Prevention of Pollution

Medium- to Long-Term Vision for Material Issues

	Risks	Opportunities	Direction of Responses
Long Term	● The cost of managing hazardous substances could rise if regulations are become more stringent in response to increased damage to human health and the loss of ecosystems. ● The company could become subject to fines or sanctions in the event of a serious leak into the air or water. ● Environmental problems at a supplier could disrupt the supplier's operation and halt our parts procurement. ● The Company's image could suffer in the event of a delayed response to initiatives.	● We could reduce costs through more efficient management, including of the supply chain. ● By reinforcing management, including of the supply chain, we could supply products that deliver reassurance and safety, as well as maintaining competitiveness. ● Managing in accordance with standards more rigorous than those imposed by regulations could enhance the corporate image.	● We will contribute toward a society free of environmental pollution by reducing the environmental impact of our products and the pollution resulting from our business activities.

	External Environment	Stakeholders' Needs and Expectations	Medium-Term Targets
Medium Term	● Increasingly stringent regulations on emissions in various countries and regions ● Increasingly stringent regulations on chemical substances in various countries and regions ● Increasingly stringent regulations on the export and import of hazardous waste (plastic waste)	● Growing interest in environmental consideration ● Growing ESG investment (investors promoting changes in corporate activities)	● Conformance to regulations on hazardous substances in products

FY2020 Materiality Targets and Results

○: As planned △: Delayed

Details of Main Initiatives	FY2020 Targets	Indicators	FY2020 Results	Self-Evaluation
Properly manage hazardous substances in products	Properly manage hazardous substances	Progress of initiative	We are obtaining information on regulated substances, upgrading our internal management system and conducting content surveys on newly regulated substances	○

Basic Approach

Vehicles are products that can affect human health and biodiversity through the emission of environmental pollutants and chemical substances during business activities or product use.

In order to contribute to the realization of a sustainable society, MITSUBISHI MOTORS considers the prevention of pollution to be one of the material issues for the Company. Our Environmental Plan Package positions this issue as one for the Company to address directly. To help realize a society free of environmental pollution, we are working to reduce the environmental impact of our products and pollution resulting from our business activities. In the stage of product development, along with promoting the development of fuel economy improving technologies and electric vehicle technologies, we strive to manage to hazardous substances. In production processes, we are endeavoring to reduce air pollutants emitted from out plants by voluntarily enacting activity standards that are stricter than legal requirements. In order to reduce the impact on the environment from air pollutants and chemical substances, we engage in the prevention of pollution throughout all our business activities.

Purifying Exhaust Gas while Driving

Vehicles powered by gasoline and diesel engines inevitably emit combustion gases from the engine while driving. These exhaust gases contain hazardous substances that can cause air pollution.

In addition to developing and popularizing electric vehicles, which emit little exhaust while driving, we are endeavoring to develop and encourage the use of gasoline and diesel vehicles that have emissions containing fewer hazardous substances.

Improving Gasoline Engine Vehicles

Since the 1960s, emissions of carbon monoxide, hydrocarbons, and nitrogen oxides (NOx) have been steadily restricted by regulations.

We have taken various measures since such regulations were first introduced. We currently comply with these regulations by applying electronically controlled fuel injectors and advanced catalyst technologies to the combustion control system.

Improving Diesel Engine Vehicles

For diesel engine vehicles, carbon monoxide, hydrocarbons, NOx, and particulate matter have been regulated in some countries, such as Japan, United States and European countries, since the 1970s.

Since such regulations were first introduced, we have taken measures including improving the combustion technology. To comply with these regulations, we have developed and produced clean diesel engines by systemizing technology such as VG turbochargers, controlling combustion with a common rail fuel injection system, introducing after-treatment using NOx trap catalysts, diesel particulate filters and a urea selective catalytic reduction (SCR) system.

Clean Diesel Engine Systems

VG Turbocharger

The VG turbocharger helps to improve fuel economy and suppress emissions of particulate matter through optimum supercharging across the engine's operating range.

Common Rail Fuel Injection System

Particulate matter and NOx can be generated due to incomplete combustion. In our vehicles, this is suppressed using a high-pressure fuel pump, common rail accumulator that stores highly pressurized fuel, and electronically controlled fuel injectors.

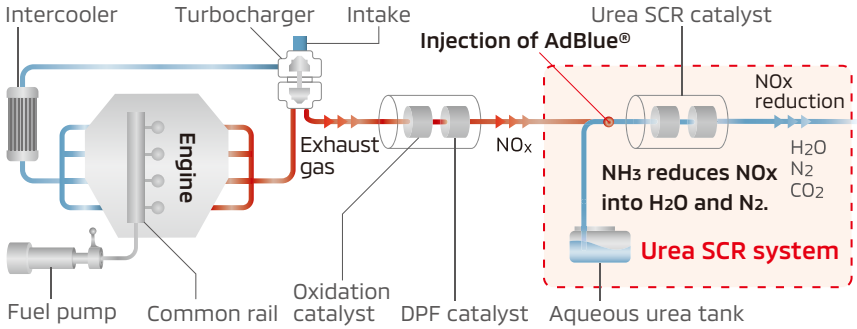
Diesel Particulate Filter (DPF)

This substantially reduces particulate matter.

Urea Selective Catalyst Reduction (SCR) System

Nitrous oxides (NOx) from diesel engines' emissions are purified using an aqueous urea solution (AdBlue®*1), breaking them down into non-polluting nitrogen and water.

[The 4N14 Engine System]



*1 A registered trademark of Germany's Verband der Automobilindustrie (VDA)

TOPICS

2.5L Naturally Aspirated Engine on the New OUTLANDER

The new OUTLANDER, which launched in North America in April 2021, is equipped with an inline direct injection four-cylinder DOHC 2.5L engine. The engine is designed for low fuel consumption, smooth driving and enjoyably agile acceleration.

This newly developed engine, which was developed through the alliance, clears emission gas level LEV III-SULEV30*2. By using the items described right column, the engine performs on both the output and fuel economy fronts.

***2: SULEV stands for Super Ultra Low-Emission Vehicles in the classification for emission in California, U.S.**

1. **Mirror bore coating**
   A mirror bore coating is used on the surface of the cylinder wall. The mirror-like finish helps to reduce friction loss.
2. **Variable tumble control valve**
   A variable tumble control valve is used to optimize the flow of air drawn into the combustion chamber. In-cylinder flow is increased as a result, promoting rapid combustion, thereby reducing emissions and improving fuel economy, while enhancing acceleration response.
3. **Electric variable valve timing (VVT) mechanism**
   An electric intake VVT is used to optimally control intake valve timing and provide superior responsiveness. On the exhaust side, a VVT with an intermediate lock is used, with individual valve timing optimized to achieve low emissions and improved fuel economy.
4. **Variable capacity oil pump**
   A variable capacity oil pump optimizes the control of oil pressure according to driving conditions, thereby reducing friction loss and helping to improve fuel economy.

Reduction of Hazardous Substances

In accordance with the reduction targets of the Japan Automobile Manufacturers Association, Inc. (JAMA) and the EU's end-of-life vehicles directive (a recycling law), MITSUBISHI MOTORS is working to reduce the use of four substances (lead, mercury, cadmium, and hexavalent chromium). We have established internal technical standards to voluntarily reduce hazardous substances. We are also taking measures to comply with regulations on the use of hazardous substances in each country in compliance with the REACH regulation*1 concerning substances and the Convention on POPs*2. At present, in addition to four substances and other heavy metals, the use of VOCs (volatile organic compounds), bromine-based flame retardants and various other substances is regulated. Regulations similar to European ones are being enforced in developing countries in Asia as well.

We are working to voluntarily reduce hazardous substances by setting internal technical standards.

*1 REACH stands for "Registration, Evaluation, Authorisation and Restriction of Chemicals." Enacted on June 1, 2007, the REACH regulation is a general system to register, evaluate, authorize and restrict the use of substances
*2 Persistent Organic Pollutants

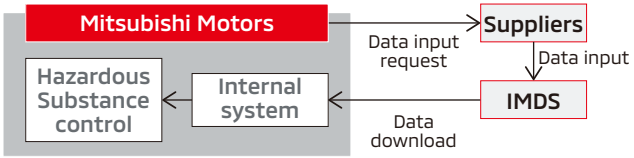
▶Data (p. 110): Emissions of Sulfur Oxide, Nitrogen Oxide, VOC (Volatile Organic Compounds) and Ozone-Depleting Substances
▶Data (p. 113, pp. 116–118): Atmospheric pollutants and PRTR-designated pollutants

Material Data Control by the International Material Data System (IMDS)

Data on the hazardous substances contained in vehicle parts delivered by suppliers are collected by the International Material Data System (IMDS), an international system for collecting such data. Together with overseas plants such as Mitsubishi Motors (Thailand) Co., Ltd. (MMTh), we utilize the collected data under a globally centralized internal system for reducing hazardous substances.

In cooperation with suppliers, we are complying with the REACH regulation, a general system for the registration, evaluation, authorization, and restriction of substances used in the EU.

Flow of Data Collection through IMDS



Reduction of In-Cabin VOCs

To provide customers with a healthy and safe cabin space, we work to reduce volatile organic compounds (VOCs) inside the cabin.

VOCs are organic compounds that are easily volatilized at room temperature such as formaldehyde and toluene. These compounds are thought to cause sick building syndrome, and may irritate the eyes, nose, and throat. In an automobile cabin, they are mainly generated by adhesives and paint used in interior parts.

Please see the JAMA website for details regarding the Voluntary Guidelines.

WEB http://www.jama-english.jp/release/release/2005/050214.html

Progress

We are working to reduce in-cabin VOCs by developing materials with low VOC emissions and technologies to reduce VOCs generated inside the cabin.

Example of Measures to Reduce VOCs

Carpet	Reduced aldehydes in pile adhesives
Seat	Reduced organic solvents in fabric adhesives
Ornaments	Reduced VOCs by using spun-dyed high-gloss interior parts
Air-conditioner	Reduces VOCs with clean air filter with deodorizing function

Preventing Air Pollution

Reduction of VOC Emissions from Production Processes

MITSUBISHI MOTORS is applying the waterborne 3WET paint method*1 to its painting process to reduce VOC emissions. In Japan, we use this method at the Mizushima Plant and the Okazaki Plant. Overseas, the system is used on the No. 3 paint line at Mitsubishi Motors (Thailand) Co., Ltd. (MMTh). MMTh also plans to use this approach at a new paint plant it is constructing.

We are also upgrading our robotic and other painting systems, reducing the amount of paint used by adjusting production lots and increasing the amount of used thinner we recover. Through these moves, we are reducing VOC emissions from vehicle production.

*1 With this method, water-soluble paints are used for the middle and top coats. Solvent-based paint is used only for the clear overcoat.

▶Data (p. 110): VOCs (volatile organic compounds)

New paint plant under construction in Thailand (MMTh)

Management of Air Pollutants

We follow laws and regulations to manage the concentrations and amounts of such air pollutants as Nitrogen oxides (NOx), Sulfur oxides (SOx) and soot emitted in production processes.

To lower NOx emissions, we introduce low-NOx-content boilers and burners when upgrading or installing new equipment. To reduce Sox emissions, we are using lower-sulfur boiler fuels, such as kerosene or natural gas.

▶Data (p. 113): Atmospheric pollutants

Management of Chemical Substances

Appropriate Management of Chemical Substances

We have introduced a chemical substance management system for using chemical substances. Before deploying substances, we examine their physical and chemical properties and the details of usage plans, as well as legal requirements, conduct risk assessments, judge whether they can be used and educate workers. We also use this system to conduct centralized management of the most recent Safety Data Sheet (SDS) information. In addition, we use data from this system to ascertain the quantity of PRTR*2 substances used and report on their usage and emissions, as well as other aspects of legal compliance.

We will continue to manage chemical substances appropriately to ensure both occupational health and safety and pollution prevention.

*2 PRTR is short for Pollutant Release and Transfer Register.

Appropriate Management of Hazardous Waste

We manage hazardous waste to avoid importing or exporting hazardous waste that is restricted by the Basel Convention on the Control of Transboundary Movements of Hazardous and Their Disposal*3.

We also transport and treat waste produced in Japan appropriately, based on various legal requirements.

*3 This convention stipulates international frameworks and procedures related to restrictions on the movement of certain types of waste across national boundaries.

Appropriate Management of Waste Containing PCBs

Harmful polychlorinated biphenyls (PCBs) are contained as insulation oil in transformers and condensers that were manufactured a long time ago. We process waste containing PCBs appropriately, in accordance with the Act on Special Measures concerning Promotion of Proper Treatment of PCB Waste.