

AP™ Bearing Installation and Maintenance Instructions



Inboard Applications

Introduction

This instruction book represents the recommendations of The Timken Company. It is a guide to the proper care and procedure that should be followed for the installation, lubrication and maintenance of Timken® tapered roller bearings as applied to inboard applications.

A Timken tapered roller bearing correctly applied and properly lubricated* will have the best opportunity of giving reliable, trouble-free service.

The periodic attention recommended should be scheduled for convenience with other phases of equipment maintenance.

General information from any railroad governing body should take precedence over and supplement this instructional booklet for roller bearings operated under the jurisdiction of that governing body.

WARNING:

Proper bearing maintenance and handling practices are critical. Failure to follow correct installation instructions and to maintain proper lubrication can result in equipment failure, creating a risk of serious bodily harm.

*Timken® AP™ rail journal bearings are prelubricated at the factory. No additional lubrication is required. Please contact your Timken representative if specialized equipment is used that may require additional lubricant or subsequent lubricant in service.

TIMKEN
Where You Turn

AP™ Bearing Installation and Maintenance Instructions



Inboard Applications

 **Rail.
Bearing
Service**

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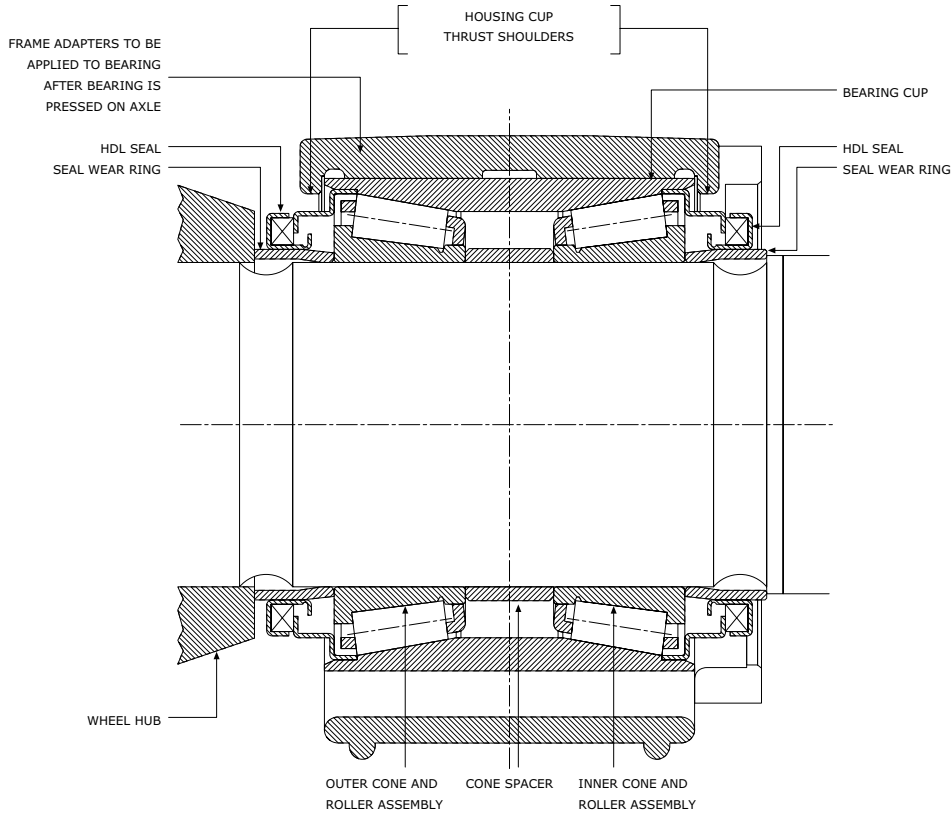


Figure 1
Typical inboard truck application with HDL seals.

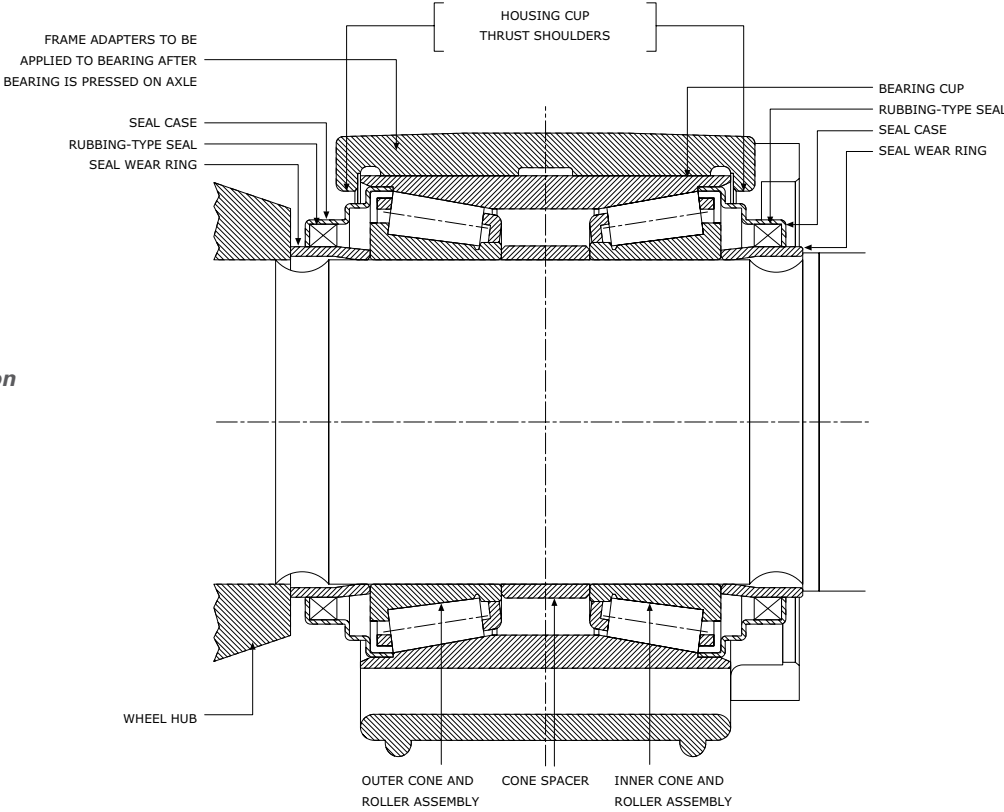


Figure 2
Typical inboard truck application with rubbing-type seals.

Bearing Installation and Removal

Equipment

Timken AP™ Bearings may be installed or removed with a bearing press, wheel press or with portable fixtures, depending on production requirements.

To ensure that bearings are properly seated, bearing or wheel presses should be equipped with relief valves so that the specified pressure can be maintained for a short interval. Bearings may not be properly seated if the required pressure is not obtained during the surge of the press when the backing ring/seal wear ring of the bearing contacts the axle shoulder.

Bearing or Wheel Presses

Bearing presses or wheel presses should be checked with a load cell to be sure that the ram pressure, as indicated by the gauge, is correct in the tonnage range and for the piston travel required for applying roller bearings to axles.

When roller bearings are applied in a bearing or wheel press, the following may be used:

- Pilot sleeves fastened to the end of the axle and separate assembly sleeves, as shown in Figure 3.

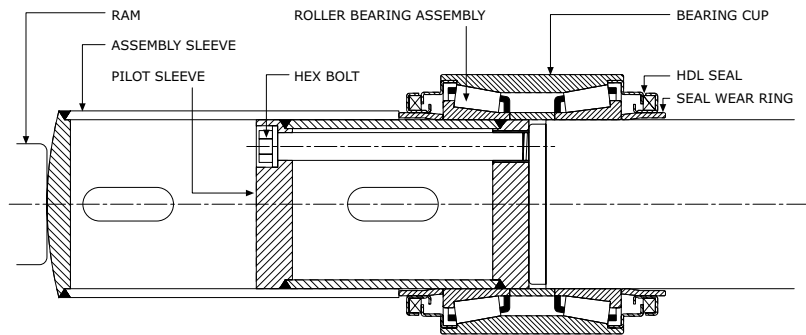


Figure 3 – Separate Sleeve method of applying roller bearings to an axle.

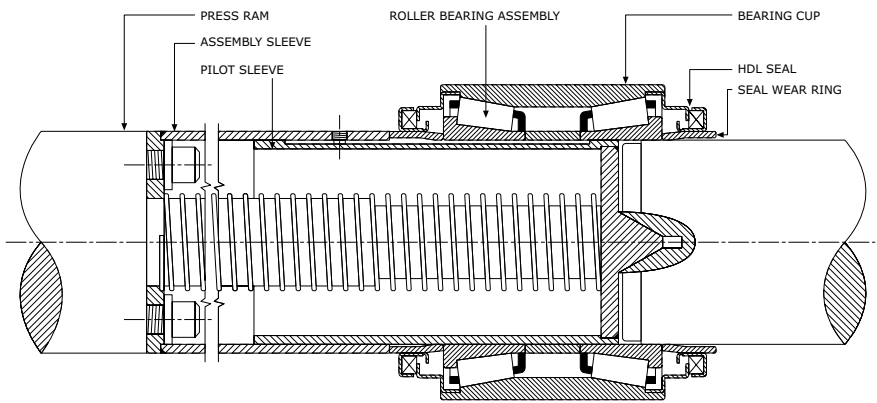


Figure 4 – Telescoping Sleeve method of applying roller bearings to an axle.

- Telescoping pilot and assembly sleeves fastened directly to the ram of the press, as shown in Figure 4.
- Details of separate assembly sleeves are shown in Figure 5.
- Assembly sleeve being used to mount a bearing is shown in Figure 6.

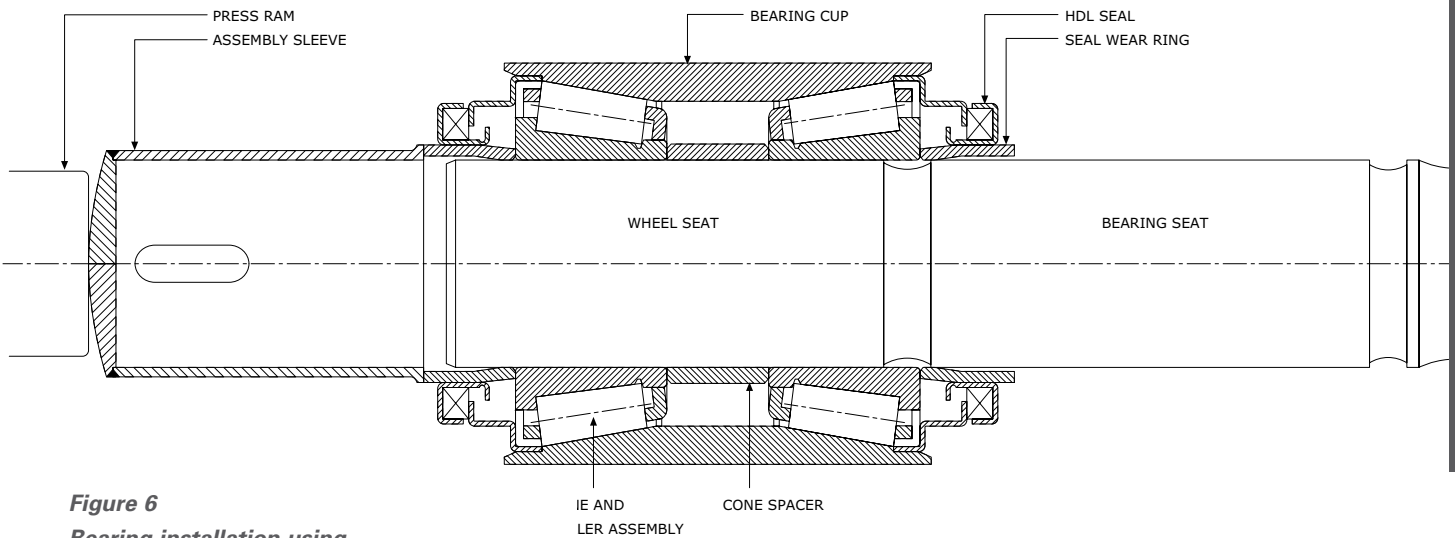
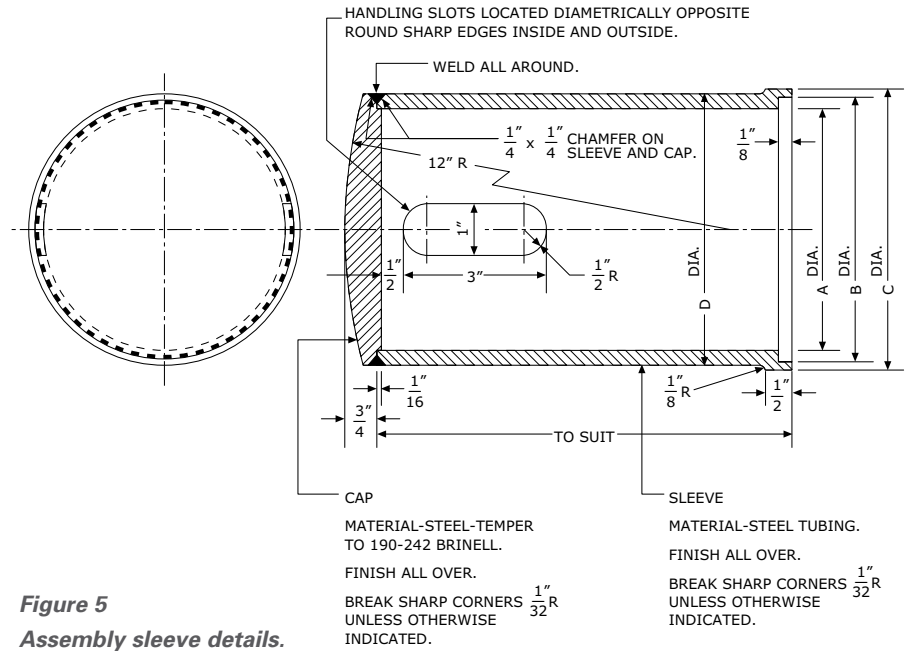


Table 1 DIMENSIONS FOR ASSEMBLY SLEEVE

Class and Size	A	B	C	D
D (5 1/2 x 10)	5 3/16"	5.707"	6"	5 3/4"
D - Short Cup	5 3/16"	5.707"	6"	5 3/4"
E (6 x 11)	5 11/16"	6.207"	6 1/2"	6 1/4"
E - Short Cup	5 11/16"	6.207"	6 1/2"	6 1/4"
F (6 1/2 x 12)	6 3/16"	6.832"	7 1/8"	6 7/8"
F - Short Cup	6 3/16"	6.832"	7 1/8"	6 7/8"

The fixtures required for removing a bearing with a bearing press or with a wheel press are shown with Figure 7.

The adapter shoe and reach rods required to attach the fixture to the bearing press or wheel press should be designed to suit the specific press conditions. The pulling shoe must be held down in position behind the seal wear ring/backing ring until the initial pressure has been applied to ensure proper contact.

Portable Fixtures

Portable fixtures consisting of a pilot sleeve, assembly sleeve, pulling shoe, reach rods and a base plate may be used for bearing installation and removal.

These fixtures can be operated by hand, air or electrically operated pumps and jacks, which are available commercially to suit production requirements.

A self-contained portable machine equipped with an electrically operated pump for installing or removing roller bearings is shown in Figure 8.

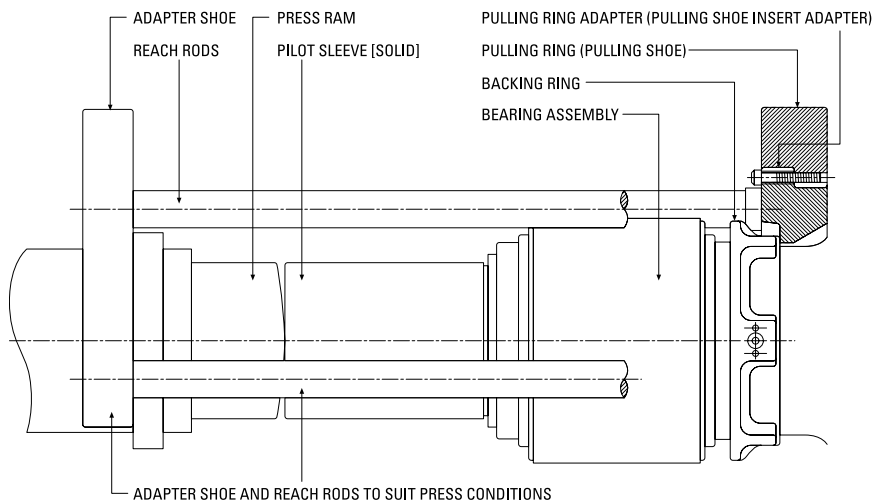


Figure 7 – Fixture for removing a bearing with a bearing press or wheel press.



Figure 8 – A self-contained portable machine equipped with a pump for installing and removing bearings.

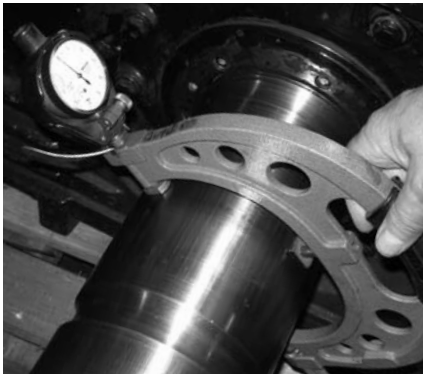


Figure 9 – Dial snap gauge.

Axles

Before proceeding with the bearing installation, the axles should be checked to make sure that the bearings can be applied without difficulty. Axle bearing seat diameters, length over backing shoulders and shoulder diameters should be checked to ensure that finished axle dimensions are within prescribed tolerance to obtain proper mounting of the bearings.

Axle bearing seat diameters should have a smooth machined, smooth machined and rolled, or ground finish and must be free from sharp corners, burrs, nicks, tool marks, scratches or corrosion.

Axle bearing seat diameters must be concentric with the wheel seat diameters.

A dial or digital snap gauge (with 0.0001" scale), as shown in Figure 9, must be used to measure journal diameter and must be calibrated using the master disc (at least class X tolerance – reference ANSI/ASME B1.2 of the American National Standard Tolerances for Plain Cylindrical Gages). Master gauges must be the same temperature as the axle being measured unless appropriate compensation is made for the temperature difference between the master disc and the journal being measured. Axle diameters should not be checked while the axles are heated due to machining. All measuring equipment and axles should be at the same temperature.

The bearing seat diameters and shoulders should be checked to ensure that the finished axle dimensions are within prescribed tolerances to obtain proper fit of the bearing assemblies.

Axles that have become magnetized must be demagnetized before bearings are applied.

Mounting the Bearings

Roller bearing work should be confined to a specific area.

Use machines and tools designed for roller bearing installation and removal.

Store bearing assemblies in a clean, dry place. Protect them from moisture and keep dry until installation on the axle.

Do not remove bearing assemblies from the shipping package or remove the protective wrapping until the time of application.

Do not remove the cardboard insert from the bore of the bearing assembly. This insert is required to hold the cone spacer in alignment with the bearing cones when installing the bearing assembly.

The bearing assemblies are shipped with a protective coating of grease over the vent fitting, if so equipped. Care should be taken so that the grease is not wiped off when the bearings are applied to the axles.

Timken railroad roller bearings must be pressed on the axle. Do not apply heat to the bearing cone assemblies to facilitate installation.

The amount of press fit of the bearing on the axle is pre-determined by the dimensional tolerances of the axle and mounting parts. Bearings and the axle do not need to be selected for fit for any given class.

Use a pilot sleeve to keep the cone spacer in alignment with the bores of the cones and to guide the bearing assembly on the axle. The pilot sleeve may be fastened to the end of the axle or may be guided by the lathe center hole in the end of the axle.

Coat the bearing seats of the axle with castor oil, heavy mineral oil or a molybdenum-disulfide and oil mixture. **DO NOT USE WHITE LEAD.** Lead compounds may be detrimental to lubricating greases by acting as an oxidation catalyst.

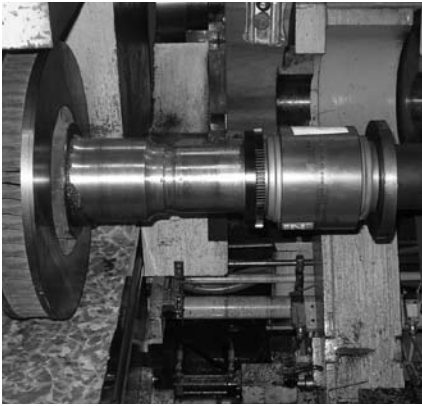


Figure 10 – Bearing ready for mounting.

When the bearing assembly is slipped on the pilot sleeve and the cardboard insert is ejected, the outboard seal wear ring should be held in place to prevent it from riding out of the seal.

If the seal wear ring does slip out of the assembly, it must be inserted into the seal correctly and carefully, chamfered end first, so that the outer lip of the seal does not turn under when the seal lips are expanded over the seal wear ring.

DO NOT INSERT ANY TOOL OR OTHER INSTRUMENT BETWEEN THE SEAL ELEMENT LIPS AND SEAL WEAR RING. This may damage the seal element lips or scratch the seal wear ring, resulting in bearing lubricant leakage.

A small lift or other bearing handling device may be used for handling larger bearing sizes.

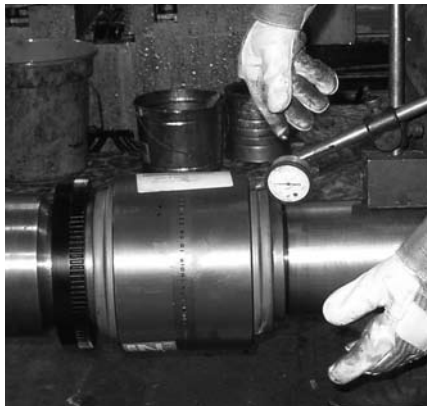


Figure 11 – Bearing mounted lateral check using dial indicator.

Pressing the Bearing Assemblies on Axles

An assembly sleeve that contacts the seal wear ring outer face and telescopes over the pilot sleeve is used to press the bearing on the axle.

To make sure that the bearings are firmly seated against the axle shoulder, the pressure shown on Table 2 should be applied to the bearings after the surge of the pressure gauge indicates that the bearings have contacted the axle shoulder.

Rotate the bearing assembly to make sure that it will turn. Due to the rubbing type seals, the bearing assembly will not rotate freely at initial application. However, if the bearing is equipped with HDL seals, the bearing may rotate more freely. New bearing assemblies are pre-adjusted at the factory. No adjustment is necessary at installation.

Checking Bearing Lateral Play

Check the bearing mounted lateral play with a dial indicator mounted on a magnetic base. To measure the bearing lateral play, place the magnetic base on the wheel seat of the axle. Position the stem of the indicator against the face of the bearing cup. Force the bearing cup laterally away from the indicator and then pull the bearing cup toward the indicator. Oscillate the bearing while making the lateral measurement to ensure that the rollers are seated for an accurate measurement.

The bearing lateral play, as shown by the dial indicator, should be between the limits of 0.001" and 0.020" (Figure 11). If a bearing rotates freely by hand, but measures less than 0.001" lateral on the dial indicator, the application is satisfactory for service. If the bearing end play does not meet the requirements, remove the bearing assembly from the axle.

A Timken representative should be consulted for the disposition of new bearings removed from axles.

Table 2 Suggested bearing and wheel seating tonnages

Bear Size	Suggested Seating Tonnage
Class D	20 T min. – 35 T max.
Class D – Short Cup	20 T min. – 35 T max.
Class E	25 T min. – 40 T max.
Class E – Short Cup	25 T min. – 40 T max.
Class F	35 T min. – 50 T max.
Class F – Short Cup	35 T min. – 50 T max.



Figure 12 – Wheel being applied with a wheel press.

Applying Wheels

The face of the wheel hub must be machined square with the wheel bore to seat against the bearing assembly.

The tolerance on a standard dimension from the wheel rim face to the wheel hub face must be predetermined so that the total variation between the wheel rim faces, including the tolerances of the bearing assemblies, mounting parts and axle, will fall within the specified wheel mounting gauge.

Install the frame adapters or housings on the bearings. Bolt the stop block assemblies to the frame adapters prior to applying the wheels.

The use of an excessive amount of white lead and oil as a press fit lubricant for pressing wheels on the axle must be avoided to prevent the white lead and oil mixture from getting into the bearings.

The wheels should be pressed on the axles slowly and carefully to avoid excessive pressure against the bearing assemblies. An accurate pressure gauge on the press is essential. When the pressure gage indicates that the wheel hub has made contact with the bearing, allow the press pressure to increase or “spike” to make sure that the wheel is seated against the outboard seal wear ring or the outer enclosure sleeve. The pressure increase should not exceed the tonnages listed in Table 2. Make sure the bearing and wheel are properly seated by attempting to insert a 0.002” feeler gauge between the axle shoulder and inner enclosure sleeve or seal wear ring, and between the wheel hub and outer enclosure sleeve or seal wear ring.

Bearing Removal

Wheels must be removed from the axles before removing the bearings. DO NOT press the bearings and wheels off the axle at the same time. It requires approximately 250 tons of pressure to break the wheel fit. Damaged bearing parts would result if subjected to these extremely high pressures.

Frame adapters or housings with outer cup thrust shoulders should be removed prior to removing the bearing assemblies from the axles.

When bearing assemblies that have been in service are removed from the axles, the bearings should be shipped to a Timken-authorized bearing reconditioning facility such as Rail Bearing Services (RBS) or Timken Rail Services (TRS) for proper cleaning, inspection and repair.

Bearing assemblies may be removed from the axle with a bearing press, wheel press or portable equipment. Forty to 60 tons of pressure is normally required to break the bearing fit.

Since the bearing assembly width is usually greater than the length of the axle wheel seat, the ram of the press must be smaller in diameter than the wheel seat diameter of the axle. Or, intermediate blocking, which is smaller in diameter than the axle, must be used to clear the bore of the bearing as it is removed.

Do not drop the bearings when removing them from the axle.

Typical fixtures for removing bearings in a bearing press or wheel press are shown in Figure 7. In some cases, due to clearance restrictions, the pulling shoe and pulling shoe adapter are combined in the design.

The adapter shoe and reach rods required to attach the pulling shoe to the bearing press or wheel press should be designed to suit the specific press conditions.

Due to limited conditions on some applications and limited contact areas on the bearings, pulling shoes for inboard applications are custom-designed.

Remove ground brush holders, magnetic speed sensors, etc. from

the bearing housings on which they are used.

Position the special puller behind the bearing. Some pullers are of a two-piece design. The top portion of the pulling shoe adapter is located behind the bearing and a cap (bottom part) and bolted securely in place. (On applications fitted with a sensor gear, it may be necessary to break the sensor gear to provide clearance for the pulling shoe adapter, or to pull the adapter through the gear.)

If a separate pulling shoe is used, position it on the pulling shoe adapter and apply the tie bolt to the pulling shoe, if so equipped.

Extend the press ram to remove the bearing and bearing housing from the axle. If the pulling shoe is not equipped with a lower cap, it will be necessary to hold the pulling shoe down until press forces are applied.

After the bearings are removed from the axle, the bearing housing can be removed from the bearing. Certain applications will require the removal of the bearing retainer.

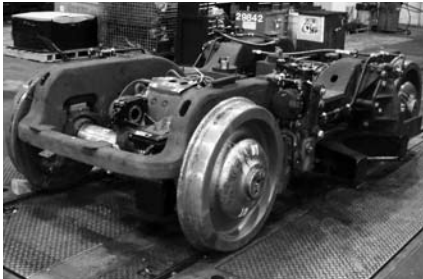


Figure 13 – Fully assembled truck.

Truck Assembly and Disassembly

General

Bearing housings or frame adapters are used to adapt Timken roller bearing assemblies to bed type truck frames of locomotives and passenger cars. Bearing housings and frame adapters are available for various designs of truck suspensions.

External wear surfaces of bearing housings and frame adapters are machined and hardened. However, liners may be applied if desired.

Trucks should be maintained in good operating condition to obtain optimal roller bearing performance. Worn or defective parts should be repaired or replaced. Figure 13 shows a fully assembled truck.

Truck Assembly

Standard procedure should be followed in assembling trucks. Care should be exercised in handling the truck frames to prevent damage caused by striking the bearings with the truck frames.

Bearing housing bores, adapter bearing seats and the outside surfaces of bearing cups must be clean and free of dirt or corrosion.

When full bore bearing housings are applied to bearing assemblies, coat the bore of the housings and the outside surface of the bearings with grease.

Be sure that the housings or adapters are applied to the bearings correctly. The word "FRONT" is cast on the housings and adapters to identify their outer face.

If the bearing assembly has had previous service, the original load zone may be recognized by the imprint of the adapter or housing contact on the bearing cup, or a new load zone location may have been indicated on the outside of the bearing cup by marking the cup when the bearing was disassembled and inspected. Position the housing or adapter on the bearing so that a new wear surface in the bearing cup will be in the load zone.

Make sure that the bearing housings or adapters are properly seated on the bearing assemblies.

Apply cap screws, lockwashers and nuts or stop blocks to adapters that have a hole provided in the bottom. These cap screw nuts or stop blocks are required to prevent the adapters from disengaging from the bearing assemblies.

Truck Disassembly

Remove control devices from the bearing housings.

Standard procedure should be followed in disassembling trucks. Care should be exercised in removing truck frames to prevent damage caused by striking the bearings with the truck frames.

When a truck is disassembled, the roller bearings and associated parts should be inspected as outlined under Service Inspection and in accordance with the Shop Practice contained on page 16.

Service Inspection

General

Roller bearings should be given a visual inspection at terminals and when equipment is on repair track or in the shop for any reason. Inspect for overheating, excessive lubricant leakage, broken, loose or missing parts such as control devices, seals, cups, housings or adapters. ***For detailed information on bearing inspection, visit www.timken.com/rail. You will be able to access resources such as our Trackside Bearing Inspection booklet and other maintenance literature.***

Examine the housings or adapters for proper seating on the bearing and for excessive wear. Defective parts must be repaired or replaced before the equipment is returned to service.

The required tools, facilities and spare parts should be available at terminals for inspection and maintenance.

Loose Seals

If a seal can be moved using a suitable probe, the bearing must be removed from the axle for inspection and repair.

Bearing Running Temperature

Running temperatures up to 100° F (55° C) above ambient may be expected under normal operating conditions.

Various types of thermo scanners are used to check bearing operating temperatures. The device manufacturers should be consulted for the operation of these devices with respect to roller bearing temperature detection.

200° F (93.3° C) heat-indicating crayons or a pyrometer can be used to check bearing temperatures after electronic detectors have shown indications of an overheated bearing. The cup outside diameter or face of the housing or adapter should be used for heat indication.

If an overheated bearing is found, follow the instructions of the railroad governing body or the appropriate railroad guidelines.

When a bearing is damaged to the extent that the wheel and axle must be removed, the housing or adapter must be sent to the shop with the wheel and axle assembly to determine the cause of the damage.

Grease Leakage

A small amount of grease leakage around the seals may be expected during the initial run-in period. This leakage will reduce to normal “weeping” after this period.

When a bearing is found that appears to be leaking excessively, check for loose seals.

Subsequent inspections will determine if further attention is required.

See Timken’s Rail Journal Roller Bearing Grease Weepage Inspection Guide for more information (www.timken.com/industries/rail/resources/8221.pdf).



Figure 14 – Axle mounted in axle lathe for inspection.

Lubricant Contamination

Lubricant containing water is destructive to roller bearings, causing rapid wear. All possible precautions should be taken to prevent water from entering the bearing assembly.

If the equipment has been submerged or operated in water of such a depth that the water could have entered the bearings, the bearing assemblies must be removed from the axles and sent to a Timken-authorized bearing reconditioning facility such as Rail Bearing Service (RBS) or Timken Rail Services (TRS).

Drain pipes or holes must be located so that drainage will not be directed at the bearing assemblies.

When cleaning the exterior of equipment, the stream of water should not be directed at the bearing enclosure seals.

When sandblast or shotblast cleaning, for repainting or for any other reason, a shield should be provided to protect both the front and rear of the bearing assembly from sand or shot.

Displaced Adapters/Housings

A housing or adapter out of position causes a load concentration on the bearing and, if continued in service for any length of time, may result in serious bearing damage. If, for any reason, the truck frames are raised to the extent that the housing or adapters could disengage or shift from the bearings, each assembly should be inspected to make sure that the housings or adapters are properly seated on the bearings.

Housings and adapters should be inspected at regular service intervals according to Timken maintenance practices. Housings and adapters should be clean and free from dirt, dust, metal chips and foreign

material that may prevent proper seating of the adapters or housings on the roller bearings.

Accidental Damage

Roller bearing assemblies under equipment involved in derailment or collision, or subject to damage by fire, floods or other cause, must be shipped for inspection before being returned to service.

Bearings must be removed from the axles and sent to a Timken-authorized bearing reconditioning facility such as Rail Bearing Service (RBS) or Timken Rail Services (TRS).

After the removal of the bearings, all axles must be checked for bent condition in an axle lathe or with other suitable equipment. A bent axle will cause premature bearing damage due to the oscillating movement and uneven load distribution in the bearing.

Bearing housings or adapters must be inspected for distortion or other damage before being returned to service. If a damaged adapter or housing is returned to service, it could cause damage to the replacement bearing due to concentration of load.

Truck frames also should be inspected to see that they are not bent or distorted. Truck frames that are bent or distorted will impose undesirable loads on the bearings, which can cause premature bearing damage.

Shop Practice

Truck Disassembly

Truck frames must not strike the roller bearings when the frames are removed from wheel and axle assemblies.

Remove the housings or adapters and clean the outside surface of the bearings. Sandblast or shotblast cleaning of roller-bearing-equipped axle assemblies is not recommended.

The outside surface of the bearing cup should be marked to indicate a new load zone to initiate a new wear surface in the bearing cup when the housing or adapter is applied to the bearing.

Adapters or housings should be cleaned and inspected for excessive wear. Adapters or housings worn to the extent that proper load distribution of the bearing is affected should be repaired or replaced.

Rotate the bearing assemblies to detect any abnormal condition and visually check the outside of the bearing assembly for broken, loose or missing parts (see service inspection instructions on page 14).

Check the bearing running lateral play with a dial indicator mounted on a magnetic base. While oscillating the bearing, force the bearing cup laterally toward the wheel hub then pull the cup away from the wheel hub. Place the magnetic base on the outside surface of the bearing cup and the stem of the indicator against a surface near the center of the bearing.

If the bearing lateral play is 0.030" or more, or if any roughness is detected when the bearing is rotated, the bearing assembly should be removed from the axle.

Whenever the bearing assemblies are removed from the axle, the bearings should be sent to a Timken-authorized bearing reconditioning facility such as Rail Bearing Service (RBS) or Timken Rail Services (TRS).

Wheel Turning

Wheel-turning lathes or wheel-truing machines may be used for turning wheels.

Protective caps, O-rings or other suitable wrapping should be used to prevent steel chips from entering the bearing or damaging the seals.

Heavy grease must be used to lubricate the lathe centers.

Wheel Renewal

When worn or defective wheels are removed from wheel and axle assemblies, the roller bearings may be removed separately using portable fixtures. Do not press the bearings and wheels off the axle at the same time. It requires approximately 250 tons of pressure to break the wheel fit. Damaged bearing parts would result if subjected to these extremely high pressures.

Electric Welding

When it is necessary to do any electric welding on cars or wheel and axle assemblies, the ground cable must be clamped to or near the part being welded so that no current will pass through the bearings.

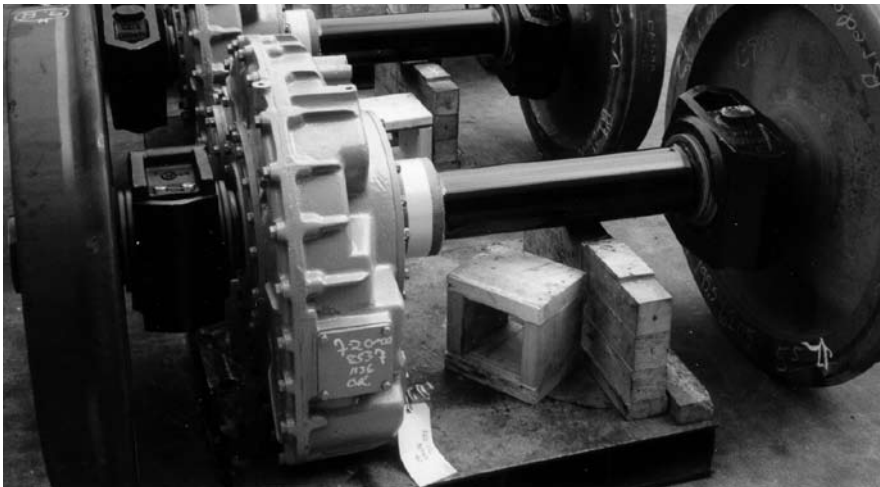


Figure 15 – Assembled wheel set ready to be installed under a truck.

Storage

Equipment with Roller Bearings Applied

When cars and locomotives with roller bearings applied are placed in storage, the brakes should be set or the wheels chocked to prevent the equipment from moving.

It is not necessary to periodically move cars or rotate bearings applied to axle assemblies to distribute the lubricant over the bearing surfaces of Timken bearings in storage for up to one year. However, if the bearings have remained stationary for one year, the car should be moved at least one car length or bearings should be rotated several revolutions on axle assemblies.

If the equipment has been submerged in flood water of such a depth that the water could have entered the bearings, the bearings should be removed and sent to a Timken-authorized bearing reconditioning facility such as Rail Bearing Services (RBS) or Timken Rail Services (TRS).

Wheel and Axle Assemblies with Roller Bearings Applied

Wheel and axle assemblies with roller bearings applied must be handled with care. Damage may result if the bearings are permitted to strike other objects.

Wheel and axle assemblies with roller bearings applied should not be stored on double track used for the storage of plain bearing axles with wheels mounted (as shown in the

AAR Wheel and Axle Manual). The wheel flanges of the wheel and axle assemblies may contact and damage the bearings of adjacent wheel and axle assemblies.

When wheel and axle assemblies with roller bearings applied are not stored on track, the wheels should be flange to flange and not overlapped.

It is not necessary to periodically revolve Timken AP bearings applied to wheel and axle assemblies in storage to distribute lubricant over the bearing surfaces for up to one year. If the bearings have remained stationary for one year, they should be turned several revolutions.

If wheel and axle assemblies with roller bearings applied have been submerged in flood water of such a depth that the water could have entered the bearings, the bearings should be removed and sent to a Timken-authorized bearing reconditioning facility such as Rail Bearing Services (RBS) or Timken Rail Services (TRS)

Wheel and axle assemblies with roller bearings applied should be used in the order in which they were stored, oldest stock first.

Roller Bearing Assemblies and Component Parts

Unmounted roller bearings and component parts must be stored in an area that is clean and well protected from moisture.

A periodic inspection of stored roller bearings should be made. Any undesirable condition found should be corrected immediately.

Stored roller bearing assemblies or component parts that have been subjected to moisture must be cleaned and inspected at a Timken-authorized bearing reconditioning facility such as Rail Bearing Services (RBS) or Timken Rail Services (TRS). Roller bearing assemblies showing evidence of moisture having entered the bearing must be sent back to RBS for proper cleaning and inspection. Damaged roller bearing parts also must be sent to RBS for repair or replacement.

Roller bearings, either new or used, that are placed in storage as individual parts or as unit assemblies, should be used in the order in which they were stored, oldest stock first.

New roller bearings and component parts should not be removed from the shipping package until they are to be installed on an axle or assembled as a unit assembly.

New or used seals held in storage must be kept covered to protect them from dust or other possible damage until they are installed in a bearing.

When new roller bearing parts are removed from storage, it is not necessary to clean the protective coating of rust inhibitor from the parts that have been retained in their original shipping package.

Shipping

Roller Bearing Assemblies and Component Parts

When roller bearing assemblies and component parts are shipped, they must be protected from dirt, dust and moisture. Care also must be taken to prevent the possibility of damage to the bearings during shipment.

New roller bearing assemblies and component parts should be shipped in their original shipping packages.





Overseas Shipping Instructions

Below-Deck Cargo

When locomotives or cars equipped with Timken AP bearings are shipped overseas, it is preferred that trucks or axle assemblies equipped with roller bearings be loaded separately and stored below deck.

Trucks should be blocked up under the truck frames to remove the weight of the truck from the bearings.

Deck Cargo

Heavy grease or car journal compound that is not soluble or affected by heat (150°F) should be applied completely around exposed seal cases on both ends of each bearing, between the face of the cup and axle end cap and between the face of the cup and backing ring.

The grease used should be either a calcium or lithium soap grease of not less than a number 2 consistency with a penetration of 265-295.

Cars and locomotives with trucks applied must be blocked up under the truck frames to remove the weight of the truck as well as the load on the center plate from the bearings. Individual trucks also must be blocked up to remove the weight of the truck from the bearings.

General

After the equipment has been unloaded at the point of destination, each bearing assembly must be examined to make sure that the adapter is properly seated on the bearing cup before the equipment is placed in service.

Timken AP bearings are prelubricated at the factory. It is not necessary to add grease to these bearing assemblies for shipment as "deck cargo" or "below-deck cargo".

For more information, visit timken.com/rail or call:

North America

New equipment applications

800.964.2626

Reconditioning services

800.368.4401

Outside North America

330.471.7368



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