

Heat Resistant Resin-coated Spline Slider Type Intermediate Shaft



JTEKT has developed a spline slider type intermediate shaft coated with heat resistant resin which can be used in high temperature environments (outside the vehicle interior). The following is an introduction of the developed product.

Aim of development

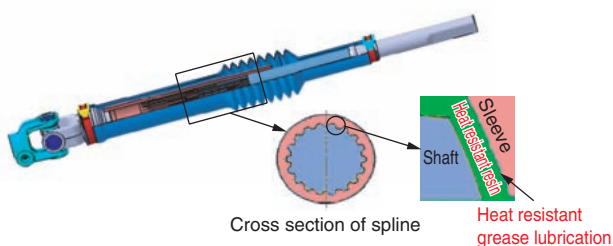
The conventional resin-coated spline slider type intermediate shaft is used in high temperature environments such as the engine room or near to the exhaust pipe of a vehicle, and therefore undergoes creep deformation due to strength reduction and softening of the resin with which it is coated. Due to this, the increase in clearance in the rotational direction during usage is greater than that during usage in normal temperature environments, which causes a decrease in vehicle comfort due to noise.

In response, JTEKT has developed a heat resistant resin and heat resistant grease with the aim of improving the durability of the product in high temperature environments and expanding the temperature range in which the spline slider can be used without decreasing the overall comfort level.

	Conventional product	Developed product
Range of use	Inside vehicle	Outside vehicle
	Up to 85°C	Up to 120°C

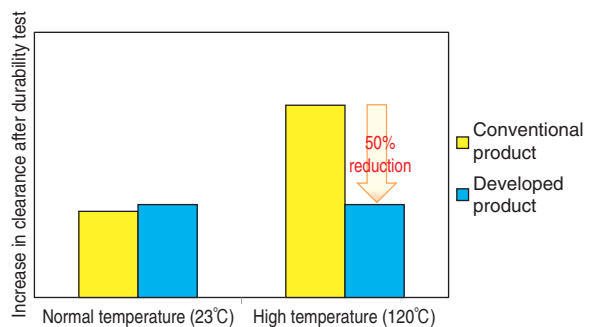
Features

- ① Heat resistant resin
Uses resin with a high melting point and the necessary coating properties.
- ② Heat resistant grease
Uses grease with excellent heat resistance, low friction and low attack to resin.



Performance

The increase in clearance in the rotational direction after a durability test under high temperature conditions is reduced by 50% compared with the conventional product. (Equal to amount of increase of conventional product in normal temperature environments)



Durability (Increase in clearance in the rotational direction)

(Component Development Dept., Steering Systems Operations Headquarters)

JTEKT CORPORATION