Environment

Contribution to a Sustainable Global Environment

Environmental Management

Promotion of decarbonization

Contribution to Vehicle Electrification

Building a Circular Economy

Air, Water and Soil Conservation

Environmental Management

What JATCO can do for a sustainable future

JATCO leverages its collected experience in the transmission business and pursues both driving and environmental performance. Currently, we are working both on the development of electric powertrains for EVs and on the further improvement of our CVTs, which boast the No. 1 market share globally (as of a 2024 JATCO survey).

Our technologies and experience have further evolved our Jatco CVT-X, which boasts 90% transmission efficiency, into the latest Jatco CVT-XS. Through acceleration that matches the driver's intentions and excellent responsiveness, driving performance is enhanced and with improved fuel efficiency, value is provided to our customers. Going forward, in anticipation of the age of electrification, we will also launch electric powertrains such as our e-Axles.

By leveraging these technologies and systems to provide innovative products for non-car mobility, we are contributing to a sustainable future.

Jatco CVT-XS

Ultra-compact e-Axle

JATCO's Environmental Policy

JATCO has revised its environmental policy to content better suited to the times, with a view to promoting environmental activities and realizing a sustainable society.

Based on the new environmental policy, JATCO will make continual improvements and raise the bar in the areas of innovation, decarbonization, resource circulation and pollution prevention in order to realize a sustainable global environment.

Environmental Policy

Contributing to a sustainable global environment through all business activities

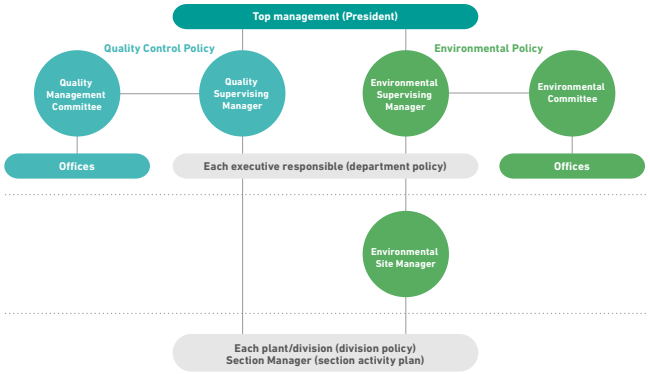
- Innovation: Develop and produce energy-efficient products and environmental technologies
- Decarbonization: Achieve carbon neutrality across the entire value chain by 2050
- Resource circulation: Promote a circular economy that maximizes resource utilization
- Pollution prevention: Prevent environmental problems and comply with legal requirements
- Continual improvement: Improve the effectiveness of the environmental management system through collaboration and co-creation with the people within the organizations

Promotion system for environmental management

JATCO's environmental management is carried out by appointing environmental supervising managers and site managers to each global site, and promoting our environmental management system (EMS) under the management and authority of each environmental supervising manager.

With regard to EMS promotion across the entirety of JATCO, comprehensive deliberation and assessment is carried out by a company-wide environmental committee comprised of each of the environmental supervising managers and environmental site managers, and a follow-up system is put in place. By applying the company-wide EMS to all divisions and production bases, we are able to align our efforts as a company, and strongly promote environmental management. This is a major characteristic of JATCO's EMS.

JATCO's systems promoting quality and environmental management



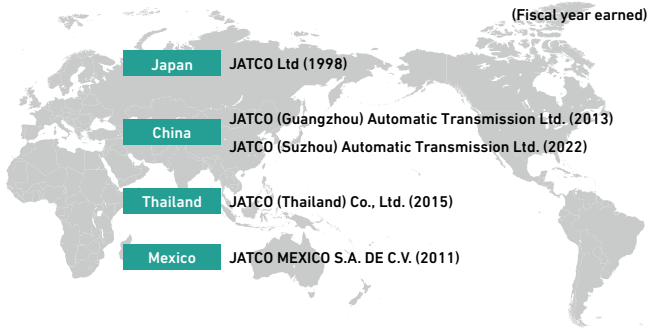
Environmental Management

Earning ISO 14001 globally

JATCO has earned ISO 14001:2015, the latest standard for environmental management systems, at all its production bases in Japan and overseas. To minimize the impact on the environment imposed by the production bases JATCO is deploying globally, we apply the same environmental protection measures used in our production bases in Japan to all our bases around the world, and we are proactive in implementing unique ideas at each base. Going forward, we will continue engaging in production practices that minimize environmental impact across our bases all over the world.

All of our global bases have acquired ISO 14001:2015 certification.
(The certificates for one of our bases)

Bases with ISO 14001 certification



Promotion system for environmental activities

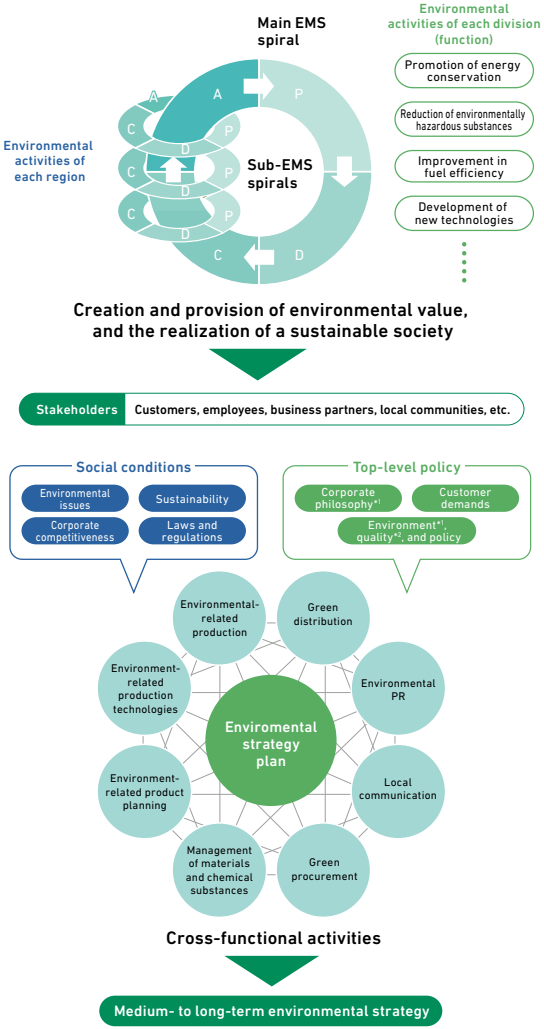
Promotion of activities that meet the needs of the local community by the Environmental Committees of each region

JATCO has established Environmental Committees in each region, and the Committees carry out environmental activities that meet the needs of the local community.
By mutually interlinking and operating two types of PDCA cycles—the PDCA cycle for the whole of JATCO (main EMS spiral) and the PDCA cycles for the regions and divisions (sub EMS spirals)—we strive to unite the direction of all the initiatives that are implemented. The aim is to create and provide environmental value to our stakeholders through continuous improvements, in order to improve the effectiveness of our activities.

Response to environmental issues from a medium- to long-term perspective

In parallel with the promotion of EMS, which carries out environmental management by sector, we are advancing our medium- to long-term initiatives for environmental issues. In relation to changes in social conditions and business environment and to our corporate philosophy and top-level policies, etc., JATCO ascertains the current situation regarding the environmental issues it should address, analyzes the risks, considers the necessary actions, and then executes them. While examining JATCO as a whole, the committee performs management and planning across the company. They implement this strategy while coordinating the environmental activity planning and management of our overseas bases.

Conceptual diagram of JATCO's environmental activities

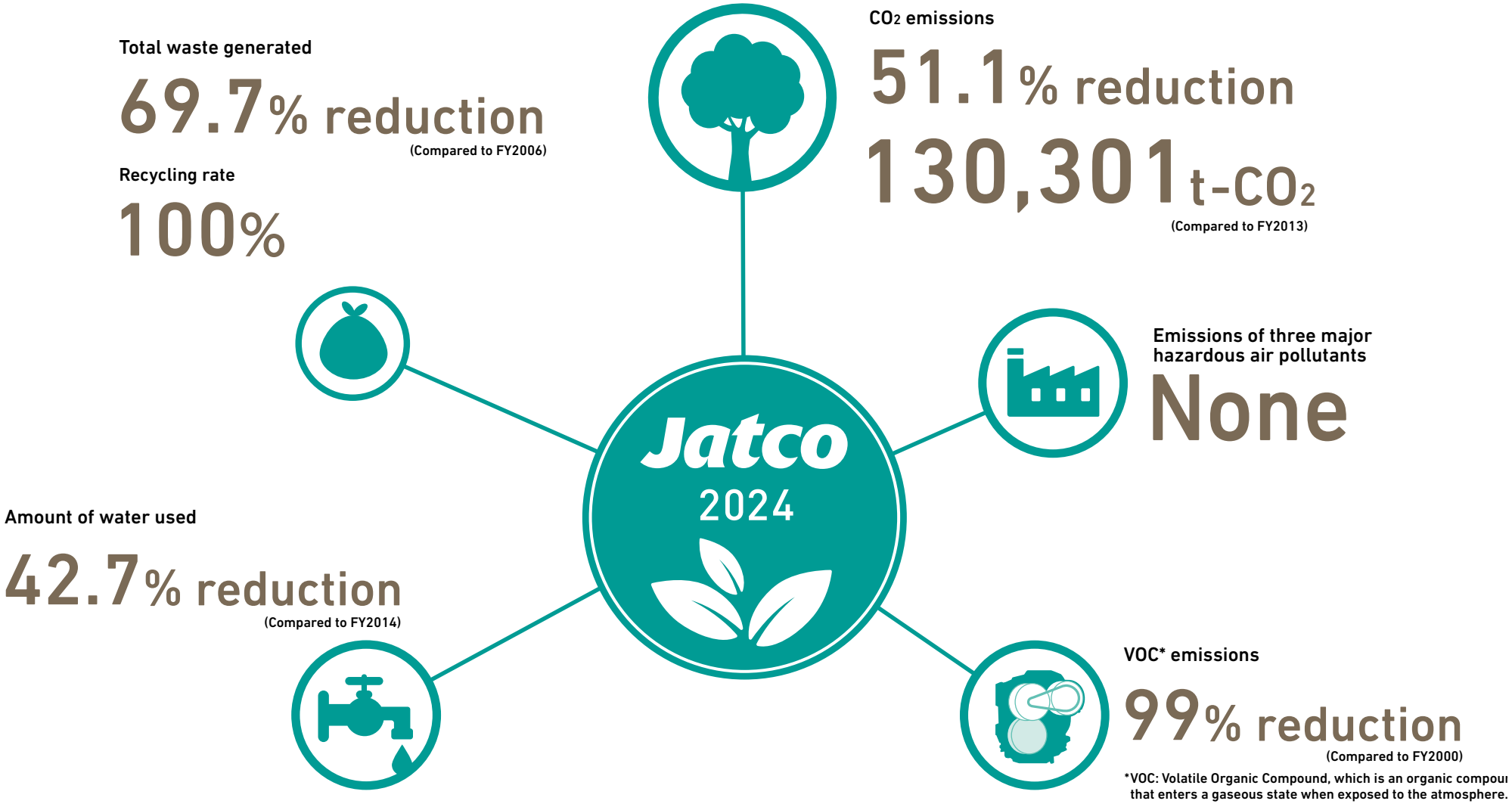


*1 For details related to corporate responsibility, see page 7
*2 For details related to environmental policy, see page 20
*3 For details related to quality control policy, see page 65

Environmental Management

FY2024 environmental results

*In business activities inside Japan



*VOC: Volatile Organic Compound, which is an organic compou that enters a gaseous state when exposed to the atmosphere.

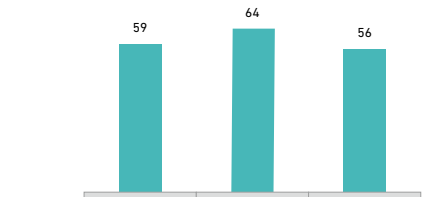
Environmental Management

Material balance

JATCO aims to create a recycling-oriented society by properly using resources and reducing emissions.

Raw materials (aluminum)

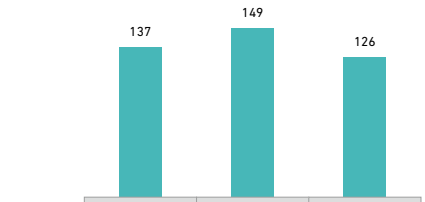
Unit: kt



	2022	2023	2024
JSZ	4	3	3
JTL	2	2	2
JGZ	13	13	10
JMEX	26	32	29
JATCO in Japan	12	14	12

Raw materials (steel)

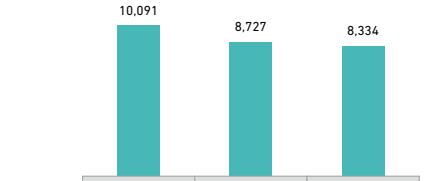
Unit: kt



	2022	2023	2024
JSZ	6	4	3
JTL	5	5	1
JGZ	28	27	22
JMEX	37	45	40
JATCO in Japan	61	68	59

Energy (LNG)

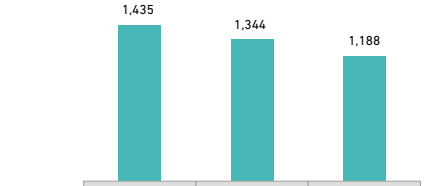
Unit: km³



	2022	2023	2024
JSZ	32	32	29
JTL	0	0	0
JGZ	0	0	0
JMEX	1,577	812	1,486
JATCO in Japan	8,482	7,883	6,819

Energy (LPG)

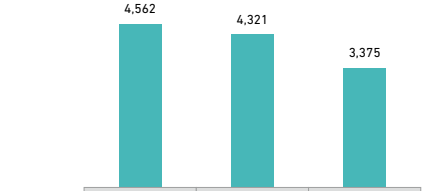
Unit: T



	2022	2023	2024
JSZ	0	0	0
JTL	23	22	21
JGZ	0	0	0
JMEX	0	0	0
JATCO in Japan	1,412	1,322	1,168

Energy (kerosene)

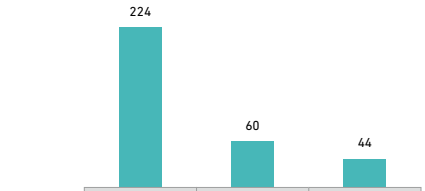
Unit: kL



	2022	2023	2024
JSZ	0	0	0
JTL	0	0	0
JGZ	0	0	0
JMEX	0	0	0
JATCO in Japan	4,562	4,321	3,375

Energy (other)

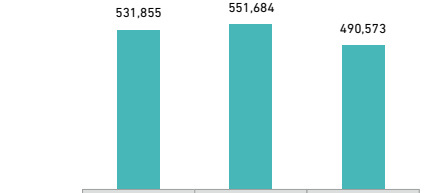
Unit: kL



	2022	2023	2024
JSZ	0	0	0
JTL	0	0	0
JGZ	0	0	0
JMEX	0	0	0
JATCO in Japan	224	60	44

Electricity

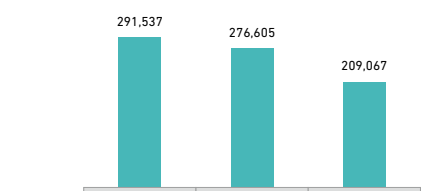
Unit: MW-h



	2022	2023	2024
JSZ	18,854	14,160	13,542
JTL	13,106	14,099	12,350
JGZ	53,873	47,066	37,932
JMEX	160,108	178,186	167,182
JATCO in Japan	285,914	298,173	259,567

CO_2

Unit: t-CO^2



	2022	2023	2024
JSZ	9,938	6,787	6,575
JTL	7,699	6,398	6,253
JGZ	28,391	22,323	19,992
JMEX	87,766	79,256	45,946
JATCO in Japan	157,743	161,841	130,301

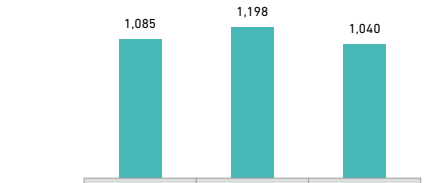
*JATCO in Japan: JATCO Ltd, JATCO Plant Tec Ltd, and JATCO Tool Ltd

Environmental Management

Material balance

Water resources (industrial water)

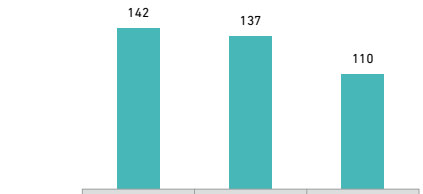
Unit: km³



	2022	2023	2024
JSZ	25	30	30
JTL	39	38	35
JGZ	0	0	0
JMEX	0	0	0
JATCO in Japan	1,021	1,130	975

Water resources (tap water)

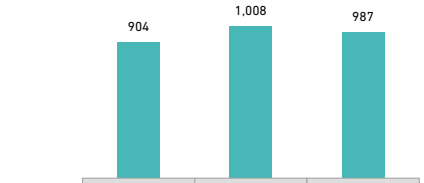
Unit: km³



	2022	2023	2024
JSZ	0	0	0
JTL	0	0	0
JGZ	89	89	74
JMEX	0	0	0
JATCO in Japan	53	48	36

Water resources (ground water)

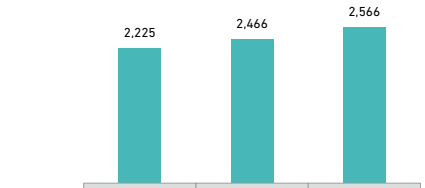
Unit: km³



	2022	2023	2024
JSZ	0	0	0
JTL	0	0	0
JGZ	0	0	0
JMEX	327	376	371
JATCO in Japan	577	632	617

Water discharge

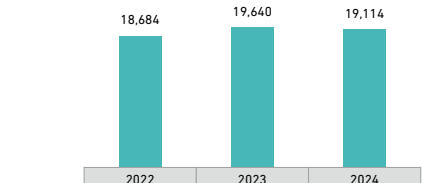
Unit: km³



	2022	2023	2024
JSZ	22	27	28
JTL	31	31	27
JGZ	36	36	30
JMEX	77	83	67
JATCO in Japan	2,059	2,289	2,414

Waste generated

Unit: t



	2022	2023	2024
JSZ	369	229	182
JTL	62	67	39
JGZ	536	514	465
JMEX	11,291	12,455	12,429
JATCO in Japan	6,425	6,375	5,999

*JATCO in Japan: JATCO Ltd, JATCO Plant Tec Ltd, and JATCO Tool Ltd

Environmental Management

Continuous efforts to reduce environmental impact, based on the PDCA (Plan-Do-Check-Act) cycle

JATCO sets forth initiatives every year aimed at reducing environmental burden as our environmental targets and aims to achieve these targets. Based on the results of these initiatives every fiscal year, we establish our targets for future fiscal years, thereby continuously improving our environmental performance. In FY2024, we did not receive any administrative dispositions due to major violations of laws, regulations, or ordinances related to the environment, and we carried out the necessary measures and reviews within the company.

Environmental objectives	Items	FY2024 targets	FY2024 results	Achieved	FY2025 targets
Continuous improvement of our environmental management system	Routine reviews	Receive regular audits: maintain certification Internal environmental audit: 1 time Environmental Committee meeting: 2 times	Received regular audits: maintained certification Internal environmental audit: 1 time Environmental Committee meeting: 2 times	○	Receive regular audits: maintain certification Internal environmental audit: 1 time Environmental Committee meeting: 2 times
	Internal environmental auditor training	Train people as needed	2 people trained	○	Train people as needed
Compliance with laws and preventive measures for environmental issues	Findings highlighted by administrative and government agencies	Number of findings: 0	Number of findings: 0	○	Number of findings: 0
	Maintenance of significant environmental characteristics	Accomplish 100% of regular reviews	Accomplished 100% of regular reviews	○	Accomplish 100% of regular reviews
	Education relating to environmental laws	Perform environmental training: 2 times	Performed environmental training: 2 times	○	Perform environmental training: 2 times
	Prevention of environmental accidents	Number of A & B rank accidents: 0 Number of C rank accidents: 1	Number of A & B rank accidents: 0 Number of C rank accidents: 3	×	Number of A & B rank accidents: 0 Number of C rank accidents: 1
Decarbonization	CO_2 emissions by revenue	45.3 t-CO_2 / Billion yen	49.2 t-CO_2 / Billion yen	×	42.9 t-CO_2 / Billion yen
Promotion of resource conservation	Promotion of waste reduction Reduction in total waste generated	2.100kg/unit	2.549kg/unit	×	1.982kg/unit
Technological development aimed at reducing environmental impact	Environmentally-friendly design [Contribution to environmental conservation and fuel-economy improvements]	Achieve 100% of goals for QCT KPIs for each product	Achieve 100% of goals for QCT KPIs for each product	○	Achieve 100% of goals for QCT KPIs for each product
	Management and reduction of environmentally hazardous substances in products	100% Conform/Maintain products with changes in environmental laws and regulations	100% Conform/Maintain products with changes in environmental laws and regulations	○	100% Conform/Maintain products with changes in environmental laws and regulations

Promotion of decarbonization

Message

With the frequent occurrence of extreme weather events and large-scale disasters making the world acutely aware of the severity of global warming, JATCO has positioned the realization of carbon neutrality as a company-wide priority and set CO_2 reduction as a company-wide KPI.
Specifically, we are focusing on expanding the adoption of renewable energy and improving the efficiency of our electricity use to reduce our dependence on fossil fuels in production activities. In development and after-sales services, JATCO is also considering CO_2 emission reductions across the entire life cycle of products, including electric vehicles.
It is essential for the environment that we resolve this dilemma of reducing CO_2 emissions even as the demand for energy grows due to increased economic activity and individuals' pursuit of greater freedom and convenience. JATCO will continue to meet society's expectations and fulfill its mission with responsibility.

Corporate Planning Division VP
Hiroyuki Kai

Carbon neutrality initiatives

JATCO aims to achieve carbon neutrality across its entire value chain by 2050, focusing on initiatives in the four areas of entire life cycle, production, product development, and environmental activities.

Total Product Life Cycle Initiatives

We assess our environmental impacts, from raw material procurement to recycling, and strive to reduce CO_2 emissions.

Production Initiatives

We are working to realize smart factories through digital transformations (DX) and innovative technologies, and to reduce the CO_2 emissions through energy conservation and the adoption of renewable energy.

Product Development Initiatives

We work on improving the efficiency of our existing products and developing new products for next-generation vehicles, contributing to the reduction of CO_2 emissions.

Environmental Activities and Other Comprehensive Initiatives

We will strengthen comprehensive initiatives such as environmental activities in concert with local communities and NPOs, and fulfill our responsibility as a good corporate citizen to reduce carbon dioxide.

Carbon Neutral Steering Committee

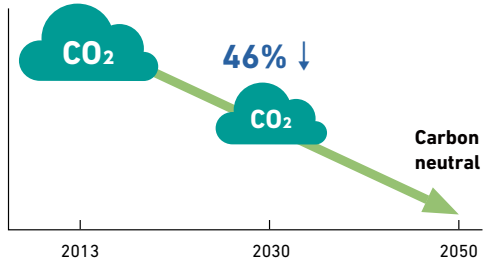
In order to formulate strategies and assess progress towards realizing carbon neutrality, the Committee, with the participation of the responsible executives in four areas and the CEO as the chairman, aims to quickly solve problems and invigorate company-wide activities through support and decision-making.

Chairman: CEO
Organizer: Corporate Planning Department

Reviewer:
- Total product life cycle initiatives Purchasing Division / Sales Division Executive
- Production initiatives Production Division / Quality Division Executive
- Product development initiatives R&D Division Executive
- Other comprehensive initiatives Corporate Planning Division Executive

Aiming to reduce CO_2 emissions

by 46%* by 2030 *Compared to 2013



FY2024 CO_2 emissions results (Global)

Unit: t-CO_2

Base	Scope1	Scope2	Total
Japan	27,061	103,240	130,301
Overseas	3,326	75,440	78,766
Total	**30,387**	**178,680**	**209,067**

Promotion of decarbonization

Total product life cycle efforts

Supply chain area (Procurement)

JATCO is promoting the visualization of CO_2 emissions in Scope 3 (Category 1) to achieve carbon neutrality across the entire supply chain. We facilitate activities by providing opportunities for information exchange with our business partners where we share each other's initiatives. For business partners requiring support, we provide opportunities to discuss their situations at any time and work together to solve problems.

JATCO is working with business partners to advance environmental improvement and reduce CO_2 emissions towards obtaining SBT certification. We will continue our efforts to realize a sustainable society.

Information exchange with our business partners

Supply chain area (Logistics)

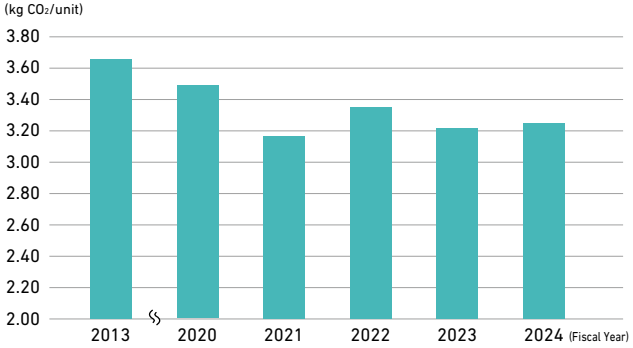
With the aim of reducing CO_2 emissions, JATCO utilizes green logistics when transporting parts. From 2013 to 2024, we achieved an 11% reduction in CO_2 emissions. In order to reduce the CO_2 emissions resulting from the transportation of our parts, we have been implementing a modal shift in our logistics, while working to obtain the acceptance of our customers in Japan.

Specifically, starting from FY2009, we switched from trucks to railcars for transporting procured parts for the route from Hiroshima (approximately 780 km away) to Shizuoka, where JATCO's production bases are located. As a result, we were able to reduce our CO_2 emissions by 83.3%.

Additionally, since September 2019, we have introduced double trailer trucks to transport JATCO production parts from the JATCO Fuji area to the Kyoto Yagi plant, and transporting at a high load factor led to a reduction in CO_2 emissions.

We will continue to pursue this modal shift and work to improve load efficiency to achieve environmentally friendly parts transportation.

CO_2 emissions per unit in transportation



FY2024 CO_2 emissions due to transport activities

11% reduction

(Compared to FY2013)

CO_2 emissions from logistics (Fiscal year)

	Unit	2022	2023	2024
Total	t-CO_2	4,166	4,344	3,795
Inbound	t-CO_2	2,824	2,834	2,508
Internal	t-CO_2	1,262	1,422	1,223
Outbound	t-CO_2	80	88	64

Load ratio (Fiscal year)

	Unit	2022	2022	2024
Truck	%	94.0	94.3	94.3
Rail	%	6.0	5.7	5.7

Land transportation by railway

Double trailer truck (Photo provided by Vantec Corporation)

Promotion of decarbonization

Production area efforts

Consolidation and shutdown of heat treatment furnaces

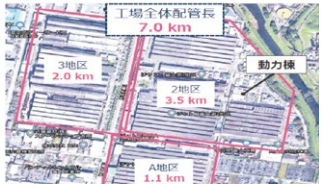
Approx. 1,659 t-CO_2/year

In the plant's heat treatment process, we are managing the load factor of each furnace for quenching and tempering treatments, while also shutting down conventional gas carburizing furnaces with poor efficiency and consolidating operations into vacuum carburizing furnaces.
We are working to reduce CO_2 emissions through efficient furnace operation.

Optimized steam supply for Fuji Areas 2, 3, 4, and A Plants

Approx. 1,081 t-CO_2/year

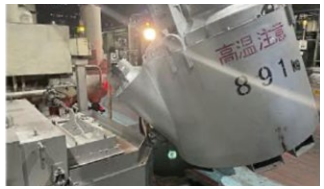
Steam for Fuji Areas 2, 3, 4, and A Plants was collectively supplied by boilers in the Area 2 Power Supply Building, resulting in a total steam piping length of approximately 7 km and a maximum pipe heat loss of 8.4 GJ/h.
By installing a dedicated individual boiler for the Area 4, we removed the steam piping from Area 2 and reduced pipe heat loss.



Consolidation of molten metal transportation at Fuji Area 3 foundry

Approx. 820 t-CO_2/year

At Fuji Area 3 Plant, each foundry (No. 2 Foundry and No. 3 Foundry) had its own melting furnace, and the molten aluminum was used only within each respective foundry.
By introducing necessary equipment such as pots, we have made it possible to transport molten metal from the No. 2 Foundry to the No. 3 Foundry, achieving improved efficiency through consolidation.



Solar carport at Yagi Area parking lot

Approx. 1,659 t-CO_2/year

As part of efforts to introduce renewable energy, JATCO has installed a solar carport at the Kyoto Yagi Area parking lot under a solar power purchase agreement (PPA) model.
It is expected to cover approximately 2.8% of the electricity consumed at the facility.

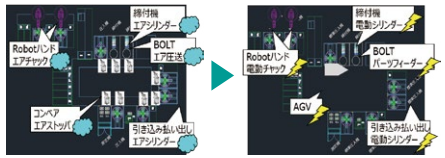
Power consumption visualization dashboard

With the aim of raising carbon neutrality awareness, we set up a power consumption visualization system that shows the status of plant power consumption and a CO_2 emissions visualization system on our internal portal site.
All of our employees can easily check the amount of electricity used in each area, thereby leading to self-initiated energy saving.

Airless model line

In the new line at Fuji Area 4 Plant, the airless concept was incorporated into the line concept at the project stage and integrated into the equipment design. Some model lines have achieved all-electric operation, with an expected 70% reduction in CO_2 emissions. While we have only achieved all-electric operation on some lines at present, we are also adopting the airless concept partially in other lines.

Current state → **Airless model line**



Promotion of decarbonization

Development efforts

Co-development and production launch of electric powertrain X-in-1

JATCO is co-developing and producing the electric powertrain X-in-1 for electric vehicles (EVs) with Nissan Motor Co., Ltd., contributing to decarbonization.

Comprehensive efforts

Reuse of Nissan LEAF batteries, solar powered outdoor lighting

JATCO has changed its Fuji Area 1 Plant and HQ Area outdoor lighting equipment to solar power specifications, achieving zero CO_2 through zero commercial power.

The CO_2 reduction effect is 0.8t-CO_2/year/unit and the storage batteries reuse Nissan LEAF batteries, also contributing to the circular economy.

In an emergency, the batteries can be removed and used as a portable power source for disasters (capacity of 40.000 mA).

Solar powered outdoor lighting being installed at Fuji HQ

Partnership agreement for realizing Fuji City Zero Carbon City

In October 2023, JATCO concluded a Partnership Agreement with Fuji City to realize the Fuji City Zero Carbon City initiative, which aims to achieve net-zero greenhouse gas emissions in Fuji City by 2050. We report our greenhouse gas emission reduction targets and results to Fuji City. Additionally, JATCO's activities are featured in Children's Zero Carbon Challenge, an environmental awareness booklet distributed to fourth-grade elementary school students in the city.

Children's Zero Carbon Challenge

Fuji City Zero Carbon City partnership agreement signing ceremony

Implementing a green curtain project

At our Yagi Area in Kyoto we are implementing a green curtain project by growing vines around the plant building to block direct sunlight. By using plants to block the sunlight, we are reducing the generation and penetration of radiant heat.

Use of energy-efficient equipment and visualization of power consumption

At the Fuji Area office building, we have implemented measures to make it possible to see conference rooms' CO_2 emissions at a glance, thereby promoting activities to enhance energy conservation awareness.

Contribution to Vehicle Electrification

Introducing electrified products utilizing JATCO's proprietary technologies

As a CVT and AT manufacturer, JATCO has delivered over 130 million units to the market. Meanwhile, for more than 10 years, JATCO has been accumulating know-how in preparation for the era of electrification. In 2010, we developed the JR712E, the world's first transmission for RWD hybrid vehicles that uses a one-motor, two-clutch system. Furthermore, we have started supplying motors and gearboxes for electric vehicles. From 2025, to launch the X-in-1, which integrates gears, a motor, and an inverter, we have established our first production base in Europe in the UK and launched a production line at the Fuji Area. We will continue to contribute to the realization of a decarbonized society through the development and production of competitive electric powertrains.

2010

JR712E

Nissan Fuga Hybrid

2013

Jatco CVT8 HYBRID (JF019E)

Nissan X-Trail Hybrid

2015

Gears for electrified vehicles

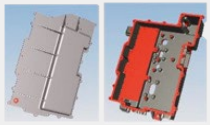
Nissan Ariya

2021

Launch of X-in-1 production line

2022

DC-DC case



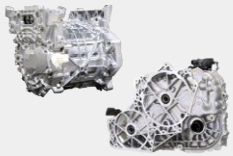
Nissan LEAF

2025

Jatco CVT8 HYBRID (JF018E)

Nissan Pathfinder

Motor/gearbox for electrified vehicles



Nissan Kicks

Establishment of JATCO UK Ltd

Contribution to Vehicle Electrification

Steadily preparing for annual production of 5 million units for EVs by 2030

JATCO has set a goal of increasing annual production for EV units to 5 million units by 2030. Starting in FY2025, we are beginning mass production of the X-in-1 electric powertrain, which we have been jointly developing with Nissan Motor Co., Ltd. We will steadily establish this mass production and contribute to enhancing the competitiveness and appeal of Nissan vehicles through performance and quality.

3-in-1 for electric vehicles

The 3-in-1 will be installed in the new Nissan LEAF, scheduled for market launch in FY2025, and will enable efficient energy management and superior driving performance.

3-in-1
(For electric vehicles)

Nissan LEAF

5-in-1 for e-POWER

The 5-in-1 is the central electric unit responsible for the high performance of the third-generation e-POWER. It is scheduled to be installed in the European Qashqai in the second half of FY2025, followed by the next-generation Rogue in North America and the all-new Elgrand for the Japanese market in FY2026.

5-in-1
For e-POWER (hybrid)

Third-generation e-POWER vehicle lineup

Qashqai
(launched in the European market in September 2025)

All-new Elgrand

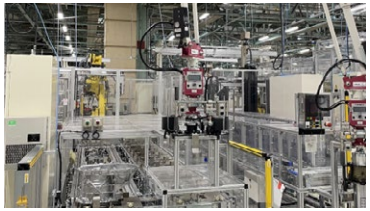
Production bases are also being steadily prepared

JATCO UK Ltd

JATCO UK Ltd, announced in January 2025, has been established in Sunderland and is scheduled to begin supplying the 3-in-1 to Nissan's UK base starting in 2026. JATCO UK Ltd will be JATCO's first production base in Europe.

e-Powertrain plant

We have renovated the plant in the Fuji Area that had been producing automatic transmissions and made it the independent e-Powertrain Plant starting in FY2025. This plant will serve as a global mother plant and become an important base for the worldwide deployment of the technological capabilities cultivated in the Fuji Area.



Contribution to Vehicle Electrification

JATCO's independently developed ultra-compact e-Axle

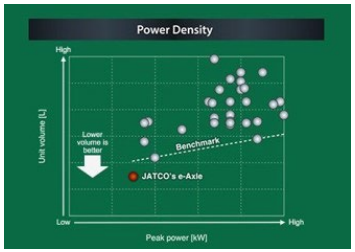
JATCO is advancing research and development on an original e-Axle. This unit is such an ultra-compact size that it can fit in the space of a laptop computer, yet generates sufficient output, boasting industry-leading size efficiency. In the independent development of the e-Axle, achieving high power density (downsizing) is one of the most important issues. The size of the e-Axle enables it to be installed in the vehicles of many of our customers, so we believe our business opportunities will expand.

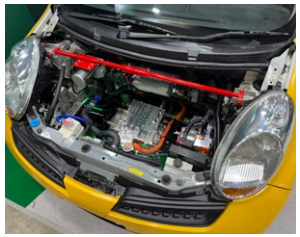
Challenge of achieving high power density (downsizing)

Achieving high power density in e-Axles goes beyond mere downsizing. It enables vehicle weight reduction and efficient use of resources while significantly enhancing design flexibility in vehicle development. With the transition to electric vehicles, an increase in vehicle weight due to battery installation is inevitable. This weight increase requires greater driving force depending on the vehicle type, increasing the need to install e-Axles on both front and rear axles. Achieving high power density in e-Axles also provides a solution to this challenge.

Nurturing next-generation engineers

Furthermore, from the important perspective of nurturing next-generation engineers, we are actively creating opportunities to install this prototype unit in actual vehicles and verify performance through real-world driving tests. The unit test car is equipped with units on both front and rear axles. Engineers gain experience from these practical initiatives, ensuring the continuous accumulation of advanced technological capabilities for the future.





Aiming to expand our lineup

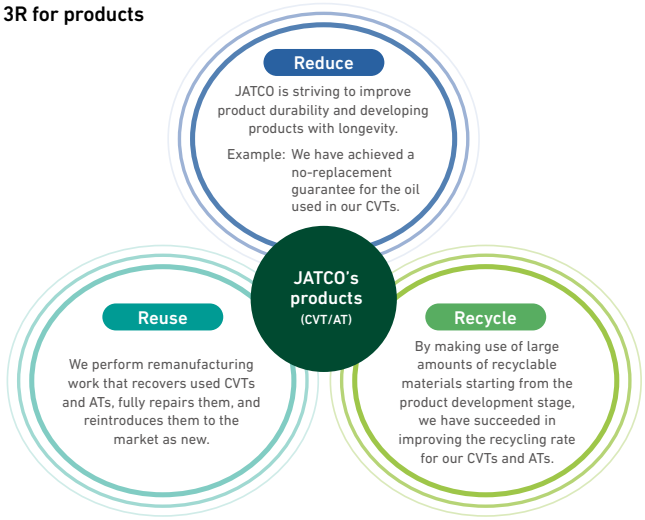
In this way, for electrification, we will first firmly establish our electrification business with X-in-1 to cover vehicles in the main volume zone, and in the medium to long term, we aim to expand our future lineup through technological development such as downsizing. We will continue to vigorously advance electrification.

Building a Circular Economy

JATCO Circular Economy Concept

As a manufacturing company, JATCO believes that it is important to make effective use of limited resources. For some time now, we have promoted a manufacturing style in which we collect used ATs/CVTs manufactured by us and then remanufacture and reuse them. Going forward, we will also focus on further promoting the circular economy. Specifically, we are advancing initiatives centered on the 3Rs (Reduce, Reuse, Recycle) approach. By designing and developing products that can be used for a long time, we reduce waste. Furthermore, by regenerating and reusing parts that are still usable from products collected from the market and by utilizing recyclable materials to regenerate them into new resources (recycle), we achieve minimization of resource dependence and waste reduction. We will work to build effective mechanisms for a circular economy across our products and business activities.

3R for products



Initiatives for waste management

Efforts to sort waste thoroughly for recycling

JATCO is endeavoring to recycle waste with thorough sorting in order to use resources efficiently and sustainably. As its waste treatment method, JATCO has eliminated waste disposal through simple incineration and landfills and is implementing material recycling (reuse and recycling) and thermal recycling (conversion to fuel). Due to this, we have attained a 100% recycling rate for waste in the production stage at our locations in Japan.

Recycling rate

100% attained

(Scope: Japan)

Initiatives to reduce waste through companywide participation

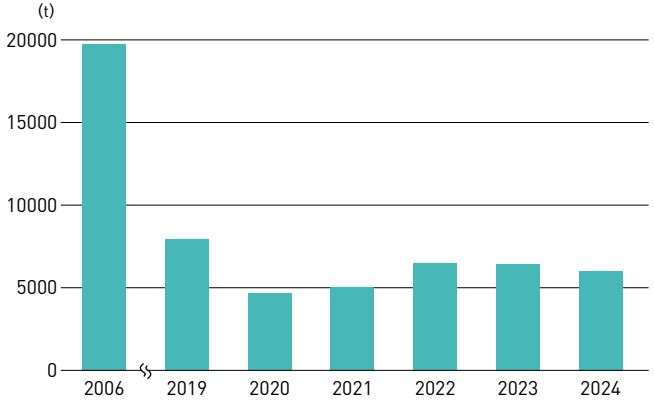
JATCO employees are always working on waste reduction from the perspective of the 3Rs.
At each location, we establish waste reduction targets, register ideas for initiatives implemented at each workplace, and share information on reducing waste to improve employee motivation at each workplace. The amount of waste in 2024 was 5,999 tons, a reduction of 69.7% compared to 2006.

Total waste generated in FY2024

69.7% reduction

(Compared to FY2006)

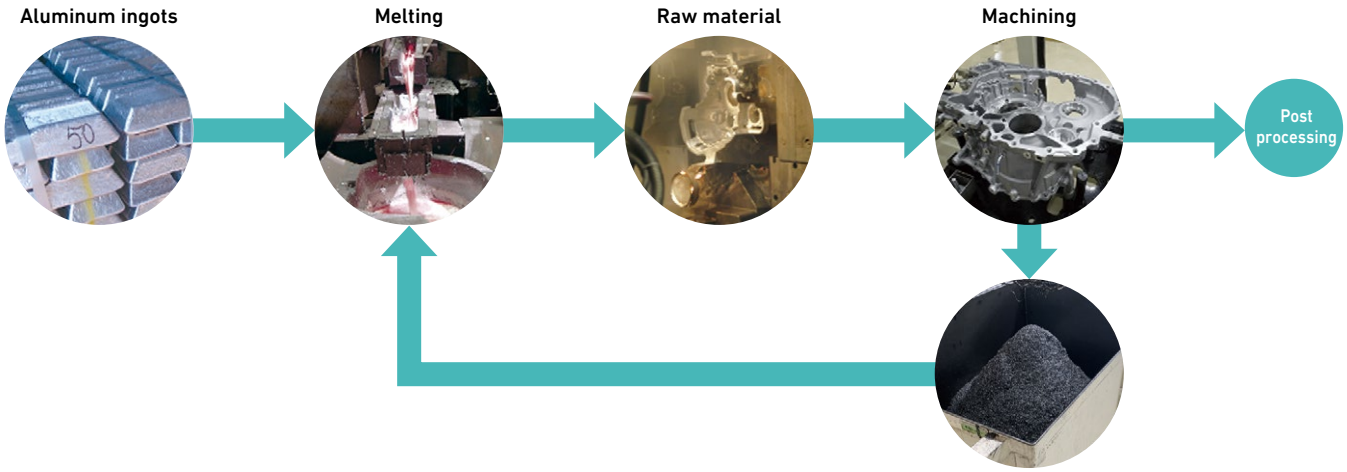
Waste generation



Building a Circular Economy

Recycling of aluminum scrap

When cutting aluminum raw materials in the production process, aluminum shavings (powder) are generated.
JATCO collects this generated powder in-house, melts it again, removes impurities, and then reuses it in products through the raw material processing process. Recycling aluminum powder not only reduces new resource input and reduces waste, but also contributes to energy conservation and the reduction of greenhouse gas (CO_2) emissions.

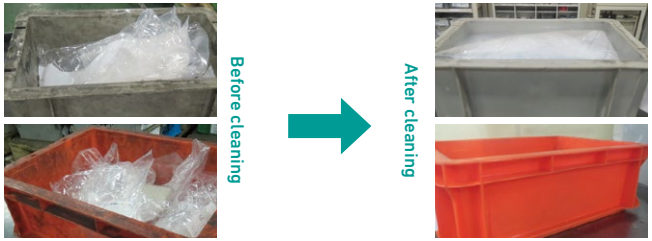


Packing density improvements and reuse of packaging materials

As part of our efforts to improve our loading ratio, which contributes to a reduction in the number of trucks used, JATCO is taking steps to improve the packing density of purchased parts for delivery.
Plastic containers and plastic cushioning material used to protect products during transportation and storage that had become unusable as a result of deterioration or product changes had previously been disposed of as industrial waste. However, after 2004, JATCO began reusing this material for other products. We have also gained the cooperation of companies engaged in the production of plastic to help us further reduce the waste we generate, such as by recycling our plastics into raw materials.

Improving the packing density of parts purchased

Eliminating wasted space not only improved transportation efficiency, but also made handling goods safer



Employees are also encouraged to keep containers clean

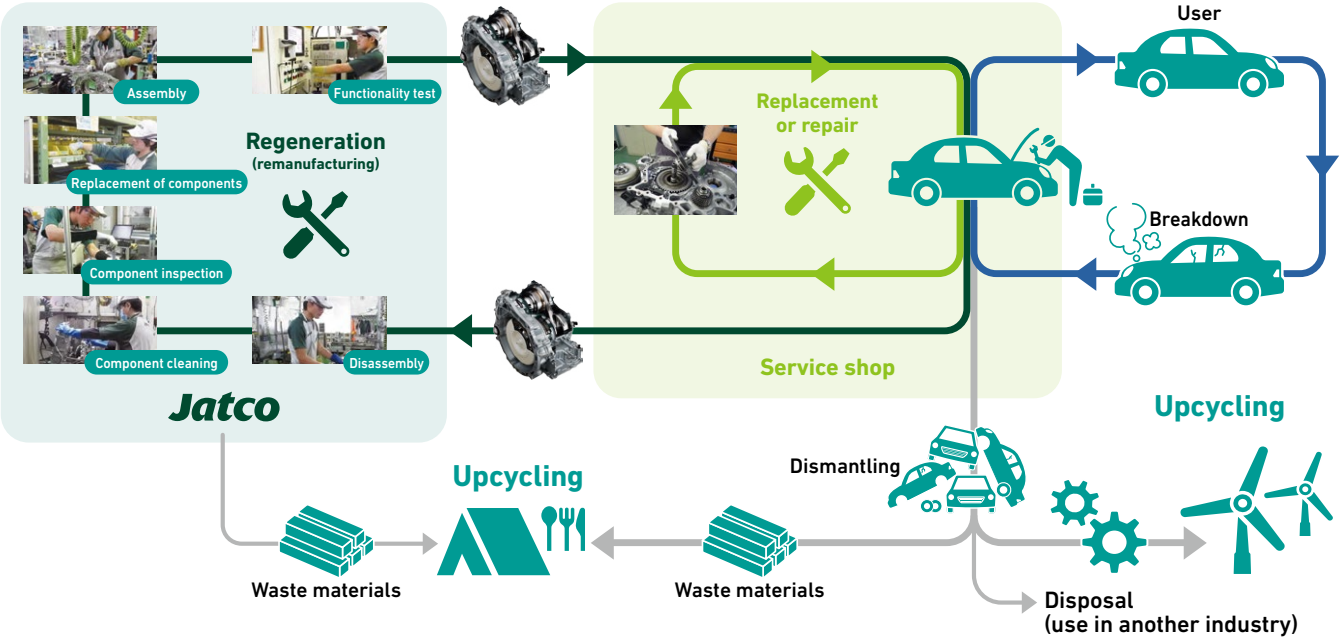
Trend in amount of plastic containers recycled or reused

Fiscal year	t
2018	40.1
2019	34.2
2020	39.5
2021	28.9
2022	29.6
2023	347.0
2024	51.0

Building a Circular Economy

Initiatives for unit repair and regeneration

From the perspective of minimizing resource dependence and reducing waste, JATCO has been developing repair technologies for units released on the market and working on the reuse business.
When a CVT/AT produced by our company breaks down, we first identify the breakdown area and, whenever possible, replace or repair the broken component on the spot.
In the case that it is difficult to replace the component, we recover the unit, disassemble it, clean it, inspect it, replace it, reassemble it, and carry out a functionality test before regenerating it as an after-sales service component that is no different in quality from a brand-new product and providing it to the customer.
Furthermore, we advance the reuse as materials of units that are difficult to regenerate as CVTs/ATs.
Through these activities, we will explore further possibilities for reusing units and components, including upcycling, and work to build effective mechanisms for a circular economy.



FY2023-24 global shipments

Components for repairs: 53,000 units
Regenerated units: 91,000 units

Upcycling initiatives

Power generation gearbox (nacelle) for medium-sized onshore wind turbines

Uses motors and inverters from used Nissan LEAFs. Aiming for practical application in 2025 in collaboration with Zephyr Corporation.

Power generation gearbox (nacelle)

Outdoor eco-knife ARUNEMO

Produced using scrap materials generated during the manufacturing of automotive transmissions.
Also contributes to regional revitalization through collaboration with two manufacturers of wood and leather products based in Fuji City.

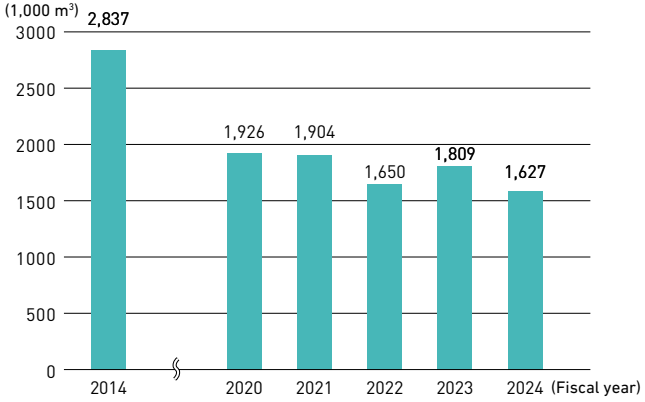
Eco-knife ARUNEMO

Air, Water and Soil Conservation

Annual water consumption reduction target of 2%

JATCO tracks the amount of water used for production at our plants and is working to reduce it. In accordance with the "Nissan Green Program" formulated by our parent company, Nissan Motor Co., Ltd., we have been working on a comprehensive reduction of our water consumption since fiscal year 2014 as a countermeasure against global water depletion. With the goal of reducing the amount by 2% every year, we achieved a reduction of 42.7% in fiscal year 2024 compared to fiscal year 2014.

Water usage



Maintaining high standards of purification

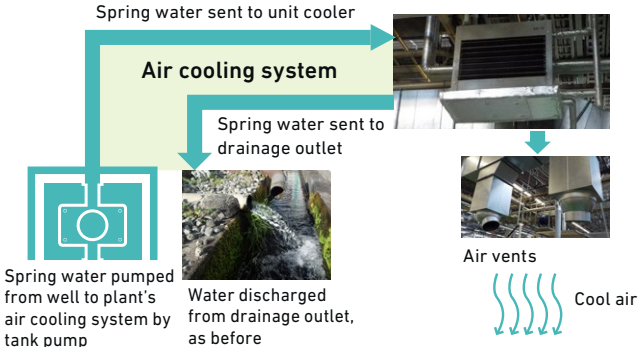
JATCO's production plants not only comply with the standards for water discharge established by national and municipal governments, but have also drawn up even more stringent purification standards for internal use. By combining facilities for activated carbon adsorption, ultrafiltration, high-speed aggregation precipitation, contact oxidation, sand filtration, and pressure flotation, we continue to maintain a high level of purification quality.

Furthermore, we have installed water-saving valves on the water faucets at each of our domestic offices to reduce our water usage.

Water treatment facilities

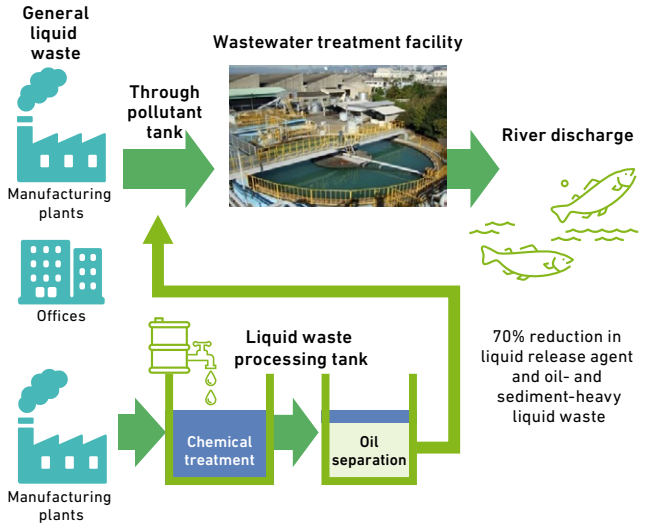
Mt. Fuji spring water cooling

There is a natural spring within the grounds of Fuji Area 1 Plant at the foot of Mt. Fuji. This water used to be discharged through a drainage outlet, but since the temperature of the spring water stays at 15–17 degrees Celsius all year round, we use it as a natural cooler via the plant's air cooling system.



Reduce liquid waste from manufacturing plants

Wastewater discharged from our manufacturing plants and offices is sent to in-house water treatment facilities, treated into safe water, and then discharged into rivers. However, liquid release agent or liquid waste with large amounts of oil or sediment cannot be treated to safe levels at water treatment facilities, so they have been processed externally as waste.
Therefore, we repeatedly reviewed the chemicals used and our purification methods, and made it possible to treat the liquid release agent and liquid waste in-house.



Air, Water and Soil Conservation

Reusing discharged water through the adoption of cold water circulation equipment

JATCO promotes the reuse of discharged water, and has adopted the use of cold water circulation equipment to purify the water used for the cooling and cleaning of production equipment, as well as for the thinning of cutting oil.

Cold water circulation equipment at forging facilities

Learning about the importance of sustainable water resources

At our JATCO plant tours, which are open to the public, we provide opportunities for children to learn about the importance and mechanisms of wastewater purification. Through actual demonstrations, we aim to deepen children's learning, promote understanding of sustainable environments among younger generations, and foster environmental awareness.

Experiment during a plant tour for elementary school students

Safe and reliable transportation of polluted water

JATCO not only takes steps to reduce the incidences of water pollution, but also considers safety when transporting polluted water to treatment facilities. Measures have been put in place at the facilities where parts are cleaned to enable the repeated reuse of water after pollutants have been removed from it. After reusing this water for several months, it is then transported to a treatment facility by truck.

Given the fact that transportation of polluted water to treatment facilities through underground pipes and gutters is method that is easily impacted by the passage of time and has reliability issues, we are also making improvements by switching to transportation of this water using aboveground pipes that are visible to employees.

Transportation to a treatment facility via a dedicated waste transportation truck

Air, Water and Soil Conservation

Management of chemical substances

Management of volatile organic compounds

We implemented volatile organic compound (VOC) countermeasures to achieve our target of reducing total VOC emissions by 30% (compared to FY2000) by FY2010, based on the action plan formulated by the Japan Auto Parts Industries Association (JAPIA). As a result of these countermeasures, we were able to reduce VOC emissions by 98% by FY2006, 99% in FY2010, and 99% again in FY2024.

VOC emissions for FY2024

99% reduction

Soil and groundwater pollution countermeasures

As part of our soil and groundwater pollution countermeasures, we completely abolished the use of organic chlorine-based solvents, and are currently monitoring our past usage of organic chlorine-based solvents and their impact on the environment.

Emissions of three major hazardous air pollutants

We were able to eliminate our emissions of three major hazardous air pollutants*1 in FY2006, and we have successfully prevented further emissions through FY2024.

FY2024 emissions of three major hazardous air pollutants

None

(Compared to FY2000)

Management of PRTR*2 substances

The amount of PRTR chemical substances handled by JATCO, calculated as the amount discharged and transported by domestic production facilities, is shown in the following table. By using cleaning solutions at room temperature in the machining process and switching to hot water cleaning in the assembly process, we have been decreasing the usage of PRTR chemical substances year by year.

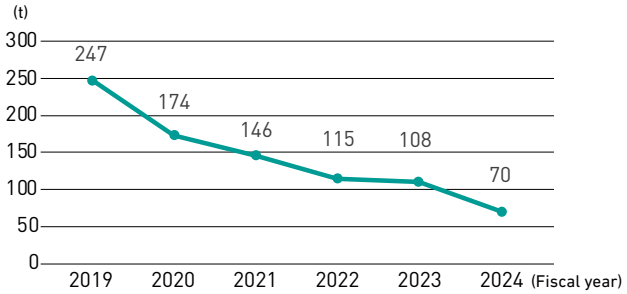
Classification	Chemical substance	Amount handled	Amount discharged			Transported
			Air	Water	Soil	
Specific Class I Designated Chemical Substances	Dioxin (mg-TEQ/yr)	0	21.3	0	0	0
	Benzene	0	1	0	0	0
Class I Designated Chemical Substances	Ethylbenzene	0	0.5	0	0	0
	Xylene	22,007	8.6	0	0	0
	Trimethylbenzene	40,012	8.8	0	0	0
	N-hexane	0	28	0	0	0
	Toluene	5,100	100	0	0	0

Unit: kg (mg-TEQ/yr for dioxins)

*1 Three major hazardous air pollutants: Dichloromethane, trichloroethylene, and tetrachloroethylene

*2 PRTR: Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof

Amount of PRTR substances handled (t)



Initiatives to reduce air pollution

At JATCO, we are promoting the adoption of regenerative burners in continuous heat treatment furnaces. Regenerative burners are devices that efficiently recover and reuse the thermal energy generated during the combustion process. By incorporating this technology into continuous furnaces, we can not only reduce energy consumption but also lower the temperature of emitted smoke and gases, thereby reducing the emissions of harmful substances. JATCO will continue to promote the use of sustainable technologies internally in order to achieve both environmental protection and economic growth.