

Resource Recycling Initiatives



FY2019 Materiality Targets and Results

○: As planned △: Delayed

Details of Main Initiatives	FY2019 Targets	Indicators	FY2019 Results	Self-Evaluation
Commercialize and expand usage of resource conserving materials	Application of technology for reduction in component waste production and expanded use of recycled materials	Expanded usage	Developing parts made of recycled materials	△
Reduce waste material in production activities	Externally disposed waste from production activities per production vehicle: 52% reduction compared to FY2005	Reduction of external waste disposal	-53%	○

Basic Approach

The consumption of resources is increasing due to the rise in populations and economic growth in emerging countries. Countries and industry groups are formulating various initiatives in order to promote automobile recycling and correct processing.

Based on the above, MITSUBISHI MOTORS considers effective resource use as our task and promotes initiatives for recycling and resource conservation.

MITSUBISHI MOTORS set targets to improve the ease of recycling, reduce the use of lead, and introduce recycled parts for new vehicles when the MITSUBISHI MOTORS Recycling Initiative was established in 1998, which we are engaged in continuously.

At production plants, with the aim of realizing a recycling-oriented society that gives consideration to the environment and resources, we are promoting the effective use of resources. We are achieving a landfill waste disposal rate of zero* at every plant by converting industrial waste materials generated from

production processes into reusable resources and reducing the volume of waste discharged.

*Land reclamation rate below 0.1%

Recycling-Based Design and Development

Under vehicle recycling legislation in Japan, Europe and China, automobile manufacturers are obligated to consider recycling when developing products.

MITSUBISHI MOTORS conducts design and development that actively incorporates not just recycling, but all aspects of the 3Rs including reduction and reuse. Since 1999, we have implemented the 3Rs in the stage starting with conceptual design in accordance with our unique Recycling Plan Guidelines.

With regard to wires and harnesses, and motors, we have improved detachability and ease of recycling in accordance with the Harness Design Guidelines.

At dealers, bumpers replaced during repairs are recycled for undercovers and battery trays. We are also increasing the use of recycled materials in other parts.

TOPICS

Using Thermoplastic Resin

DELICA D:5, which was launched in 2019, uses easily recyclable thermoplastic resin for exterior and interior parts.

Main parts (indicated in green) that use thermoplastic resin



Exterior



Interior



End-of-Life Vehicle Recycling

MITSUBISHI MOTORS encourages the recycling of end-of-life vehicles to reduce the environmental impact of waste from these vehicles. In Japan, the European Union and other regions, we promote recycling in accordance with the automobile recycling laws of each country. We comply carefully with the evolving automobile recycling laws that are being introduced in emerging countries in Asia.

Response to Automobile Recycling Laws in Japan

After the End-of-Life Vehicle Recycling Law was enacted in 2005, the company has been accepting used automobile shredder residue (ASR), airbags, and fluorocarbons for recycling.

Regarding ASR recycling, we participate in ART*¹ in order to jointly process ASR. As a result of the creation of new processing facilities and other measures, the ASR recycling rate in fiscal 2019 was 96.5%, substantially above the statutory standard of 70% in effect since 2015. We will continue to develop new recycling facilities to ensure the stable processing of ASR.

The company outsources the treatment of airbags and fluorocarbons to the Japan Auto Recycling Partnership (JARP).

In addition, for the effective use of recycling fees deposited from customers, we proactively works on

increasing the recycling rate by conducting efficient recycling and proper processing of these three items.

*1 Automobile Shredder Residue Recycling Promotion Team established by Nissan Motor Co., Ltd., Mazda Motor Corporation, MITSUBISHI MOTORS and others.

Recycling Promotion in the EU

Response to the EU's Directive on the Recycling of End-of-Life Vehicles

In the EU, in accordance with the End-of-Life Vehicles Directive*² established in 2000, automobile manufacturers or importers must accept and recycle end-of-life vehicles. Also, in 2003, the ELV Directive*³ was enacted, specifying ease of recycling as a certification requirement.

The company built a system of acceptance and recycling in line with the actual situation of EU member countries centering on our European subsidiary Mitsubishi Motors Europe B.V. (MME).

*2 "Directive of the European Parliament and of the Council on End-of-Life Vehicles"

*3 Abbreviation of End-of-Life Vehicles.

Provision of Dismantling Information

In the EU, automobile manufacturers must provide dismantling information for new model vehicles to treatment operators. The company provides such information on a timely basis by using the International Dismantling Information System (IDIS) jointly developed by automobile manufacturers.

Response to the EU's Directives on Approval for Vehicle Models for Recyclability

In the EU, satisfying the minimum 95% recyclability rate is a requirement for type approval of vehicle models, and the company established a system that satisfies the requirements of this directive. Our vehicles sold in the EU meet the requirements of the directive under this system. We will continue to acquire recyclability approval for all new models sold in the EU.

Collection of Drive Batteries in Electric Vehicles/Construction and Operation of the Recycling System

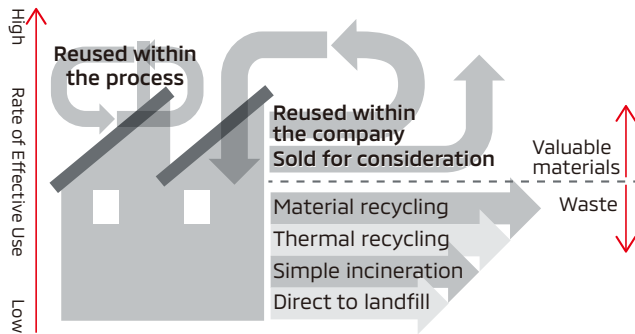
In Japan, Europe, and North America, the company established and operates a battery collection system for the purpose of recycling technology development and proper treatment of end-of-life batteries in electric vehicles and plug-in hybrid vehicles.



Initiatives to Reduce Waste Generation and Reuse Resources in Production Activities

By improving its production processes, MITSUBISHI MOTORS is working to reduce the amount of waste it generates through manufacturing. For the waste we do generate, while curtailing treatment costs we continue to review and improve the ways in which we sort and treat waste, using it more effectively as resources.

Effective Use of Resources and Recycling



TOPICS

Reducing Waste Generation by Transitioning Casting to the Aluminum Die-Casting Process

In recent years, aluminum die casting has been widely adopted in the manufacture of engine blocks for passenger cars to make them more lightweight than when using conventional cast iron. The die-casting of aluminum generates substantially less waste casting sand than the casting of iron.

At the Kyoto Plant, which mainly manufactures engine and powertrain parts, we are moving to consolidate our production line for cast iron engine blocks, as the production of aluminum die-cast parts is growing while that of cast-iron products is decreasing. Our last cast iron line ceased operations in June 2019, and we stopped producing cast iron engine block at the Company. As a result, the amount of waste casting sand we generate fell by around 10,000 tons per year.



Production line for cast iron engine blocks