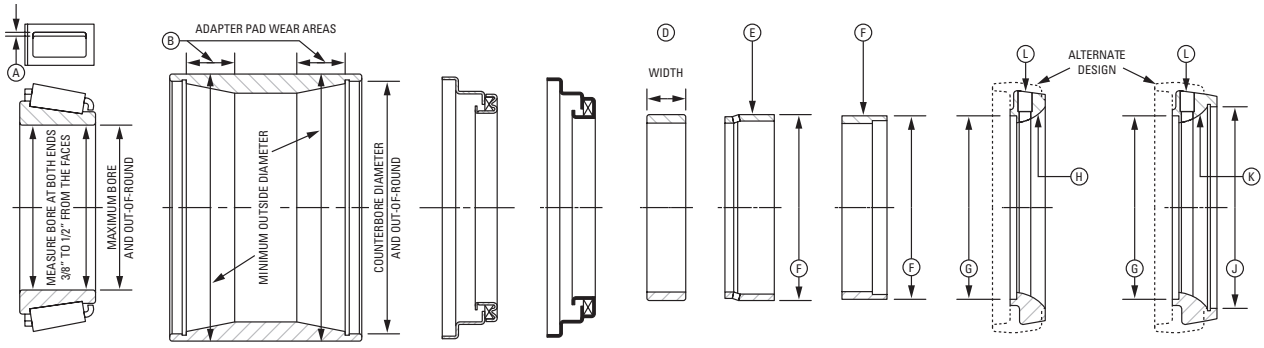
AP™ ROLLER BEARINGS SERVICE LIMITS

Passenger Cars
Steel/Polymer Cage With HDL / Ecoturn Seal And HDL Sleeve

TIMKEN



Class and Size	Diameters are Averages								Amount of Grease (Ounces)		
	Roller Assembly			Outer Ring (Cup)				Backing Ring	Each Roller Assembly	Around Spacer	Total Quantity
	Inboard Max. Bore	Outboard Max. Bore	Out-of-Round	Minimum OD	Maximum C'bore	Minimum C'bore	Out-of-Round	Maximum C'bore			
D (5-1/2 x 10)	5.1880"	5.1885"	0.003"	8.1750"	7.755"	7.7450"	0.005"	----	4	2	10
E (6 x 11)	5.6880"	5.6885"	0.003"	8.6750"	8.255"	8.2450"	0.005"	7.0300"	4	4	12
F (6-1/2 x 12)	6.1880"	6.1885"	0.003"	9.9250"	9.380"	9.3700"	0.005"	7.5300"	6	6	18
G (6-1/2)	6.5005"	6.5010"	0.003"	10.8630"	10.280"	10.2700"	0.005"	7.9030"	8	6	22

A. Roller assembly – cage inspection.

⚠ WARNING

Failure to observe the following warnings could create risk of death or serious injury.

Never spin a cone assembly.
The rollers may be forcefully expelled, creating a risk of bodily harm.

Do not install on the inboard side (adjacent to the backing ring) of any bearing assembly, any Timken Axle Saver™ Seal Wear Ring's P/N K151590 or P/N K153392 with date code before 08 03. Installation at this position may result in galling of the axle when the bearing is pressed onto the journal, which can cause fracture of the axle in service.

Steel cage inspection
Place roller assembly on back face (large diameter face) when checking clearances. If the roller pocket of the cage is worn to the extent that a 0.060" feeler gage can be inserted between the roller and the cage bridge, the roller assembly should not be returned to service.

Polymer cage inspection
It is recommended that cone assemblies be returned to Timken for reconditioning. Wash using only water and detergent solutions, not exceeding 190° F. Visually inspect for damage. Only remove rollers from the marked "inspection" pocket (if cage is provided with this feature). Check and ensure proper roller orientation when reapplying these rollers. Separable roller should only be reassembled into the cone from which it was removed. DO NOT mix rollers. DO NOT disassemble or attempt to reapply other rollers. DO NOT stress-relieve cone assemblies and DO NOT plate cone bores of cone assemblies with cages applied. Failure to follow these guidelines could lead to unsatisfactory bearing performance and equipment damage.

B. Outer ring (cup). When outer ring shows wear from adapter, the minimum OD is to be measured in the adapter pad wear areas. If the outer ring is distorted in the area of the counterbore, a close visual inspection of the inside and outside surfaces is required. Outer rings that have hair line cracks must be scrapped.

C. Seal – scrap used seals.

D. Spacer width – bench lateral. A spacer must be selected or the spacer may be ground to provide the bearing bench lateral play specified below for type of lateral measuring equipment used:

	Power operated	Hand operated
Classes D-E	0.023"- 0.029"	0.020"- 0.026"
Classes F-G	0.027"- 0.031"	0.024"- 0.028"

Where close coordination is maintained between the bearing repair facility and the bearing mounting facility, the bearing bench lateral may be set to limits necessary to provide satisfactory mounted bearing lateral.

E. Seal wear ring – outside surface. If the outside surface of the seal wear ring is scratched or cracked or if the lip contact path has worn to a depth of 0.005" (0.010" on diameter), the seal wear ring must be scrapped.

F. Seal wear ring – fit in backing ring. The seal wear ring must have a tight fit in the backing ring counterbore (style no. 1 and 3).

G. Backing ring – fit on the seal wear ring. The counterbore of the backing ring (style 1 & 3) must have a tight fit on the seal wear ring. See Fig. 3.12 of AAR Roller Bearing Manual.

H. Backing ring – size and radius (style 1). Backing rings that are bent or distorted must be scrapped. Check the backing ring size and the bore radius for proper axle fillet contact and excessive corrosion with the AAR gage as shown in the Roller Bearing Manual.

J. Backing ring – size and radius (style 2 & 3). Check major ID.

K. Backing ring – radius (fitted). Check bore radius for excessive corrosion. Light pitting and rusting is acceptable.

L. Vent fitting. Check the vent fitting to see that it is not clogged, hardened, or damaged. Hardened or damaged vent fittings should be replaced. (Part Number K89716).

NOTE: Contact The Timken Company for information on bearing parts that are not shown.

Part Numbers – Bearing Components																						
Class and Size	Roller Assembly (Steel Cage)	Roller Assembly (Polymer Cage)	Outer Ring (Cup)	Spacer	HDL Seal	EcoTurn Seal	HDL Sleave	Seal Wear Ring (with out holes)	Non-Fitted Backing Ring**				Fitted Backing Ring**					Old Style* End Cap	New Style End Cap*		Locking Plate	Cap Screws
									With Shroud-Vented	Without Shroud-Vented	With Shroud-No Vent	Without Shroud-No Vent	With Shroud-Vented	Without Shroud-Vented	With Shroud-No Vent	Without Shroud-No Vent	Sure-Fit™		With Shroud	Without Shroud		
D (5-1/2 x 10)	HM127446	HM127446F	HM127415XD	HM127446XA	K151172	K165474	----	K157631	K85525	K127205	K153511	K150048	K524571	----	K153509	----	-	K86877	-	K523660	K84326	K53399
E (6 x 11)	HM129848	HM129848F	HM129814XD	HM129848XA	K150471		K150491	K153392	K85095	K320054	----	----	K529704	K127206	K150049	K150050	K160794	K86003	-	K151315	K84325	K44434
F (6-1/2 x 12)	HM133444	HM133444F	HM133416XD	HM133444XA	K147750		K149549	K151590	K85516	----	K504080	----	K529701	K125685	K151303	K524466	K160685	K85521	-	K523744	K80511	K44434
G (6-1/2)	HM136940	HM136940F	HM136916XD	HM136940XA	K150189		----	K154507	----	----	----	----	K100638	K96539	----	K115426	-	K95199	K147768	K523750	K84701	K84398

*Backing ring styles interchangeable.
**Polymer cage can be retrofitted at reconditioning.
Replacements for individual backing rings are available upon request.

NOTE: Every reasonable effort has been made to ensure the accuracy of the information contained in this writing, but no liability is accepted for errors, omissions or for any other reason.

TIMKEN

The Timken team applies their know-how to improve the reliability and performance of machinery in diverse markets worldwide. The company designs, makes and markets high-performance mechanical components, including bearings, belts, chain, gears and related mechanical power transmission products and services.

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