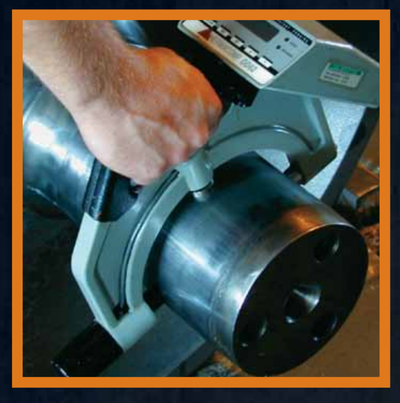
TIMKEN

AP™ and AP-2™ BEARING INSTALLATION AND REMOVAL QUICK REFERENCE

INSTALLATION

1.

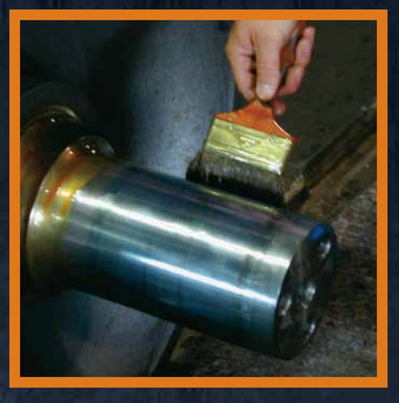


Before applying bearings, check the condition of the axle journals, fillets and dust guards to ensure they are suitable for service.

2.

Apply a moderate to heavy 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.

For applications where a fitted backing ring is not required, ensure the bearing is properly seated by inserting a 0.002" feeler gauge between the backing ring and the axle fillet as shown above. If the feeler gauge can be inserted more than 1/8", the bearing is not properly seated.

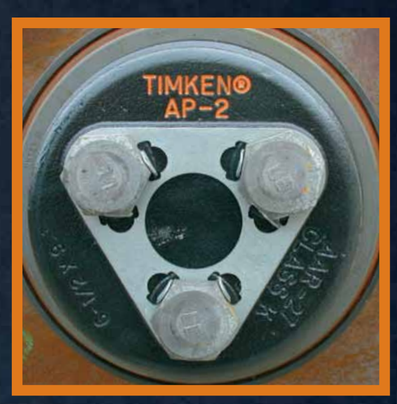
6.

BEARING		CAP SCREWS	
Class and Size	[1] Seating Tonnage	Size	[2] Torque F. - Lbs.
B (4 1/4 X 8)	30 - 40	3/4" - 10	115
C (5 X 9)	30 - 40	7/8" - 9	145
D (5 1/2 X 10)	45 - 55	7/8" - 9	160
E (6 X 11)	45 - 55	1" - 8	290
F (6 1/2 X 12)	45 - 55	1 1/8" - 7	420
G (7 X 12)	60 - 70	1 1/4" - 7	490
GG (6 1/2 X 12)	60 - 70	7/8" - 9 High Strength	315
GG (6 7/8 X 12)	60 - 70	7/8" - 9 High Strength	315
L (6 X 8)	45 - 55	1" - 8	290
K (6 1/2 X 9)	45 - 55	1 1/8" - 7	420
M (7 X 9)	60 - 70	1 1/8" - 7	420

[1] Imperial tons [2] Torque wrenches must be accurate within (+-) 4%.

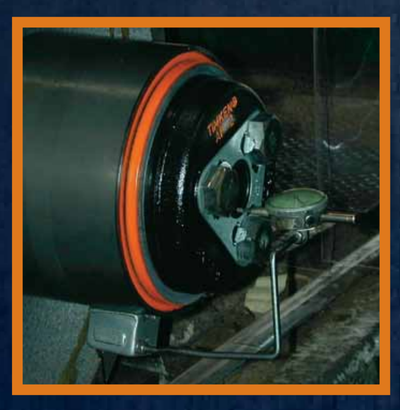
Apply the axle end caps and tighten the cap screws with a torque wrench to the torque specified in the table above. Recheck each cap screw several times until the cap screws do not move when the specified torque is applied.

7.



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

8.



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

1. Rotate the bearing several times while forcing the bearing cup toward the wheel hub.
2. Position the dial indicator as shown in the photo. Begin by pressing the bearing cup toward the wheel, and then pull the bearing cup toward the bearing end cap. Note the total travel.
3. The bearing lateral should be between 0.001" and 0.015" for most applications (consult your Timken representative for special 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**.