Special Program

Technical Prospects for Automotive Components Business

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1 Introduction

The word “automotive” is an adjective widely used to refer to “things related to automobiles” or simply “related to automobiles.” As the driving of automobiles has become increasingly automated in recent years, there has been a growing demand to provide value related to general transportation rather than just driving. This is precisely the proposition of “mobility,” which means “easy to move.” For Automotive Components Operations, which mainly produces equipment and components for automobiles, motorcycles, and railways, the challenge for the future is how to adapt these products to the possible borderless mobility society of the future.

In order to realize the corporate spirit of “By serving technologies and products that make people’s lives safe and comfortable, KYB group dedicates to the society,” it is essential for Automotive Components Operations to collaborate in co-creation not only with Hydraulic Components Operations and the Special Purpose Vehicles Div., but also with external organizations, including those in other industries. In doing so, we should leverage our vibration control and power control expertise accumulated over many years to create new value. In an age where everything is connected to create value, we will provide technologies that connect things to things, things to people, and people to people, and work to solve societal issues related to mobility.

2 Eliminating Vulnerable road users

Many developed countries, including Japan, are facing declining birth rates and an aging population with fewer people able to own and drive cars. In the rural areas of these countries, the elimination or reduction of public transportation services hinders the free movement of people. Therefore, there is an urgent need to expand mobility with an automated driving function that can safely be used by everyone. By highly coordinating full-active suspensions for more aggressive vertical damping and steering-by-wire systems for more precise steering control with brake control, it will be possible to move comfortably to destinations without accidents. We will promote the development of actuators that enable such movement and devices/systems for interconnection.

3 Eliminating Environmental Degradation

Emerging countries and developing countries, also known as the Global South, are increasingly using more conventional means of transportation, such as cars and motorcycles. While we expect our hydraulic equipment to be more widely used in these countries, we need to consider environmental measures for the equipment throughout the product life cycle.

We are working on a development program to replace petroleum-derived hydraulic fluids used in shock absorbers, a core product of Automotive Components Operations, with those derived from natural materials. The aim of this replacement is to use raw materials derived from natural

materials that absorb CO2 when they are being produced (for carbon neutrality), to ensure the biodegradability of the fluids in case of leakage, and to improve the recyclability of the products after disposal (Fig. 1). With this development program as an opportunity, we will apply life cycle environmental measures to all products and services handled not only by Automotive Components Operations but also by the company.

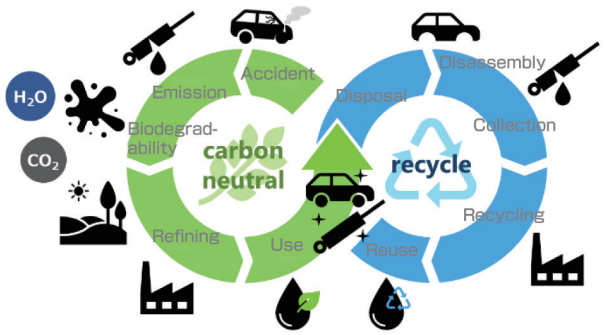

Fig. 1 Environmental measures for hydraulic fluids

In addition, KYB's Development Center (Kawabe-cho, Kamo-gun, Gifu Prefecture), the company's development headquarters, is working to coexist with wildlife in a lush green environment and to preserve Lespedeza tomentosa, a rare plant listed as an endangered species (Class II), as a contribution to local communities (Photo 1).

Photo 1 Environment around the Development Center

4 In Closing

As automobiles transform into mobility, we are beginning to provide value not only by making things (Monozukuri) but also by creating experiences (Kotozukuri). With the idea of shifting from competition to co-creation, we are developing human resources that can contribute to society, with an emphasis on connecting with people inside and outside the company.

Author

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Joined the company in 1996. General Manager, Engineering Headquarters, Automotive Components Operations. Taken present post after working in Automotive Engineering Research Center and Suspension Engineering Dept.