

Environmental Aspects

Developing Environmentally-Friendly Products

Reducing environmental impact is a high-priority issue of our R&D

NTN receives Automotive Component Award for dramatic reduction in weight and size

A dramatic 50% reduction in weight and size to reduce the environmental impact of vehicles

The “constant velocity steering joint” (CSJ) that we developed as a light, compact, and highly-functional automotive product was awarded the “Automotive Component Award” of the “2008 Super Monozukuri Manufacturing Awards” held by the Conference for the Promotion of Monozukuri and the Nikkan Kogyo Shimbun Ltd.

These awards focus on parts and materials that are a source of competitiveness in the field of Monozukuri. NTN’s part was selected from a field of 94 applicants.

Constant velocity joints are parts that transmit rotational motion even at severe angles. The product recognized here is the world’s first ball-type constant velocity steering joint, which is approximately 50%

lighter and more compact than conventional constant velocity steering joints, reducing the environmental impact of vehicles.



A compact, high-strength design that maintains sharp steering

Kenta Yamazaki

Supervisor
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The CSJ is based on a ball-type constant velocity joint and features NTN’s unique pre-loading mechanism eliminate the tiny gaps inside the joint to provide a backlash-free, high-strength product with smooth rotation. It can function at a wide angle and gives flexibility when designing the layout of steering systems.

Emphasizing environmentally-friendly design at the R&D stage

Believing that environmentally-friendly technology is indispensable to the world, we are redoubling our efforts to increase product life while reducing weight, torque, friction, and energy loss

NTN believes that environmentally-friendly technology is

absolutely necessary to preserve the global environment and we are engaged in product R&D with a high priority on reducing environmental impact. Our R&D aims to increase product life, and reduce weight, torque, friction, and energy loss in our primary products including bearings and constant velocity joints.

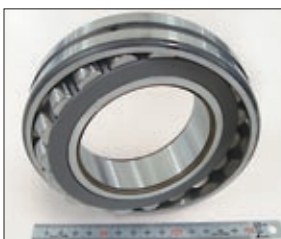
Of the products developed from fiscal 2006 to 2008, 60% of them were environmentally-friendly products.

Our primary environmentally-friendly products

Longer life

A new type of spherical roller bearing that lasts five times longer than conventional products

We developed this spherical roller bearing for industrial machinery. It lasts five times longer than conventional products and is standardized as the “Ultage series.” It is a new series of bearings that meets all requirements including long life, high speeds, and improved ease of handling.



Reduced weight

An “Ultra-high load capacity tapered roller bearing” that contributes to improved fuel economy

We have developed an “Ultra-high load capacity tapered roller bearing” for automotive transmissions and differential gears that lasts as long and is just as rigid as conventional bearings but is significantly lighter and more compact. It is 58% lighter, 17% smaller in diameter, and 25% thinner, and contributes to improved fuel economy.



Lower torque and friction

A “Low torque sealed ball bearing” with an 80% lower rotational torque

As the demand for improved vehicle fuel economy increases, there is a greater need for more efficient transmission bearings, so we developed the “Low torque sealed ball bearing,” which has 80% less rotational torque. This bearing’s seal prevents the entry of foreign matter, helping maintain the lower torque.

