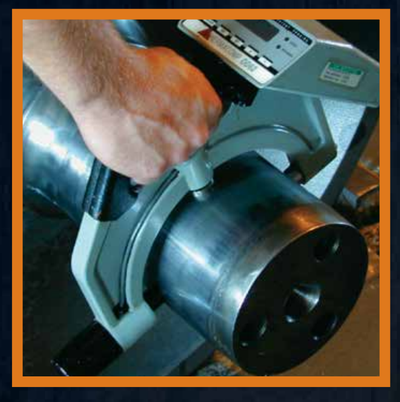
TIMKEN

JOURNAL BEARING
INSTALLATION AND REMOVAL QUICK REFERENCE

INSTALLATION

1.

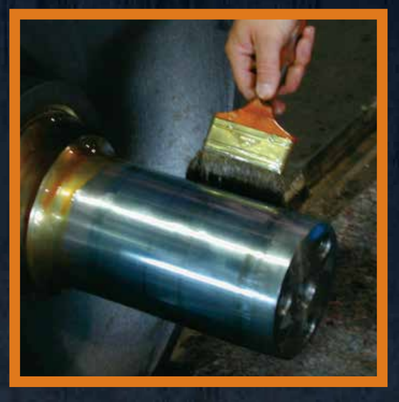


Before applying bearings, check the condition of the axle journals, fillets and dust guards to ensure they are suitable for service.

2.

Apply a coating of approved anti-rust compound to the axle and dust guard fillets up to the wheel hub.

3.



Coat the axle journal with an approved press-fit lubricant. Do not use white lead.

4.

Verify there is adequate press ram travel to allow proper seating of the bearing. Press the bearing on the axle journal. Ensure the bearing is properly seated by allowing the pressure to build up to the tonnage shown in the table below. NOTE: Be careful when handling the Class K, L and M bearings during mounting as the backing ring may separate from the bearing.

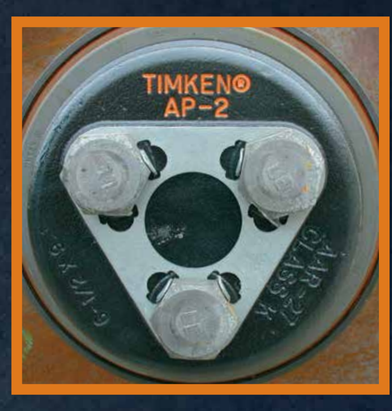
5.

AAR JOURNAL BEARINGS				
BEARING		CAP SCREWS		
Class and Size	[1] Seating Tonnage	SIZE Inches	TORQUE [2] Ft. - Lbs.	TORQUE [2] N-M
D (5 ½ X 10)	45 - 55	⅞″ - 9	160	220
E (6 X 11)	45 - 55	1″ - 8	290	395
F (6 ½ X 12)	45 - 55	1 ⅛″ - 7	420	570
K (6 ½ X 9)	45 - 55	1 ⅛″ - 7	420	570
G (7 X 12)	60 - 70	1 ¼″ - 7	490	665
OTHER JOURNAL BEARINGS (NON AAR)				
B (4 ¼ X 8)	30 - 40	¾″ - 10	115	155
C (5 X 9)	30 - 40	⅞″ - 9	145	200
GG (6 ½ X 12)	60 - 70	[3] ⅞″ - 9	315	430
GG (6 ⅞ X 12)	60 - 70	[3] ⅞″ - 9	315	430
L (6 X 8)	45 - 55	1″ - 8	290	395
M (7 X 9)	60 - 70	1 ⅛″ - 7	420	570
Short Class G	60 - 70	1 ¼″ - 7	490	665
Short AP-2 Class G	60 - 70	1 ¼″ - 7	490	665

[1] Short ton, 1 ton = 2,000 lbs. [2] Torque wrenches must be accurate within (+-) 4%. [3] High strength cap screws.

Apply the axle end cap and tighten the cap screws with a torque wrench to the torque specified in the table above. Recheck each cap screw several times until the cap screws do not move when the specified torque is applied.

6.



Lock the cap screws by bending all of the locking plate tabs flat against the sides of the cap screw heads.

NOTE: Do not reuse locking plates.

7.

Check the bearing lateral with a dial indicator mounted on a magnetic base:

1. Rotate the bearing several times.
2. Position the dial indicator as shown in the photograph, the dial indicator tip is to register on the cup face. (Or other shop approved method such as indicator to register on the wheel hub). Begin by oscillating the cup slightly while forcing the cup toward the wheel hub and note the value on the dial indicator. Pull the cup away from the wheel hub while oscillating. The travel of the dial indicator needle is the mounted lateral of the bearing.
3. The bearing lateral should be between 0.001″ and 0.015″ for most applications. If the bearing rotates freely by hand, but indicates less than 0.001″ lateral on the dial indicator, the application is satisfactory for service.

REMOVAL

- Always remove bearings in accordance with operating instructions provided by the manufacturer of the bearing removal equipment.
- Be careful not to drop or damage the bearing during removal. Protect the bearings from dirt and moisture until they are disassembled for inspection and repair.

⚠ WARNING

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

Proper maintenance and handling practice are critical. Always follow installation instructions and maintain proper lubrication. Always use suitable personal protective equipment, including safety glasses.

This information and illustrations are to be used as a guide for common applications. Information from any railroad governing body, the original equipment manufacturer's operating instructions and your company procedures should take precedence over this information.

LET US HELP

Timken engineers are eager to share their expertise. For questions or full installation and removal instructions, contact a local sales or service engineer or visit **www.timken.com/rail**.