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Supplying suspension springs and hydrogen-tank fixing springs for Toyota's new MIRAI

~Aiming to Achieve a Clean and Sustainable Low-Carbon Society~

New MIRAI

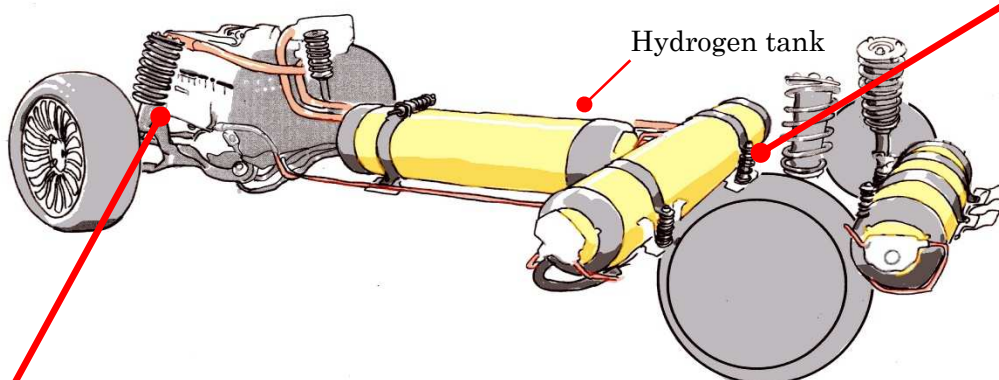


Photos : Toyota Motor Corporation

Chuo Spring Co., Ltd. (Headquarters: Nagoya City Midori-Ku, President and CEO: Satoshi Takae) announced that our "Suspension Springs" and "Hydrogen Tank Fixing Springs" were continuously adopted and partially newly adopted for the new FCV (fuel cell vehicle) MIRAI of Toyota Motor Corporation, which had been launched on December 9, 2020.

■ Hydrogen tank fixing spring

Products used for joints in fastening bands between high-pressure hydrogen tanks and car bodies. Hydrogen is stored in a tank in a highly compressed condition of about 70MPa, and the stored hydrogen reacts with oxygen in the air to generate electric power, and the FCVs run by driving the motor. The tank body also shrinks due to the pressure drop caused by the consumption of hydrogen in the tank caused by running, but even when these tanks shrink, the fastening band of the tank is held in the car body without loosening. Since the spring is constantly fastened and the load is applied, "settling resistance" is required, and in order to realize this "settling resistance" the material selection and the manufacturing process are devised.



■ Suspension Springs

Despite being an environment-oriented FCV, it achieves high operational stability and ride comfort. And, in order to secure the maximum car interior space, an original high strength material which contributes to the weight reduction was used, by carrying out optimum design technology which pursued the performance such as softening of spring constant than usual spring and increasing the number of turns by decreasing the winding outer diameter. In addition, our products combine our technologies, such as our unique environmentally friendly, high-precision cold spring manufacturing technology, which realizes the manufacture of springs, which was difficult with the prior art.



By continuing to take on the role of core FCV components in order to "utilize the technologies we create in society" under our corporate philosophy, we will contribute to the realization of a clean and sustainable low-carbon society.