Business

Innovation through Manufacturing

Solutions to Drive the Possibilities of Mobility

Pursuing Energy Efficiency

Solutions to Drive the Possibilities of Mobility

Toward achieving our corporate purpose

JATCO's corporate purpose is: "Driving the possibilities of mobility with technology and passion." By applying our proprietary technology to mobility beyond just automobiles, we intend to help resolve various societal issues. To realize such applications, we implemented organizational changes effective April 1, 2024. We will promote new businesses more vigorously, for example by establishing a new business commercialization promotion organization in the Business Development Division. our New Business Promotion Department examines commercialization feasibility.

Development team for an e-bike drive unit

Fostering entrepreneurship to "drive the possibilities of mobility"

JATCO must create new value and businesses and take on risks to continually grow toward our corporate purpose. This posture is that of entrepreneurship. Since FY2022, led mainly by the Corporate Planning Department, we have held business contests and companywide events to foster entrepreneurship. The business contest called for ideas from our global workforce for creating new businesses. In response to over 100 submissions, the management team took part in reviewing the proposals. The aims are to enhance individual flexibility and adaptability to change and to encourage individuals to achieve growth and self-fulfillment by proactively embracing new opportunities and challenges and thinking and acting independently to realize their own ideas.
The outstanding projects from the FY2022 business contest participated in FY2023 external innovation programs to refine their ideas and finally presented business proposals to the management team. As a result, their work has been transferred to the New Business Promotion Department together with its promoters, and there are some projects which are continuing their activities toward commercialization. In the same way, the outstanding projects from the FY2023 business contest are participating in innovation programs and refining their ideas.

The participants in the FY2023 business contest

Solutions to Drive the Possibilities of Mobility

Developing a 2-speed automatic transmission in-wheel- motor drive unit for electric motorcycles

We jointly developed this product with Zhejiang Jiuzhou New Energy Technology Co., Ltd., a prominent Chinese manufacturer of drive units for electric motorcycles. This unit, which integrates a 2-speed automatic transmission with a motor, exceeds a maximum torque of 250 Nm and a top speed of 100 km/h, and can climb steep gradients of 30 degrees.

2-speed automatic transmission in-wheel motor drive unit

Developing a drive unit for electric-assist bicycles

This drive unit combines an assist motor and transmission mechanism using our proprietary technology. We have also developed a smartphone app to monitor the remaining battery level and travel range and adjust the assist levels.
In March 2024 we concluded a Memorandum of Understanding (MOU) regarding collaboration toward mass production of the drive unit with Korean bicycle manufacturer MYVELO.

MOU signing ceremony on March 4, 2024 (left: Eiji Ogawa, corporate vice president at JATCO Ltd, right: MYVELO president Choi Yunho)

Developing a wheelchair with a transfer mechanism

The wheelchair with transfer mechanism that JATCO is developing is a mobility device which integrates transfer and mobility. We are advancing the development of products to achieve smooth transfers and bring smiles to the faces of caregivers on the frontlines by using ergonomic robotic control to overcome challenges in nursing care faced by both caregivers and recipients of care on the frontlines.

Integrating the functions of mobility and transfer

Pursuing Energy Efficiency

As a powertrain specialist manufacturer, JATCO has continually honed its technologies to supply increasingly energy-efficient units, delivering products that balance environmental performance and power. We will firmly carry these technologies forward into the electric powertrains we launch onto the market in the future.

Jatco CVT-XS

CVT with dramatically improved environmental performance and drivability

The Jatco CVT-XS is a product that is the culmination of our technological expertise as a transmission manufacturer and has dramatically improved environmental performance and driving performance. It expands the gear ratio by approximately 13% compared to conventional transmissions of the same size, and has reduced mechanical loss due to its smaller mechanical oil pump. Due to these improvements, the fuel efficiency of the vehicle has improved, contributing to meeting the requirements of the Greenhouse Gas/Corporate Average Fuel Economy (GHG/CAFE) regulations in the United States.

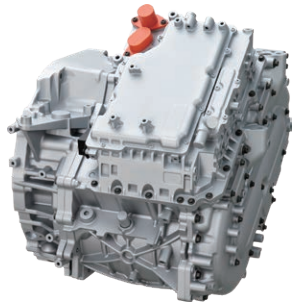
Jatco CVT-XS

X-in-1

An electric powertrain which achieves the sharing of major components and modularization

Integrating major components such as the motor, inverter, and gears makes it possible to create a small, lightweight electric powertrain unit, contributing to enhancing the energy efficiency of vehicles.
Furthermore, sharing major components between the 3-in-1 for electric vehicles and the 5-in-1 for e-POWER enhances the production efficiency of the units and contributes to enhancing energy efficiency during production.
In addition, the use of a motor which uses less than 1% rare earth reduces the environmental impact.

3-in-1: for electric vehicles



5-in-1: for e-POWER

High-efficiency ultra-low-viscosity reducer oil

Ultra-low-viscosity oil contributing to electrical power saving in EVs

We have developed an ultra-low viscosity oil which can contribute to electrical power saving in EVs.
This oil can significantly reduce friction in the reducers of EV systems, making it possible to extend travel range without increasing battery capacity.
As a result, this oil will contribute to reducing the cost of and popularizing EVs, and achieve a reduction in CO_2 emissions that will help prevent global warming.