

Tapered Roller Bearing Fitting Practice Guide: Part Two

CHOOSING THE CORRECT FIT FOR YOUR APPLICATION

In our last issue, we discussed the importance of mounting a wheel bearing with a proper fit. In this issue, we provide quick and easy reference tables for suggested fitting practices for wheel-ends where the hub and shaft are made of iron or steel.

The tables account for the bearing, spindle and hub tolerances. Read across the row with the appropriate bearing size range to find the appropriate fitting practices. For example, a cup with a 5 inch outside diameter (OD) assembled into an iron or steel hub should be 0.001 inch tight to 0.004 inch tight.

For cone fits, the spindle OD should be smaller than the cone bore within the resultant fit range.

For tight fits, the wheel hub inside diameter (ID) should be smaller than the cup OD by the resultant fit values shown on the tables.

When the cups are pressed directly into aluminum hubs, the suggested fitting practice is a minimum tight fit of 0.001 inch per 1 inch of outside cup diameter. For example, if you are installing a cup with a 5 inch OD into an aluminum housing, the minimum tight fit should be 0.005 inch tight.

TRUCK WHEEL-END CONES: FRONT, REAR & TRAILER

Cone Bore Diameter				
Over	Inclusive	Tolerance	Cone Seat (Spindle OD) Deviation	Resultant Fit
0"	3.0000"	0"	-.0002"	0002" Loose
		+.0005"	-.0007"	.0012" Loose
3.0000"	12.0000"	0"	-.0005"	.0005" Loose
		+.0010"	-.0015"	.0025" Loose

TRUCK WHEEL-END CUPS WITH IRON OR STEEL HUBS: FRONT, REAR & TRAILER

Cup Outside Diameter				
Over	Inclusive	Tolerance	Cup Seat (Hub ID) Deviation	Resultant Fit
0"	3.0000"	+.0010"	-.0020"	.0030" Tight
		-0"	-.0005"	.0005" Tight
3.0000"	12.0000"	+.0010"	-.0030"	.0040" Tight
		-0"	-.0010"	.0010" Tight

WARNING! Proper maintenance and handling practices are critical. Failure to follow installation instructions and to maintain proper lubrication can result in equipment failure creating a risk of serious bodily harm. Never spin a bearing with compressed air. The rollers may be forcefully expelled creating a risk of serious bodily harm.

QUESTIONNAIRE



Dear reader:

The Timken Company is committed to becoming the best performing manufacturing company in the world. From time to time, we use surveys to help us in our continuous improvement initiatives. This survey is designed to help us get to know you better, so we can be a better supplier to the nation's heavy-duty fleets. Please complete the survey and return it to us as indicated. **As a token of our appreciation, we'll hold a drawing and three lucky survey respondents will win a DVD player.**

Name: _____ Position: _____

Name of company: _____

Address: _____

Phone: _____ Fax: _____

E-mail: _____ Web site: _____

1. Is your fleet private or public? ☐ Private ☐ Public
2. How many power units are in your fleet? ☐ 0-50 ☐ 51-100 ☐ 101+
3. How many trailers are in your fleet? ☐ 0-50 ☐ 51-100 ☐ 101+
4. Who is the predominant supplier of power units?
☐ Freightliner ☐ Kenworth ☐ Mack ☐ Navistar ☐ Peterbilt ☐ Sterling ☐ Volvo ☐ Other
5. When purchasing a power unit, which brand of bearing do you specify? _____ ☐ Do not specify
6. Who is the predominant supplier of trailers?
☐ Dorsey ☐ Great Dane ☐ Stoughton ☐ Strick ☐ Trailmobile ☐ Utility ☐ Wabash ☐ Other
7. When purchasing a trailer, which brand of bearing do you specify? _____ ☐ Do not specify
8. When specifying bearings from an OEM, rank the attributes that affect your buying decision/brand preference:

	Least Important			Most Important		
Price	1	2	3	4	5	
Quality	1	2	3	4	5	
Performance	1	2	3	4	5	
Other	1	2	3	4	5	

9. Do you perform maintenance on your power units in-house or outsource/contract the work? ☐ In-house ☐ Outsource ☐ Other
10. When maintenance is required on your power units, which brand of replacement bearing do you specify? _____ ☐ Do not specify
11. Do you perform maintenance on your trailers in-house or outsource/contract the work? ☐ In-house ☐ Outsource ☐ Other
12. When maintenance is required on your trailers, which brand of replacement bearing do you specify? _____ ☐ Do not specify

***Fax or mail your survey
by March 31, 2000 to
be eligible for one of
three prize drawings
for a FREE DVD player.***

Fax: 330-471-6381

Mail: The Timken Company
DVD Drawing
P.O. Box 6929
Canton, OH 44706

Must be postmarked by
March 31, 2000

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