

UNITED STATES INTERNATIONAL TRADE COMMISSION

TAPERED ROLLER BEARINGS FROM CHINA
INV. NO. 731-TA-344 (THIRD REVIEW)

TESTIMONY OF STEVEN P. RUSSELL
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The Timken Company

Good morning. My name is Steve Russell. I am the manager for Timken's Marketing, North America – Light Vehicle Systems, Heavy Truck and Off-Highway. My responsibilities include sales of tapered roller bearings to the original equipment market. Such customers include not only the vehicle manufacturers themselves but also their tier suppliers.

I understand that some parties participating in this sunset review have argued that wheel hub assemblies incorporating tapered roller bearings are not “like” other tapered roller bearings. I strongly disagree with that contention. A wheel hub assembly is a type of wheel end system. On the table in front of me are four different types of wheel end systems. First, we have a pair of Single Row Tapered Roller Bearings. Each consists of a cup and a cone assembly. Together these two TRBs have served as the bearing solution in wheel end systems for generations and continue to be used by OEMs today. Next to that is our Generation I UNIPAC two-row tapered roller bearing package. When the petition was filed in 1986, pictures of various TRBs, including the UNIPAC and the later UNIPAC Plus, were included as exemplars of the type of products that, if imported from any of the countries under investigation (including China), were intended to be covered by the

investigation. The staff report accompanying the Commission's original determination also mentioned that additional modifications to these package bearings were under development. Next to that is Timken's Gen II TRB product, which consists of tapered roller bearings that are sealed in a housing or package. This type of product comes with or without a sensor for antilock braking systems. And finally, we have our Gen III TRB wheel hub assembly, which is a self-retained, integrated package bearing. Again, this type of product can be manufactured with or without the ABS sensor. While each of these products offers different features, each performs the same basic function of reducing friction and handling radial and thrust loads.

TAPERED BEARINGS USED IN WHEELS ON TODAY'S VEHICLES



**Two Single (TS)
Row Bearings**



**Dodge Ram 2500
(1994-Current)**

SE739



**GEN I
UNIPAC™**



**Chrysler PT Cruiser
(2001-2010)**

SE749



**GEN II
SENSOR-PAC™**



**Ford F150
(2009-Current)**

SP550214



**GEN III
SENSOR-PAC™**



**Chevrolet Silverado 2500
(2007-Current)**

SP580312

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Timken is producing each of these products today for sale to OE customers. Which particular product is used is decided at the design stage of a new vehicle model. As you can see on the screen, some vehicles, such as the Dodge Ram 2500 truck, use single row TRBs.

I understand that the Commission looks at a number of factors in determining whether various products should be considered a single “like” product or multiple “like” products. I’d like to comment on several of these factors from both an engineering and a practical perspective.

From an engineering perspective, every tapered roller bearing is designed to resolve a particular problem. Therefore, TRBs of different sizes and configurations will not share the same exact physical characteristics across the board in the way that, say, certain steel products or commodities such as magnesium may. Thus, TRBs of different sizes or different configurations are not interchangeable in a particular application, whether one is comparing two single row TRBs, two housed TRBs, two TRB wheel hub assemblies or some mixture. Nonetheless, as this Commission found in the original investigation, all TRBs do share the same basic elements (cups, cones, rolling elements and cages), and perform the same basic function, namely, to reduce friction between moving parts, irrespective of variations in design and configuration.

With respect to interchangeability, these wheel end systems you see before you are simply an example of the same kind of continuum of product that is the case for TRBs generally, as demonstrated on the table to my right.

As for customer and producer perceptions, although I understand from the Public Prehearing Report that most purchasers, importers, and domestic producers reported that customers perceive TRBs and TRB wheel hub assemblies as different (pages I-30 and I-31), that is contradicted by the actions of OEMs in making design decisions. For our OE customers, the particular type of wheel end system that will be used in a new platform is something that is decided at the design stage and turns on such questions as whether the vehicle has an ABS, or antilock braking system, that needs to be integrated with the wheel hub assembly. If so, then our Gen II or Gen III model could be designed in with the sensor feature. But every vehicle has wheel applications, and many of those applications have been and continue to be solved through the use of two single row TRBs. Once designed in, no other TRB (whether another set of single row TRBs, or another size TRB wheel hub package) will work. On the display table to my right, you will see several Gen II TRB wheel hub units and several Gen III TRB wheel hub units. The Gen II products are not interchangeable between themselves, nor with Gen III products, nor with a set of single row TRBs. Nor are single row TRBs interchangeable with other single row TRBs of different sizes, designs, and so on. This is as true today as it was when the petition was originally filed.

With respect to channels of distribution, I understand from the Public Prehearing Report (page I-31) that several purchasers and importers indicated that TRBs and TRB wheel hub assemblies do not share the same channels of distribution. They claim TRB wheel hub assemblies are only sold in the automotive aftermarket, whereas "other" TRBs are sold in many other markets. First, because vehicles often utilize multiple TRBs, not

just those that may be used in wheel ends, many vehicles have a dozen or more TRBs in addition to any in the wheel ends. These TRBs are typically some size and configuration of a single row TRB. Thus, both what the parties opposing continuation of the order call “other TRBs” and TRB wheel hub units or assemblies are sold to OEM customers and their tier suppliers in the automotive sector. Therefore, any statement that TRB wheel hub assemblies are only sold to the automotive aftermarket is factually inaccurate. Similarly, both “other TRBs” and TRB wheel hub assemblies move through automotive aftermarket channels, as Tom Tecklenburg will describe.

Finally, there is nothing about TRB wheel hub assemblies that limits their use solely to automotive applications. For example, Timken is currently working with certain agricultural customers to use Gen II and Gen III products in agricultural applications.

Thank you.