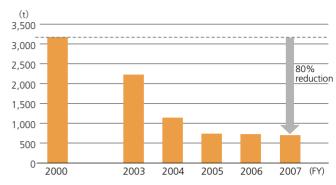
Changes in VOC emissions

#### Proper controls for chemical substances

For some time, MMC has operated a chemical management system whereby any compound that is due to be introduced into production processes is pre-screened for toxicity, with the results determining whether or not it can be used.

MMC prioritizes its efforts to restrict emissions based on the level of risk established for each chemical.

The company has achieved an 80% reduction over fiscal 2000 in the amounts of PRTR-listed substances released or transferred. More detailed information is available on the MMC website. Change in the amounts of PRTR-listed substances released or transferred



Note: MMC domestic plants (including some development divisions)

## Prevention of soil and groundwater contamination

MMC regularly monitors the quality of groundwater at its production sites using observation wells. The company applies various measures to prevent any toxic chemicals from causing soil contamination.

## Handling of polychlorinated biphenyls (PCBs)

In line with a special legislative measure in Japan, MMC applies proper controls for storage of PCBs contained in insulating oil in devices such as transformers and capacitors. From summer 2008, the company intends to move ahead according to plan with the disposal of these PCBs.

#### Asbestos countermeasures

MMC is surveying all production facilities and buildings where asbestos fibers may have been dispersed via airborne diffusion. The company has almost completed work to switch to nonasbestos alternatives across its production sites while seeking to eliminate the risk of fiber dispersion from existing equipment.

## Check! Fiscal 2007 Self-Evaluation

MMC remains on course to attain its VOC emissions-reduction target for fiscal 2010. By applying proper chemical management controls, the company has also been able to reduce the amounts of PRTR-listed substances that were released or transferred. MMC is working to dispose of PCBs and asbestos in line with its plans.

## Action! Future Plans and Issues

MMC will work to reduce VOC emissions even further, including initiatives to switch to water-based painting methods when it refurbishes its painting plants.

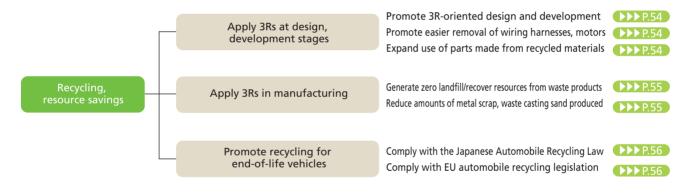
# Recycling and Resource Conservation Recycling and Resource Conservation

### **Program Overview**

Today, MMC faces the pressing issue of a society that is shifting from an economic model based on mass production, mass consumption and mass disposal toward a recycling-oriented paradigm that leaves a much smaller environmental footprint. To achieve this, MMC needs to make much more efficient use of resources in manufacturing, recycle used products as much as possible, and recover resources. These measures are of increasing importance as countries become more concerned over controlling resource usage (because of remarkable rises in prices or resource nationalism).

Efforts to recycle and save resources must be made at every stage of the product lifecycle, from vehicle development and production to use and disposal. MMC is pursuing a 3R program (reduce, reuse, recycle) across the product lifecycle.

Automobiles are global products. MMC is therefore working on global recycling and resource-saving initiatives to comply not only with the laws in Japan but also with automobile recycling laws in the EU, South Korea, China, and other countries. The company is also responding to demands that MMC automobiles be easy to dispose of once they have been exported as used cars and come to the end of their lifecycle, or that their disposal has a relatively small environmental impact.





Thermoplastic resin bumper on the Lancer Evolution X

### Applying 3Rs at Design and Development Stages

#### Plan! Fiscal 2007 Goals

- Promote 3R-oriented design for new models (Reduce/Reuse/Recycle)
- Promote easier removal of wiring harnesses and motors
- Expand use of parts made from recycled materials

#### **Do!** Fiscal 2007 Activities and Results

#### 3R-oriented design

The new models launched in fiscal 2007, the *Galant Fortis* and *Lancer Evolution X*, included various 3R-oriented design features incorporated from the concept development stage and based on MMC's in-house 3R-oriented design guidelines. MMC was creative in its use of materials (including the use of thermoplastic resins) and structural designs (including reductions in the number of parts and fastenings).



Main parts of the *Galant Fortis* made from easily recyclable thermoplastic resins (red areas)

## Promoting easier removal of wiring harnesses and motors

It will be increasingly important to remove and recover coppercontaining parts, such as wiring harnesses, because of economic factors and also to ensure that any iron scrap is of a suitable quality for recycling.

The five automakers in the ART<sup>\*1</sup> have collaborated on design guidelines for wiring harness recycling and have agreed to their use in product development. Copper can be difficult to separate from iron, but it needs to be removed at the dismantling stages. The guidelines cover the concept and provide examples of easily dismantled designs for wiring harnesses, motors, and other parts that contain large amounts of copper.

The guidelines are available on the ART website.



ART design guidelines for wiring harness recycling

web https://www.asrrt.jp/elv/doc/HARNESS/001/ guide.pdf

## Expanding use of parts made from recycled materials

MMC has increased the number of parts made from recycled bumper materials from 40 parts in fiscal 2006 to 47 parts in fiscal 2007. MMC's sales companies collect bumpers for recycling when vehicles are undergoing repairs. MMC continues to work on recycling materials.



## Check! Fiscal 2007 Self-Evaluation

All of the new models launched in fiscal 2007 met MMC's development targets in terms of ISO-compatible recyclability and reduced hazardous substance usage. These results underline MMC's usage of 3R-oriented design considerations at the vehicle development stage, based on its in-house 3R-oriented design guidelines.

MMC made progress according to plan in efforts to promote easier removal of wiring harnesses and motors and greater use of parts made from recycled bumper materials.

## **Action!** Future Plans and Issues

MMC will continue to make vehicles that factor in 3R considerations from the early development stages. The company will also start to address new challenges, such as the recycling of batteries used in electric vehicles.

\*1 The ASR Recycling promotion Team (ART) is a consortium formed by Nissan, Mitsubishi, Mazda and other automakers in Japan to promote efficient automobile shredder residue (ASR) recycling.

## Promoting Effective Resource Usage in Manufacturing

## **Plan!** Fiscal 2007 Goals

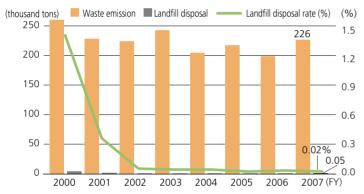
- Achieve zero landfill waste from domestic plants
- Maintain recycling rate \*1 of at least 98% for waste
- Reduce emissions of metal scrap and casting sand
- (Reduce emissions per unit of sales by 1.0% from FY2006 levels by end of FY2011)

#### **Do!** Fiscal 2007 Activities and Results

#### Zero landfill waste and waste recycling

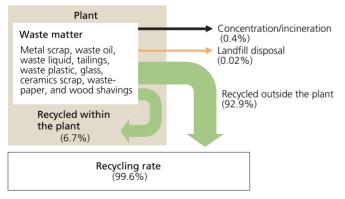
In fiscal 2007, production volumes increased so waste volumes generated also increased, but MMC reduced the amount of residual waste produced and achieved its zero emissions<sup>\*2</sup> target (0.02% achieved in fiscal 2007). MMC beat its recycling rate target, achieving a level of 99.6%.





Note: Domestic manufacturing plants and Pajero Manufacturing Co., Ltd.

#### Waste matter flow at domestic plants



## Reducing emissions of metal scrap and casting sand

Metal scrap and casting sand account for around 90% of production-related waste. MMC has set separate emission-reduction targets for these materials and is working to reduce these emissions.

#### Examples of other initiatives

MMC communicates regularly with group plants in Japan over their initiatives, while MMNA (US) and NedCar (Netherlands) plants run local 3R activities.

At its Japanese plants, MMC has turned parts of the shipping caps used to prevent oil leaks during engine transport into recyclable plastic bags, in order to reduce the amount of waste generated.

Waste oil that cannot be reused because it is contaminated with water is recycled as a raw material for emulsion fuel<sup>\*3</sup> that can curb the production of atmospheric pollutants (such as NOx) during combustion.

MMC has also compacted bulky plastic containers and other waste using a compactor or waste collection vehicle, which makes waste transport more efficient and helps reduce CO<sub>2</sub> emissions.



Waste collection vehicle

## Check! Fiscal 2007 Self-Evaluation

MMC achieved a landfill disposal rate of 0.02%, maintaining its record of achieving a zero emissions target (0.1% or less). The company continued to beat its recycling rate target, achieving a level of 99.6%.

MMC beat its targets for cutting emissions of metal scrap and waste casting sand per unit of sales, cutting emissions by around 18% over fiscal 2006 levels to 9.2 t/¥100 million.

## Action! Future Plans and Issues

MMC will continue to train staff and promote waste separation, as well as promote 3R initiatives on a global basis across the entire MMC group.

The company is reviewing its 3R activities from the perspective of preventing global warming, as recycling and waste transportation generate greenhouse gases.

- \*2 MMC defines zero emissions as a landfill disposal rate (the amount of waste sent to landfill as a proportion of total waste generated) of no more than 0.1%, as prescribed by internal regulations.
- \*3 Emulsion fuel: Oil and water are basically immiscible, so when an emulsifier is used to form an oil/water emulsion that is then combusted, the water droplets vaporize/evaporate while the oil forms even smaller droplets. This results in greater combustion efficiency and curbs the production of CO<sub>2</sub>, NO<sub>x</sub>, and particulate matter.

<sup>\*1</sup> The recycling rate equals the amount of recycled waste divided by the amount of total waste emissions, expressed as a percentage.

#### **Recycling of End-of-Life Vehicles (ELVs)**

#### Plan! Fiscal 2007 Goals

- Achieve automobile shredder residue (ASR) recycling rate of at least 70% (Japan)
- Build ELV take-back system (EU)
- Comply with new ELV directive on recyclability (EU)
- Provide dismantling data (EU)

#### **Do!** Fiscal 2007 Activities and Results

#### Compliance with Automobile Recycling Law (Japan)

MMC recycles materials from three major items recovered from ELVs: ASR that is recycled by ART and air bags and fluorocarbons that are recycled by the Japan Auto Recycling Partnership (JARP<sup>\*4</sup>). Because customers pay recycling fees for each ELV collected, the system provides an incentive for operators to achieve high recycling rates through efficient processing and recycling of these three items.

MMC achieved an ASR recycling rate of 68.8%, just below the statutory minimum of 70% required by 2015.

#### ■ ELV recycling in fiscal 2007 (recycling and proper disposal)

ltem	Performance criterion	#ELVs/amounts recycled
Shredder	Total ELV collection	342,598 ELVs/55,806 t
dust (ASR)	Recycling by ASR recyclers	315,905 ELVs/34,243 t
	Total recycling	26,693 ELVs/4,178 t
	Recycling rate*	68.8%
Air bags	Total air bag collection	72,195 ELVs/143,773 air bags
	Intact module recovery	9,663 ELVs/16,764 air bags
	Onboard deployment/removal	62,275 ELVs/127,009 air bags
	Mixed-method air bag recovery	257 ELVs
	Amount recycled by facilities	11,669 kg
	Recycled volume	10,977 kg
	Recycling rate**	94.1%
Fluorocarbons	Total fluorocarbon collection	250,149 ELVs/75,409 kg

#### •ELV recycling in fiscal 2007 (recycling and proper disposal)

Payment of deposited fees	¥2,515,114,067
Recycling costs	¥2,529,197,177
Balance	(¥14,083,110)

\*ASR recycling rate equals the recycling weight plus the total reused rate weight divided by total ASR collected. Statutory minimum ASR recycling rates are 30% from fiscal 2005, 50% from fiscal 2010, and 70% from fiscal 2015.

#### Compliance with ELV legislation in EU

The EU directive relating to ELV recycling came into force in October 2000 and is now on the statute books of most EU member countries. The law mandates collection and recycling of ELVs by manufacturers, importers and distributors.

MMC's local sales and production subsidiary Mitsubishi Motors Europe (MME) is leading efforts to develop an efficient ELV collection and recycling system tailored to the situation in each country. Construction of this system is almost complete.

## Compliance with new ELV directive on recyclability

Following further regulatory developments, the approval of new models in the EU is now also dependent on demonstrating that vehicles are at least 95% recyclable. MMC is in the process of constructing a system to facilitate calculation of this ratio by compiling data on materials, including from production sites outside Japan. The system is scheduled for completion by end-2008.

#### Providing dismantling data

Provision of information on new vehicle model disassembly to importers and distributors is also mandatory in the EU. MMC is participating in the International Dismantling Information System (IDIS), a joint system established by automakers for disseminating such data on a timely basis.

## Check! Fiscal 2007 Self-Evaluation

MMC made steady progress in complying with ELV recycling legislation in Japan and the EU.

The company was unable to continue its record of achieving the statutory minimum recycling rate for ASR in Japan (70%) ahead of the official deadline in 2015.

## **Action!** Future Plans and Issues

MMC will improve its disposal systems to allow it to achieve the 70% ASR recycling rate in a stable and continuous fashion. The company plans to make greater use of the total recycling method for ELVs to cut processing costs and increase recycling rates further.

MMC also plans further progress in complying with the EU directive requiring certification of model recyclability.

\*4 JARP is a consortium composed of 12 Japanese automakers and the Japan Automobile Importers Association (JAIA) to act as a single point of contact on air bag and fluorocarbon disposal.

<sup>\*\*</sup>Air bag recycling rate equals the weight of materials recycled divided by the amount collected at the facility for recycling. The statutory minimum air bag recycling rate is 85%.

#### Commentary

#### Advanced vehicle recycling

ELVs contain many useful materials and are already recycled to a high degree, but further improvements in recycling quality are important in the development of a recycle-oriented society.

Ferrous material makes up at least 70% of vehicle materials and the recycling of high quality ferrous material is a key focus in efforts to create a recycle-oriented society and reduce CO<sub>2</sub> emissions. High quality iron scrap can be obtained by completely removing copper-containing parts, such as wiring harnesses, contained in the ELV shell, producing materials that can be reused for automotive applications.

MMC also needs to revise disassembly procedures and take these into account from the design stages if the company is to achieve advanced vehicle recycling through the use of recyclable materials such as plastics and glass in new products.

#### Recycling flow for ELVs

There are two disposal routes possible: the shredder route and the total recycling route.

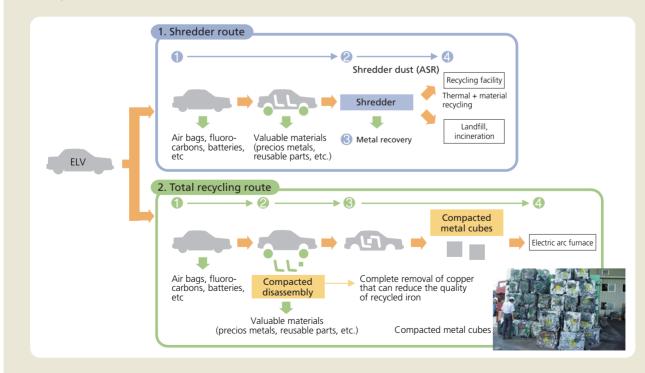
MMC works to produce vehicles that allow easy recovery of valuable materials, through creative material and structural designs. The company is also expanding the use of the total recycling route for disposal to enable higher recycling rates and the recovery of high quality ferrous material.

#### 1. Shredder route

- 1. Remove air bags, fluorocarbons, batteries, and valuable materials (including precious metals, reusable parts) from the car body.
- 2. Load the remaining ELV shell into a shredder machine and crush.
- 3. Recover ferrous material from the ASR using a magnetic separator. Recovered ferrous materials are shipped to steelmakers for use as raw materials.
- 4. The remaining shredder dust is either recycled or disposed of by incineration or as landfill.

#### 2. Total recycling route

- 1. Remove air bags, fluorocarbons, batteries, and valuable materials (including precious metals, reusable parts) from the car body.
- 2. At the same time, completely remove any copper-containing parts such as wiring harnesses (complete disassembly).
- 3. Load the remaining ELV shell into a press machine and compact it into a cube<sup>\*1</sup> shape. At this stage, also press seats and plastic parts such as instrument panels that become shredder dust.
- 4. The compacted metal cubes are used as ferrous raw materials by electric arc furnace operators. The plastic parts pressed at the same time form a heat source when electric arc furnaces are used to melt down the iron.



\*1 Compacted metal cubes: The output when an ELV shell is compacted into a cube or rectangular-solid shape.

### **Environmental Data for New Models in Fiscal 2007**

In fiscal 2007, the all-new *Galant Fortis* and *Lancer Evolution X* went on sale and MMC added the C2 series of 2WD vehicles to the *Delica D:5* range. Environmental data on these new models is summarized below.

	N	ame	Lancer Evolution X	Galant Fortis	Delica D:5 C2 series
	Vehicle type	ce	CBA-CZ4A	DBA-CY4A	DBA-CV5W
		Engine type	4B11 (MIVEC Inter-cooler turbo)	4B11 (MIVEC)	4B12 (MIVEC)
	_ ·	Displacement (ℓ)	1.998	1.998	2.359
Vehicle	Engine	Туре	DOHC 16V Inline 4-cylinder	DOHC 16V Inline 4-cylinder	DOHC 16V Inline 4-cylinder
specifications		Fuel	Unleaded premium gasoline	Unleaded regular gasoline	Unleaded regular gasoline
		Max. output (net) [kw(PS)/rpm]	206 (280)/6500	113 (154)/6000	125 (170)/6000
		Max. torque [Nm (kgfm)/rpm]	422 (43.0)/3500	198 (20.2)/4250	226 (23.0)/4100
	Drive syste		4WD (electronically controlled)	2WD (FF)	2WD (FF)
	Transmissi		Twin Clutch SST, 6 speed	CVT (INVECS-III 6 speed)	CVT (INVECS-III 6 speed)
	10•15 mo	de [km/ℓ]	10.0	13.6	11.0
	CO2 emiss	ions [g/km]	232	171	211
Fuel consumption	Compliand efficiency	ze with FY2010 fuel standard		Achieved <sup>要成22年度</sup> 燃費基準達成車	Achieved +5% <sup>平成22年度</sup> 燃費基準 <b>15%</b> 達成車
Air-	Refrigeran	t type	HFC134a	HFC134a	HFC134a
conditioning	Refrigeran	t use	500	500	780
Exhaust emissions	Relevant regulations and standards (2005 exhaust emission standards)				<b>     住排出ガス車</b> 日期2月21年間2月2日第一日の1月1日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日
	CO [g/km]		1.15	1.15	1.15
	NMHC [g/	km]	0.025	0.013	0.013
	NOx [g/km	ו]	0.025	0.013	0.013
LEV certified (lo	LEV certified (local governments)		*Certified by eight local governments: LEV under 2005 standards *LEV-7 certified (seven local govern- ments in Kyoto/Osaka/Kobe): 17 LEV *Tokyo metropolitan certification: ULEV	*Certified by eight local governments: ULEV under 2005 standards *LEV-7 certified (seven local govern- ments in Kyoto/Osaka/Kobe): 17 ULEV *Tokyo metropolitan certification: ULEV	*Certified by eight local governments: ULEV under 2005 standards *LEV-7 certified (seven local govern- ments in Kyoto/Osaka/Kobe): 17 ULEV *Tokyo metropolitan certification: ULEV
External noise	Noise compli	ance level during acceleration (dB-A)	76 (meets standard)	76 (meets standard)	76 (meets standard)
	Lead *2 (JAMA 200	6 target: 1/10th of 1996 levels)	Achieved	Achieved	Achieved
Hazardous	Mercury *3 (JAMA 2005 target: Use banned from January 2005)		Achieved	Achieved	Achieved
substances	Hexavalent chromium (JAMA 2008 target: Use banned from January 2008)		Achieved	Achieved	Achieved
	Cadmium (JAMA 2007 t	arget: Use banned from January 2007)	Achieved	Achieved	Achieved
	Parts use e	easily recycled materials	Bumpers, instrument panels, internal trim, etc.	Bumpers, instrument panels, internal trim, etc.	Bumpers, instrument panels, internal trim, etc.
Recycling	Use of recycled materials		Oil pressure gauge, dashboard panel, roof acoustic absorbent	Oil pressure gauge, dashboard panel, roof acoustic absorbent	Oil pressure gauge, carpet, dashboard panel, roof acoustic absorben:
	Material cont	tent displayed on plastic/rubber parts	Yes	Yes	Yes
	Lau	nched	October 2007	August 2007	May 2007 (addition of the 2WD C2)

\*2 Parts not covered by JAMA targets: lead batteries are excluded as a recycling and recovery route is established.

\*3 Parts not covered by JAMA targets: LCDs for navigation systems etc., combination meters, discharge headlamps, and in-car lights. Excludes minor use for parts required for traffic safety.

## **Eco-First Commitment**

MMC has responded to the MOE's Eco-First system, launched in April 2008, and submitted an "Eco-First promise" to Environment Minister Ichiro Kamoshita on 1 July.

The company has identified the three areas listed below where MMC will work on various environmental conservation programs as a leading company in the environmental arena. MMC made a promise to the Environment Minister to pursue these goals.

- 1. Develop and apply products that generate low CO<sub>2</sub> emissions in order to build a low-carbon society.
- Pursue energy-saving and recycling programs in order to build a recycling society.
- 3. Reduce the environmental impact of all MMC business operations, including manufacturing, sales, and office functions.



The MMC President (right) handing over a letter to Environment Minister Ichiro Kamoshita (left) at the commitment ceremony held at the MOE on 1 July, 2008



#### Eco-First system

- A program initiated by the MOE in April 2008 to promote further conservation efforts by leading companies in the environmental arena
- Each company involved recognizes environmental measures as a management priority, develops advanced and unique targets, and makes a promise to the MOE to fulfill
  these targets

### **Third-party Review**

Increasing pressure on automakers to help society cut CO<sub>2</sub> emissions In 2008, the G8 summit was held in Toyako, Hokkaido and major countries around the world discussed the importance of acting against climate change. Individuals like myself were made keenly aware of the importance of co-existing with the global environment in our lifestyles and business methods.

One of the major challenges facing society is how to manage automobiles. Estimates show that 20% of automotive-related CO<sub>2</sub> emissions come from manufacturing, but 80% come from vehicle usage. Automakers have worked on environmental measures to reduce exhaust gases or improve fuel efficiencies while supporting comfortable lifestyles and convenient societies. Amid rising gasoline prices, society is now placing greater expectations on the auto industry to pursue further environmental programs.

## Establishing a market for new-generation electric vehicles, as symbolized by the Drive@earth concept

I then reviewed the Social and Environmental Report 2008, with its focus on innovative technology developments, environmentally aware initiatives, and relationships of trust with society, all themes that resonate strongly with society.

I was extremely impressed with the stance of prioritizing environmental issues to support the co-existence of individuals, society, and the Earth through automobiles, as encapsulated in the Drive@earth corporate tagline.

Under the section on innovative technology developments, the report describes the new-generation electric car that produces zero CO<sub>2</sub> emissions when running. The car features the first ever large-scale high-performance lithium ion battery and is a superb example of product development with an eye to the future. I hope that charging facilities will be put into place ahead of the car's market launch in fiscal 2009.

The car emits 72% less CO<sub>2</sub> per kilometer compared with gasoline-powered cars, even including the CO<sub>2</sub> emissions during power generation. I would like to see greater use of clean energy sources when the charging facilities are being put into place. Specifically, I would like to see the use of renewable forms of energy, for example from biomass, geothermal, wind power, hydro power, and solar power sources, as well as nuclear energy, in a bid to actively build a sustainable society.

I also hope that the government and the private sector will establish the right conditions for the Japanese launch of clean diesel vehicles or flexible fuel vehicles capable of running on a mix of 0-100% bioethanol, all technologies that are being readied for launch overseas. Making further cuts in CO<sub>2</sub> emissions in response to rising demand in developing countries

In terms of environmentally aware initiatives, MMC has reduced the amount of CO<sub>2</sub> emissions in relation to sales and cut CO<sub>2</sub> emissions from manufacturing operations by 26% over fiscal 1990 levels. However, these results were affected by falling production volumes. Emerging countries in Asia and elsewhere are now expected to develop rapidly, generating rising demand overseas. I hope that automakers will therefore be diligent in their efforts to make further cuts in CO<sub>2</sub> emissions.

Turning to the creation of a recycling society and in particular to the recycling of end-of-life vehicles (ELVs), I am impressed by the efforts made in Japan and the EU to develop better recycling systems. I hope that MMC will redouble its efforts to improve the recycling rate for shredder dust. The company achieved the 2015 statutory minimum of 70% ahead of schedule in 2006, but the recycling rate fell slightly below this target, to 68.8%, in fiscal 2007.

Environmental conservation programs include forest conservation initiatives by company staff, but I would like the company to consider ongoing target setting and achievement.

In the sections on MMC's environmental initiatives, I found the descriptions of progress in environmental management and specific PDCA programs to be very well written.

Valuing communication, supporting local low-carbon communities I inspected MMC's Powertrain plant in Kyoto while thinking through the theme of creating relationships of trust with society. When the plant was established some 50 years ago, they started out as a factory in the middle of a field. Today, houses and apartments are clustered around the plant.

As well as installing equipment to counter bad odors and noise from the plant, MMC is involved in various activities to engage with the local community, including setting up a community liaison office and allowing study tours of the plant or educational excursions by local primary schools. I sensed the enthusiasm the company has for communicating with the local community.

MMC is building relationships of trust by working closely with the community. For example, it opens up the works for use as parking space as part of a Park and Ride scheme set up by the city during the Arashiyama fall colors season. The scheme is aimed at reducing the number of private cars touring the area and alleviating traffic jams.

We hope that various programs are trialed in order to develop a low-carbon society. Good examples are linking cars and public transport systems through Park and Ride schemes at cities across Japan, curbing traffic flow through carpooling, or developing "compact city" town centers that are easy to walk around. I also hope that information can be collected and disseminated on how best to live in a motorized society as we work to create sustainable communities. **Turning into a 21st-century company with a focus on safety**,

#### reliability, and targeted environmental initiatives

I am highly impressed by MMC's goal to develop a virtuous cycle for the environment and the economy by managing their business and technology developments to meet the changing demands of our times. One such example is MMC's commitment to the Ministry of the Environment's Eco-First system. In the future, I think it will be important for every single employee to engage in local and social activities and to understand the needs of society from a broadranging perspective but also in a flexible yet targeted manner.

Finally, one of the basic requirements of an automaker is to ensure safety and reliability and to comply with laws and regulations. In the wake of the recall cover-up scandal, I am happy to see MMC publicly disclosing information on its Business Ethics Committee that was launched in 2004. I sincerely hope that MMC can apply this earnest approach to laying the foundations for coexisting with the global environment.



#### Yuko Sakita

Journalist, Environmental Counselor Director, Director, NPO GENKI Network for Sustainability Director, NPO Shinjuku Environmental Action Network

Environmental Businesswomen Member Director, Carbon Offset Japan Member of the Central Environmental Council, National Land Development Council, and other government councils Author of numerous publications, including Daredemo Dekiru Gomi Daietto (Garbage Diet for Everyone)

#### Environmental Considerations in the Preparation of This Report

#### Paper certified by FSC

This report is printed on paper certified by the FSC (Forest Stewardship Council), an international NGO. Paper certified by the FSC is made from trees harvested from so-called sustainable forests, which are well managed and protected from illegal cutting. Trees are cut only in the quantities necessary and the effects on the ecosystem around such forests are minimized.

MMC endorses such sustainable-forest activities, as it believes that the use of FSC-certified and recycled paper for appropriate purposes in a balanced way is a first step toward a sustainable society. Besides this report, MMC makes a point of using FSC-certified paper for its environmental pamphlets and vehicle catalogues. (ID No.: FSC-JPN-0008)

#### Ink and printing

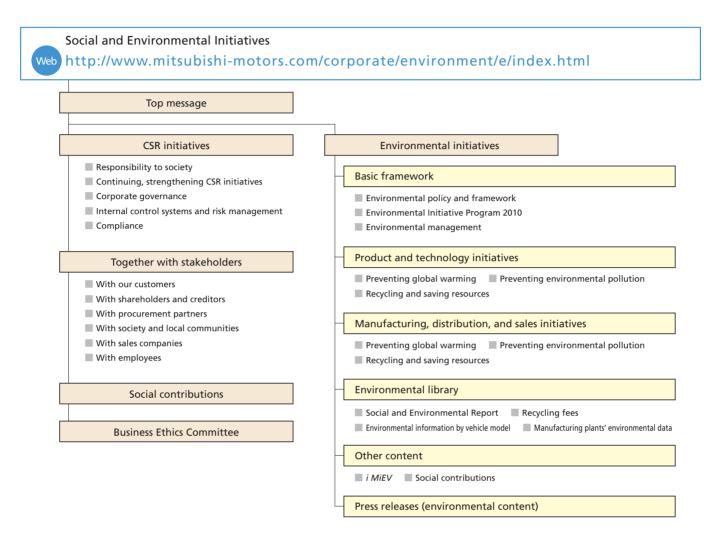
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#### Comparison With the Ministry of the Environment's "Environmental Reporting Guidelines" (2007 Version)

Items in guidelines	Relevant major pages
Basic items	
BI-1: Preface by CEO	P3-4,P59
BI-2: Basic requirements in reporting	P2, P61-62,Back Cover
BI-3: Business outline (including business indicators)	Р5-8
BI-4: Outline of environmental report	P35-36,P37,P43,P49,P53
BI-5: Material balance of business activities (impact, internal environment, output)	P40
Environmental management indicators	
MP- 1: Status of environmental management	P37-39
MP- 2: Compliance with environmental regulations	P35-36,P42,P51-52
MP- 3: Environmental accounting information	P40
MP- 4: Status of environmentally friendly investments and loans	_
MP- 5: Status of supply chain management, etc.	P26,P35-36
MP- 6: Status of green purchasing and procurement	P26
MP- 7: Status of research and development of new technologies, DfE, etc.	P11-12,P35-36,P41,P45-46,P50,P54
MP- 8: Status of environmentally friendly transport	P35-36,P48
MP- 9: Status of efforts to protect biodiversity and use bio-resources in a sustainable manner	P15
MP-10: Status of environmental communications	P42
MP-11: Status of environmentally related social contributions	P15
MP-12: Status of products and services for reducing environmental impact	P11-12,P35-36,P38,P40,P41,P44-46,P47-48,P50-52,P54-5
Operational indicators	
OP- 1: Total amount of energy input and measures to reduce it	P40,P47-48
OP- 2: Total amount of materials input and measures to reduce it	P40
OP- 3: Total amount of water input and measures to reduce it	P35-36,P40
OP- 4: Amount of substances recycled for reuse within business areas	P55
OP- 5: Total production of products or sales	P5-6
OP- 6: Emissions of greenhouse gases and measures to reduce them	P35-36,P40,P44,P47-48,P58
OP- 7: Air pollution, environmental load on living environments and efforts to reduce it	P35-36,P40,P50,P52
OP- 8: Amounts emitted and movement of chemical materials, and efforts to reduce it	P35-36,P40,P51-52
OP- 9: Total emissions of waste, etc., final disposal of waste, and measures to reduce it	P35-36,P40,P55
OP-10: Total amount of wastewater discharged and measures to reduce it	P35-36,P40
Environmental efficiency indicators	
Links between environmental considerations and business management	-
Social performance indicators	
State of social activities	P9-10,P13-15,P17-21,P23-32

#### MMC Websites

Interested readers can find further information on MMC's "Social and Environmental Initiatives" website.



#### Notice concerning the MMC Social and Environmental Report 2008 Questionnaire

To date, we have asked for your feedback on this report via a questionnaire to be returned by fax or mail. We are now making the questionnaire available online to make responses easier to collect.

The questionnaire is available on each page on the above website (Social and Environmental Initiatives). We would very much appreciate readers accessing the website and using the questionnaire to give us feedback, opinions, or suggestions. We value your comments as they help us to improve future reports.

MMC's key sources for disclosure online		
As well as a PDF version of our Social and Environmental Report, the MMC website also contains the following information and documents for download:		
Social and Environmental Report PDFs	Web http://www.mitsubishi-motors.com/corporate/environment/report/e/index.html	
Annual Report PDFs	Web http://www.mitsubishi-motors.com/corporate/ir/irlibrary/e/anual.html	
Fact Book PDFs	Web http://www.mitsubishi-motors.com/corporate/ir/irlibrary/e/fact.html	
Corporate data	Web http://www.mitsubishi-motors.com/corporate/e/index.html	
IR information	Web http://www.mitsubishi-motors.com/corporate/ir/e/index.html	
Press releases	Web http://media.mitsubishi-motors.com/pressrelease/e/allcategory/all/	

Note: The above Social and Environmental Initiatives website is scheduled to be available from early September 2008. Website URLs may change when the website contents are amended. Mitsubishi Motors Social and Environmental Report 2008

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#### Inquiries MITSUBISHI MOTORS CORPORATION Environment & Recycling Affairs Department 5-33-8 Shiba, Minato-ku, Tokyo 108-8410, Japan Tel: +81-3-6852-4207 Fax: +81-3-6852-5526

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