

DODGE® SLEEVOIL® RTL PILLOW BLOCKS

Sizes 3-7/16" through 12"

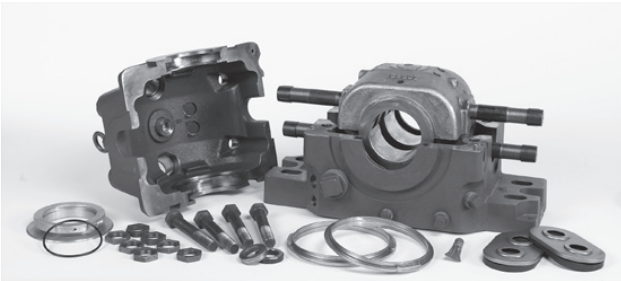
These instructions must be read thoroughly before installation or operation. This instruction manual was accurate at the time of printing. Please see dodgeindustrial.com for updated instruction manuals.

This manual is best suited for RTL Pillow Blocks. If your SLEEVOIL housing nameplate specifies "RTL SPHERICAL HOUSING," use manual MN3085. Dodge started manufacturing RTL SPHERICAL PILLOW BLOCKS in 2014.

WARNING: All products over 25 kg (55 lbs) are noted on the shipping package. Proper lifting practices are required for these products.

CAUTION: Do not scrape, rebabbitt or otherwise alter this product. Such action adversely affects bearing performance and may result in damage to or destruction of equipment.

SLEEVOIL RTL pillow blocks are designed for applications requiring a bearing with high thrust load capacities and are available in expansion and non-expansion types.



Exploded view of expansion pillow block (housing cap and liner cap not shown). Non-expansion pillow block includes thrust plate kit and split thrust collar.



Options include: thermocouple, circulating oil kit, heater and thermostat, vibration detector kit, auxiliary seal kit and end closure.

WARNING: Because of the possible danger to person(s) or property from accidents which may result from the improper use of products, it is important that correct procedures be followed: Products must be used in accordance with the engineering information specified in the catalog. Proper installation, maintenance and operation procedures must be observed. The instructions in the instruction manuals must be followed. Inspections should be made as necessary to assure safe operation under prevailing conditions. Proper guards and other suitable safety devices or procedures as may be desirable or as may be specified in safety codes should be provided, and are neither provided by Dodge nor are the responsibility of Dodge. This unit and its associated equipment must be installed, adjusted and maintained by qualified personnel who are familiar with the construction and operation of all equipment in the system and the potential hazards involved. When risk to persons or property may be involved, a holding device must be an integral part of the driven equipment beyond the speed reducer output shaft.

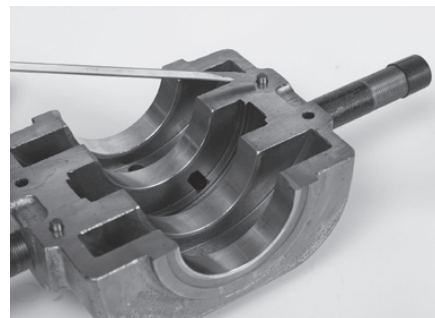
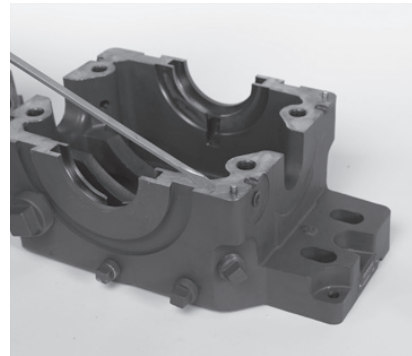
PRE-ASSEMBLY INSTRUCTIONS

Refer to applicable contract/assembly drawings to verify that all parts are available prior to assembly. Disassemble and thoroughly clean all parts of the pillow block. The installer is the last person to inspect all parts for fit, damage and cleanliness. Care **MUST** be taken to avoid contaminating the internal surfaces of the bearing.

WARNING: Rust Preventatives and solvents can be toxic and/or flammable. Follow directions and safety procedures recommended by their manufacturers.

WARNING: Liner assembly has critical machined surfaces which are easily damaged. Use care in handling to protect these surfaces. Liner parts should be placed on a soft, CLEAN surface.

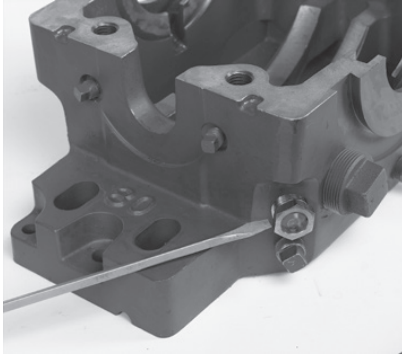
For ease of installation, the housings and liners are split and match-marked. The split halves are machined together and must not be interchanged. The match-mark on the housing is found near the joint in the grommet area. The match-mark on the liner is found on the outer diameter of the pilot on one end of the liner.



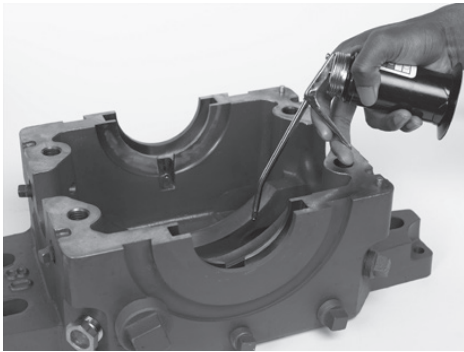
INSTALLATION OF BASES

WARNING: To ensure that drive is not unexpectedly started. Turn off and lock out or tag power source before proceeding. Failure to observe these precautions could result in bodily injury.

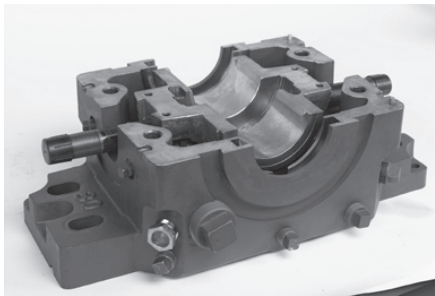
Check mounting structure to insure it is rigid, level and well supported. Position housing base on pedestal so oil gauge is in position specified on construction drawing. **Do NOT tighten housing base to pedestal.**



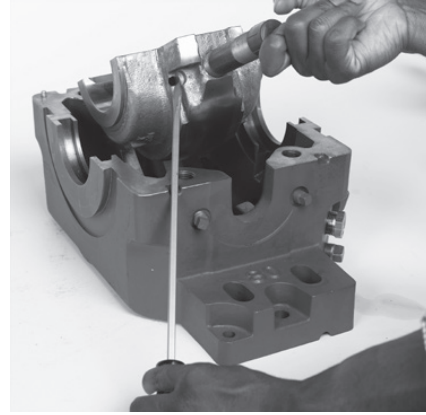
Apply oil to the spherical seats of the housing base.



Set liner base in housing base.



Because of the closely controlled liner to housing fit, it may be necessary to bolt the housing base down to allow the liner to slip into the housing seat. Do a preliminary alignment check at this time.



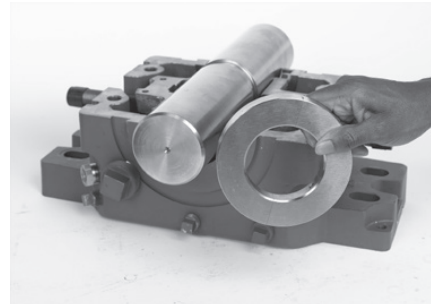
Make sure the two thermocouple/RTD holes in the liner are aligned with the two thermocouple/RTD holes in the housing. Apply oil to the liner bearing surface.

NOTE: Liner has been machined to close tolerances. Scraping of bore is not necessary.

INSTALLATION OF SHAFT AND THRUST COLLAR

Inspect shaft to ensure it is smooth (32 micro-inch RMS or better) and free of burrs and rough spots. Standard shaft diametrical tolerance should be nominal $+0.000/-0.002$ " unless otherwise specified on shaft detail drawing.

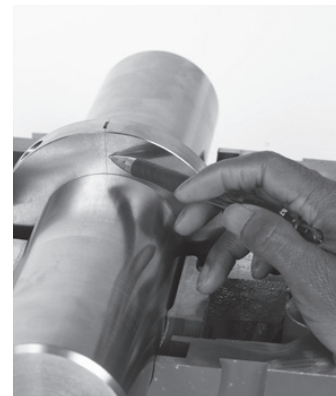
If bearing is non-expansion (fixed) type, check thrust collar for burrs and scratches. Use crocus cloth (NOT emery) to smooth any scratches on the thrust collar faces.



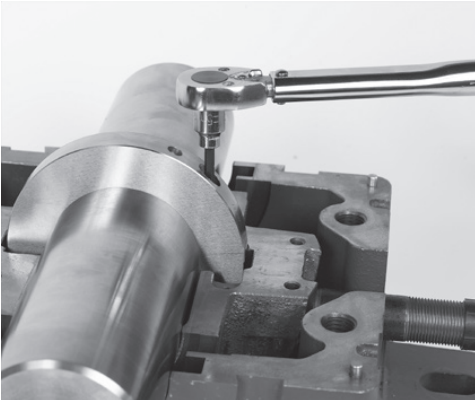
If clamp-on type thrust collar is used, make sure joints of collar are clean. Place both halves of thrust collar into shaft groove and tighten clamp screws alternately and evenly to torque value specified in Table 1.

NOTE: Set and jam screws are shipped separately.

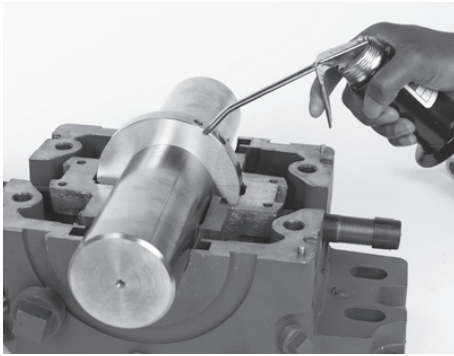
The collar faces must be smooth with no offset at the split.



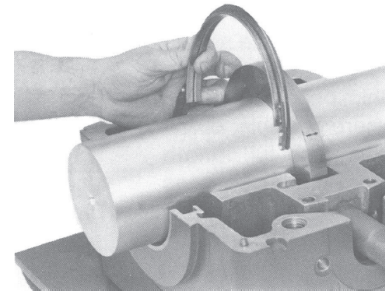
Tighten set screws to value specified in Table 1. **Install and tighten jam screws 1/10 of torque specified for set screws.**



Oil shaft in the bearing area and CAREFULLY set shaft in place.

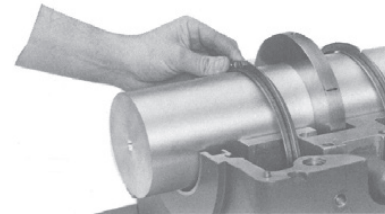


Place oil ring around outside of liner base and over shaft.



Install oil ring screws to insure they are secure. Repeat for second ring.

Make sure oil rings rotate freely on shaft.



INSTALLATION OF THRUST PLATES

For non-expansion bearings:

Clean one set of babbitt faced thrust plates.

NOTE: Thrust plates are shipped in protective wax with the babbitted faces on the outside. Be careful not to damage the babbitted faces when peeling off the wax.

NOTE: Plates are matched halves and **MUST NOT** be interchanged.



Carefully smooth any scratches on babbitted face with crocus cloth (NOT emery cloth or sandpaper). Oil plate halves generously.



Table 1

| RTL SLEEVOIL SIZE | THRUST COLLAR | | | |
|-------------------|-----------------------|--------------------------|----------------------|--------------------------|
| | CLAMP SCREW | | SET SCREW | |
| | SCREW SIZE (SOC. HEX) | WRENCH TORQUE (IN.-LBS.) | SCREW SIZE (SOC.HEX) | WRENCH TORQUE (IN.-LBS.) |
| 3 7/16 RTL | ¼ - 20NC | 160 | 5/16 - 24NF | 160 |
| 315/16 RTL | ¼ - 20NC | 160 | 5/16 - 24NF | 160 |
| 4 7/16 RTL | ¼ - 20NC | 160 | 5/16 - 24NF | 160 |
| 415/16 RTL | 5/16 - 18NC | 325 | 5/16 - 24NF | 160 |
| 5 7/16 RTL | 3/8 - 16NC | 580 | 3/8 - 16NC | 275 |
| 6 RTL | ½ - 13NC | 1425 | 3/8 - 16NC | 275 |
| 7 RTL | ½ - 13NC | 1425 | 3/8 - 16NC | 275 |
| 8 RTL | ½ - 13NC | 1425 | 5/8 - 11NC | 1200 |
| 9 RTL | 5/8 - 11NC | 2800 | 5/8 - 11NC | 1200 |
| 10 RTL | ¾ - 10NC | 5000 | 5/8 - 11NC | 1200 |
| 12 RTL | ¾ - 10NC | 5000 | 5/8 - 11NC | 1200 |

The thrust collar must be centered in the cavity of the liner base.

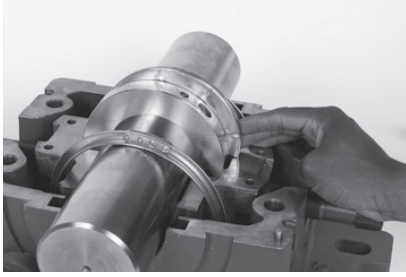
INSTALLATION OF OIL RINGS

NOTE: Do NOT use oil rings if liner cap has baffles installed in the oil ring grooves.

Oil rings are shipped disassembled with two extra screws. Place oil rings around outside of liner base and over shaft.

NOTE: Oil ring halves are match-marked and **MUST NOT** be interchanged.

First, install the plate half without milled slots in the steel back. Press the babbitted face against the thrust collar and rotate plate around shaft into liner cavity.

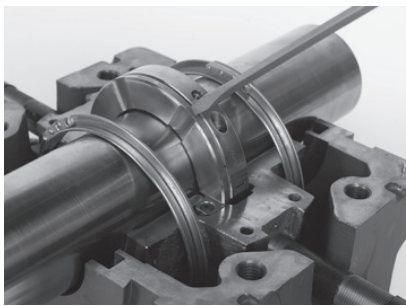


Install retainer washer in groove in liner base. Rotate plate until stopped by retainer washer.



Place the other thrust plate half (half with two milled slots in steel back) against thrust collar, making sure babbitt faces thrust collar.

Clean and oil the second thrust plate set and install in same manner. It may be necessary to move the shaft slightly to obtain enough clearance in the liner cavity to install the lower plate half.

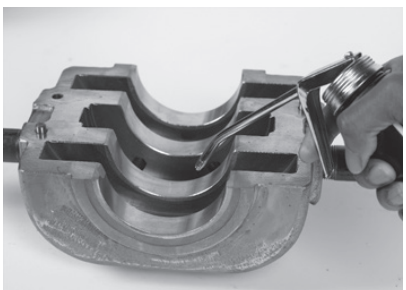


CAUTION: The bearing is not yet fastened in place and can be moved.

Total axial clearance between thrust plates and thrust collar is .015 - .030 inches.

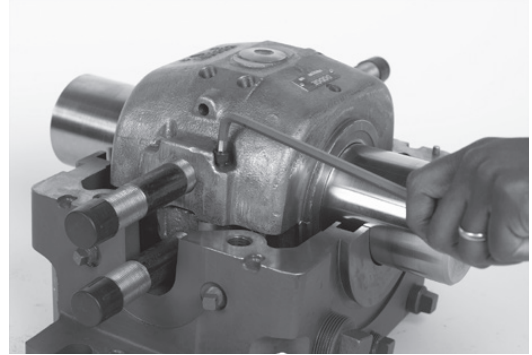
INSTALLATION OF LINER CAP

Apply oil to the bearing area of liner cap.

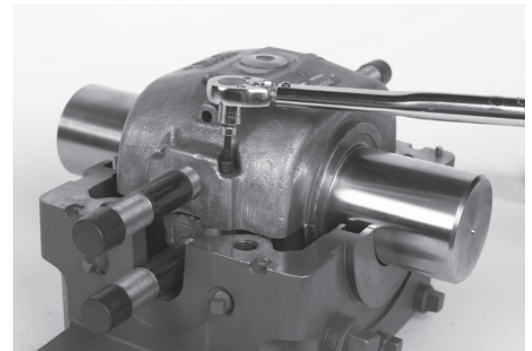


WARNING: If it ever becomes necessary to remove liner cap, make certain that both upper thrust plate halves remain in place next to the thrust collar. If a plate half should remain in the liner cap it can drop from the liner and cause injury.

CAREFULLY locate liner cap on liner base. These SLEEVOIL liners have match-marks permanently stamped at the joint near one end. These match marks permanently insure that parts stay paired and critical orientation of assemblies is maintained. Makes sure oil rings rotate freely. End faces of liner should have no appreciable offset.



Install cap screws and tighten alternately to torque given in Table 2.

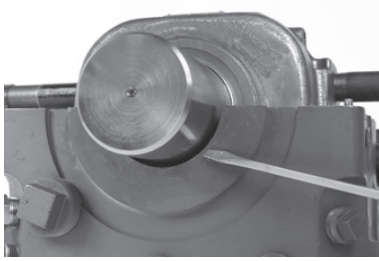


NOTE: If liner cap on non-expansion bearing will not drop into place, remove cap and reposition thrust plates tightly against thrust collar. Reinstall liner cap.

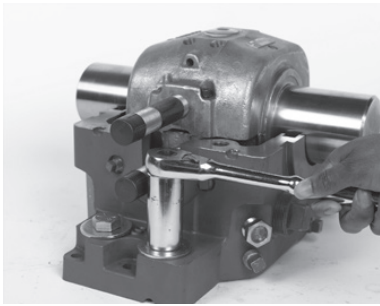
Table 2

| RTL SLEEVOIL SIZE | LINER CAP BOLTS | |
|-------------------|-----------------|-------------------|
| | THREAD SIZE | TORQUE (IN.-LBS.) |
| 3-7/16 | 5/16 - 18 | 132 |
| 3-15/16 | 5/16 - 18 | 132 |
| 4-7/16 | 5/16 - 18 | 132 |
| 4-15/16 | 5/16 - 18 | 132 |
| 5-7/16 | 5/16 - 18 | 132 |
| 6 | 3/8 - 16 | 240 |
| 7 | 1/2 - 13 | 600 |
| 8 | 1/2 - 13 | 600 |
| 9 | 1/2 - 13 | 600 |
| 10 | 3/4 - 10 | 2100 |
| 12 | 3/4 - 10 | 2100 |

Check alignment of pillow block by noting clearance between housing and shaft at each end of the housing. Clearance should be uniform within 1/32". Shim bearing pedestal where possible; otherwise, use full length shims under base as required. Alignment of pillow block should be accurate to prevent the seals from rubbing.



Tighten the four pedestal bolts to torque value given in Table 3. Shaft should rotate freely.



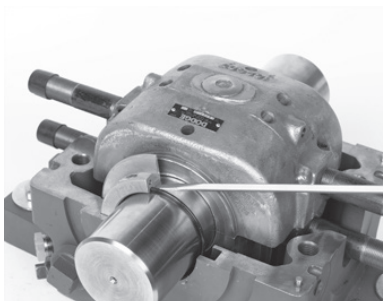
INSTALLATION OF OIL SEALS

Cut the O-ring (rubber cord) and wrap it around the shaft inside the seal groove. If the O-ring is too large, cut it to fit the shaft. For most effective sealing, ends of O-ring must meet. Cement or glue the ends together. Lubricate O-ring with oil or grease.



Apply a thin coat of heavy oil or light grease in the housing seal grooves to extend seal life.

Disassemble one seal and place one half on shaft with flinger facing liner. Locate O-ring in seal groove and rotate seal half around shaft into housing base groove.



Install other half of seal and tighten screws to torque given in Table 3. Check to make sure the seal will slide along the shaft with minimum effort to allow for shaft expansion. Align the seal in the middle of the seal groove.

Install second seal in same manner. If end closure is to be used, the neoprene disc is to be installed on one end at this time instead of the bearing seal. Consult construction drawing.

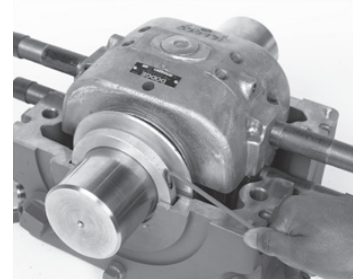


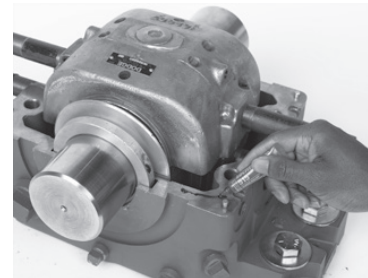
Table 3

| RTL SLEEVOIL SIZE | HOUSING/PEDESTAL BOLTS | | SEAL CLAMP SCREWS | |
|-------------------|------------------------|-------------------|-------------------|-------------------|
| | THREAD SIZE | TORQUE (IN.-LBS.) | THREAD SIZE | TORQUE (IN.-LBS.) |
| 3-7/16 | 3/4 | 2100 | 10-24 | 12 |
| 3-15/16 | 7/8 | 2040 | 10-24 | 12 |
| 4-7/16 | 1 | 3000 | 10-24 | 12 |
| 4-15/16 | 1 | 3000 | 10-24 | 12 |
| 5-7/16 | 1-1/8 | 4200 | 1/4-20 | 33 |
| 6 | 1-1/4 | 6000 | 1/4-20 | 33 |
| 7 | 1-1/2 | 10000 | 5/16-18 | 65 |
| 8 | 1-3/4 | 11500 | 5/16-18 | 65 |
| 9 | 1-3/4 | 11500 | 3/8-16 | 120 |
| 10 | 2 | 15000 | 3/8-16 | 120 |
| 12 | 2 | 15000 | 3/8-16 | 120 |

INSTALLATION OF HOUSING CAP

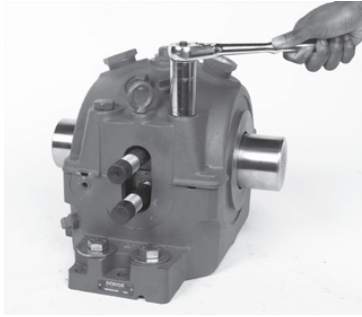
Back off the plunger screw as far as possible.

Along the outer contour of the housing base, apply the supplied LOCTITE® 515 or an equivalent sealant to the joint. CAREFULLY place the housing cap on the base, and take special precautions to prevent seal damage.



The plunger screw must remain loose until the housing bolts have been tightened.

Apply RTV (not supplied) around each of the four housing bolt holes. This will prevent water from entering the bolt hole cavities.



Insert the bolts, and torque to the values shown in Table 4.

NOTE: Follow all instructions and precautions shown by LOCTITE or the equivalent product's manufacturer.

Wipe off any excess sealant and RTV/gasket material.

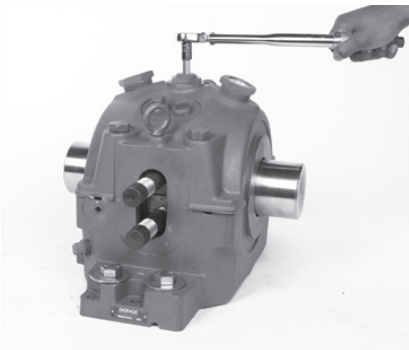
Table 4

| RTL SLEEVOIL SIZE | PLUNGER SCREW | | HOUSING CAP BOLT | |
|-------------------|------------------------|----------------------|-------------------------------|----------------------|
| | WRENCH SIZE (SOC. HEX) | TORQUE (IN.-LB.) | THREAD SIZE | TORQUE (IN.-LB.) |
| 3-7/16 3-15/16 | 3/8 3/8 | 850 850 | 3/4-10 3/4-10 | 1920 1920 |
| 4-7/16 4-15/16 | 1/2 5/8 | 1260 2500 | 7/8-9 7/8-9 | 2280 2280 |
| 5-7/16 6 | 5/8 5/8 | 2500 2500 | 1-8 1-8 | 2640 2640 |
| 7 8 | 5/8 3/4 | 2500 3600 | 1-1/8-7 1-1/8-7 | 3600 3600 |
| 9 10 12 | 3/4 3/4 3/4 | 3600 4800 4800 | 1 1/4-7 1 1/4-7 1 1/2-6 | 5040 5040 8880 |

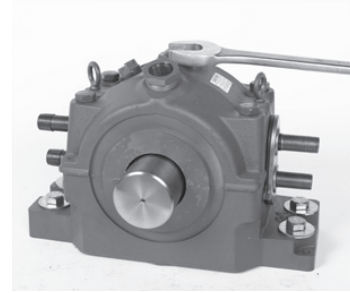
Plunger screw will be tightened to torque given in Table 4, following procedure described below.

Cap Loaded Bearings:

To install cap in cap loaded bearings, tighten plunger screw to torque given in Table 4 while shaft is held down. Mark the position of the plunger screw. Loosen plunger screw one turn and loosen shaft hold down.



Next, tighten plunger screw to the mark. Remove shaft hold down and tighten plunger screw locknut.



NOTE: Do NOT tighten plunger screw on accompanying base loaded bearing until cap loaded bearing has been installed and shaft hold down removed.

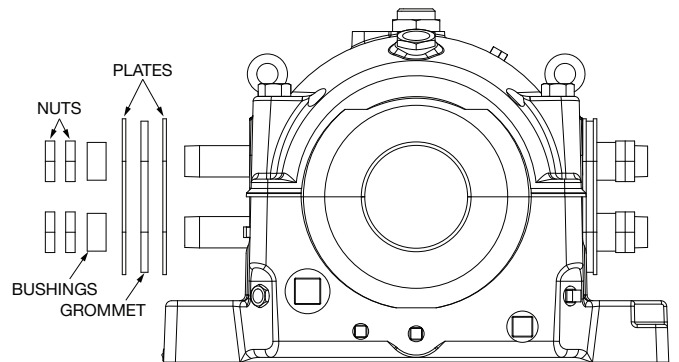
BASE LOADED BEARINGS:

Tighten plunger screw to torque given in Table 4 and secure with locknut.

INSTALLATION OF GROMMETS AND OIL GAUGE

Install grommet and grommet plate over coolant pipes.

Apply RTV or a non-hardening sealant on the housing grommet area and between the grommet and grommet plates, and around coolant pipes.



Install bushings and nuts on pipes (snug not tight).

Oil level gauge may be located any distance from the pillow block by use of a coupling and pipe of desired length. The extended pipe must be supported so that it remains straight and level with no offsets (use a spirit level—do not guess). Use pipe sealer on all connections.

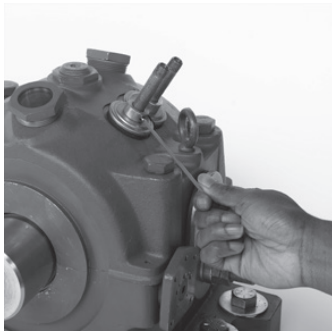
When pillow block is arranged for circulating oil, the oil level is controlled by the drain system and the oil level gage is not needed

OPTIONS

When pillow block is arranged for circulating oil, insert the two small pipe nipples thru the holes in the housing cap and screw them tightly into the liner.



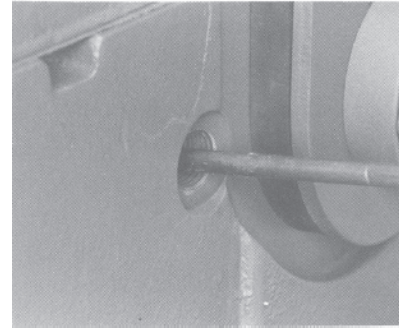
Install grommet, grommet plate and collar over each inlet pipe. Press down on collar and tighten collar set screw.



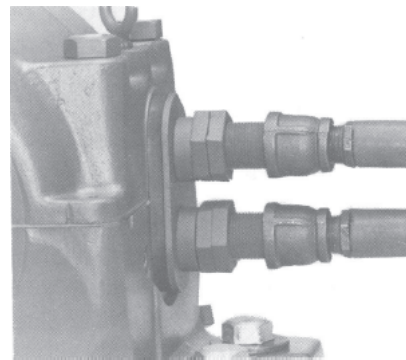
NOTE: ALL plumbing (oil and water) should be cleaned and flushed before being connected to the pillow block. These systems should be tested before the bearing is put into operation.

Connect circulating oil supply lines so that each inlet receives an equal amount of oil. A flow control valve and oil flow indicator are recommended in the inlet line. Oil flow must be adjusted to the rate recommended by the equipment manufacturer. Connect the drain lines. The drain piping should be vented and must be of adequate size to remove the oil at the specified flow rate. The housing drain must be directed straight down into a return drain sloping away at a 15° or greater angle. The oiling system should have a means of filtering the oil to remove any contaminating particles. A 25 micron filter or better is recommended.

It is strongly recommended to use thermocouples or RTDs to monitor the bearing bore temperature during operation. Probe diameters should be a maximum of 1/4". There are two designated thermocouple/RTD holes machined in the housing base next to the water pipe grommets. These two holes should align with the two thermocouple/RTD holes drilled into the liner. Install two RTDs/thermocouples in each bearing. Make sure the probe tips contact the end of the drilled holes in the liner. Use sealant on all threaded connections.



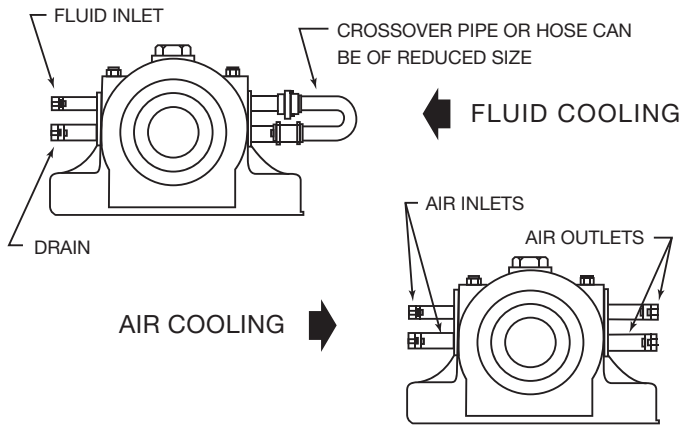
Check construction drawings to determine if coolant (water or air) is to be supplied to the bearings. Do not connect coolant pipes and bearing unless construction drawings and/or equipment instructions call for this. If no connection is required, pipes can be left open.



NOTE: ALL plumbing (oil and water) should be cleaned and flushed before being connected to the pillow block. These systems should be tested before the bearing is put into operation.

If coolant pipes are to be connected, make sure that all pipe lengths are correct and unions are well aligned. Careless fitting will result in serious preloading of the bearing. Lengths of flexible hose between the pillow block and rigid piping are recommended to avoid preloading of the bearing. A regulating valve should be placed ahead of the inlet and a sight drain at the outlet for liquid coolants. The recommended method of pipe connection for liquid coolants is to connect the inlet to the top pipe and the outlet to the bottom pipe on the same side of the bearing. A return is then used to connect the two pipes on the other side of the bearing. Adjust coolant flow to rate specified on construction drawing or to suit conditions. Anti-freeze type additives may be used in cold operating environments, otherwise purge all coolant from liner by blowing out with compressed air or steam anytime coolant is subject to freezing. Bearing rating is generally based on a maximum water inlet temperature of 90°F. The interior pressure of the liner should never exceed 120 psi. For deviations see construction drawings or contact equipment manufacturer.

CAUTION: Water pressure should never exceed 120 P.S.I.



NOTE: If coolant temperature can fluctuate below 70°F during low ambient conditions, then an oil sump heater/thermostat should be installed to ensure proper oil temperature is maintained.

CAUTION: Do not stand on water pipes.

Remove and reinstall, using sealer, all pipe plugs not previously removed.

Prior to placing the bearings into operation check for cooling pipe leaks by placing the cooling water system into operation at normal operating pressure and flow rate. If a leak is detected, remove and reinstall the coolant pipes with pipe sealant, and check again.

When using air as the cooling medium, connect an inlet to each pipe on one side of the bearing and an outlet to the pipes on the other side. Adjust flow to rate specified on construction drawing or to suit conditions.

Other Accessories/Options Available:

- Combination Heater/Thermostat Assembly
- Oil Sump Thermometer
- Auxiliary Seal Kit
- Isolator Seal Kit
- End Cap Kit
- Vibration Detector Mounting Kit
- Coolant Hose Kit
- RTD Kit
- OLF-2
- Cool Lube 2

LUBRICATION AND OPERATION

Since the satisfactory operation of the pillow block depends almost entirely on the oil film being maintained between the shaft and bearing liner surface, the use of a high quality oil from a reputable manufacturer is recommended. Use a high grade straight mineral oil with rust and oxidation (R & O) inhibitors and anti-foam agents. Check construction drawings or equipment instruction manual for proper oil. Oil viscosity is determined by the equipment manufacturer and normally specified on the construction drawing. Information regarding qualities and properties of specific oils should be referred to the lubricant manufacturer.

If bearings do not have circulating oil, fill pillow block with oil to top of center circle in the oil gauge.

After placing into operation remove inspection covers and check to make sure oil rings are bringing up oil. Operation should be checked frequently during the first few days.

IMPORTANT: Check and re-torque plunger screw to the specified torque after 24 hours or initial start-up and then check periodically as required.

Table 6

| RTL SLEEVOIL Size | Oil Volume *† | | |
|-------------------|----------------------|----------------|----------------|
| | Fluid Ounces Approx. | Quarts Approx. | Liters Approx. |
| 3 7/16 | 56 | 1.75 | 1.66 |
| 3 15/16 | 64 | 2 | 1.89 |
| 4 7/16 | 80 | 2.5 | 2.37 |
| 4 15/16 | 128 | 4 | 3.79 |
| 5 7/16 | 152 | 4.75 | 4.49 |
| 6 | 224 | 7 | 6.62 |
| 7 | 336 | 10.5 | 9.94 |
| 8 | 416 | 13 | 12.30 |
| 9 | 608 | 19 | 17.98 |
| 10 | 896 | 28 | 26.50 |
| 12 | 1440 | 45 | 42.59 |

* Volume of oil required to fill pillow block to top of CENTER CIRCLE of oil gauge.
† 32 fluid ounces = 1 quart = 0.946 Liters

If noise develops, check alignment of housing, plunger screw and all operating parts. Check all points and re-torque bolts and plunger screws after several days operation. Maintain oil level between top and midpoint of the oil level gauge at all times while unit is in operation. Oil will leak out of the shaft seals if the bearings are overfilled with oil.

NOTE: Bearings should NOT be stored outdoors before installation. For extended or outdoor storage, contact equipment manufacturer for special storage instructions.

NOTE: Bearings (and shafts) allowed to set idle for extended periods after being run MUST be protected against corrosion. If the unit can not be run for several minutes at least once a week, consult equipment manufacturer for special lubrication instructions.

Oil Maintenance Schedule

Drain, flush, and refill with oil after 2 to 3 weeks of initial break-in operation. Since the satisfactory operation of the bearing depends entirely on an oil film being maintained between the shaft and the bearing liner surface, it is recommended that an oil analysis be performed at these regular intervals.

- Every 3 months for 24 hour/day service
- Every 6 months for 8 hour/day service

Acceptably of oil should be referred to the lubricant manufacturer. If oil quality is acceptable then repeat this procedure in 3 month intervals. Visually check oil for contamination between oil analysis checks. Oil service life depends upon several factors such as ambient conditions, operating temperature and frequency of bearing starts and stops. It is recommended that the oil be changed at least once per year for unfiltered static applications. Removing contaminants through the use of either the OLF 2 (Oil Level and Filtration 2) Unit or a circulating oil system can extend oil service life. Consult equipment manufacturer for more information.

Any questions about installation, maintenance, and arrangement of coolant or oil connections should be referred to the equipment manufacturer.

NOTE: Isolators or Auxiliary Seals are recommended for outdoor applications, contaminated atmospheres, and high volume air flowing over the bearing.

Temperature

The bearing temperature will increase after start-up until its normal operating point is reached. The normal operating temperature should not exceed 180°F. Make sure to check with the OEM for the specified normal operating temperature. An alarm temperature should be set at 15°F above the normal operating temperature. A shut-down temperature should be set at 30°F above the normal operating temperature. Some fluctuation due to ambient temperature change is normal.

Low ambient and operating temperatures can be as harmful to the bearing as high temperatures. The Dodge heater / thermostat combo can be used in these low ambient conditions.

The Dodge heater / thermostat combo turns on at 70°F and turn off at 100°F to ensure proper oil sump temperature during operation.

NOTE: The recommended oil temperature at start-up is 70°F MINIMUM.

CAUTION: If heaters are used, be sure heaters are off when oil is removed from bearing.

WARNING: When installing heater and thermoswitch, follow directions and safety procedures recommended by the manufacturer. Install wiring in accordance with the National Electrical Code and local codes. Failure to observe these guidelines could result in electrical shock.

Vibration

Any significant vibration or imbalance **MUST** be corrected. Check with equipment manufacturer for acceptable conditions.

Pillow Block Material Details

| | |
|--------------------|------------------------------------|
| Housing: | Class 30 Gray Cast Iron |
| Liner: | Class 30 Gray Cast Iron |
| Babbitt: | Lead or Tin Based Babbitt |
| Oil Rings: | Bronze |
| Aluminum Seal: | Sand Cast Aluminum |
| O-ring: | Elastomer Compound |
| Aux. Seal: | HNBR with Stainless Steel Retainer |
| Grommet: | Synthetic Rubber |
| Grommet Plate: | Carbon Steel |
| Pipe Nipple: | Carbon Steel |
| Oil Gauge: | Stainless Steel, Polypropylene |
| Hardware: | Carbon Steel |
| Plunger Screw: | Carbon Steel |
| Gasket Eliminator: | LOCTITE 515 Sealant |

This Sleeveoil pillow block could contain lead in the bearing Babbitt material, please exercise proper precautions in the use, installation, dismantling and recycling of this unit.

Other Notes:

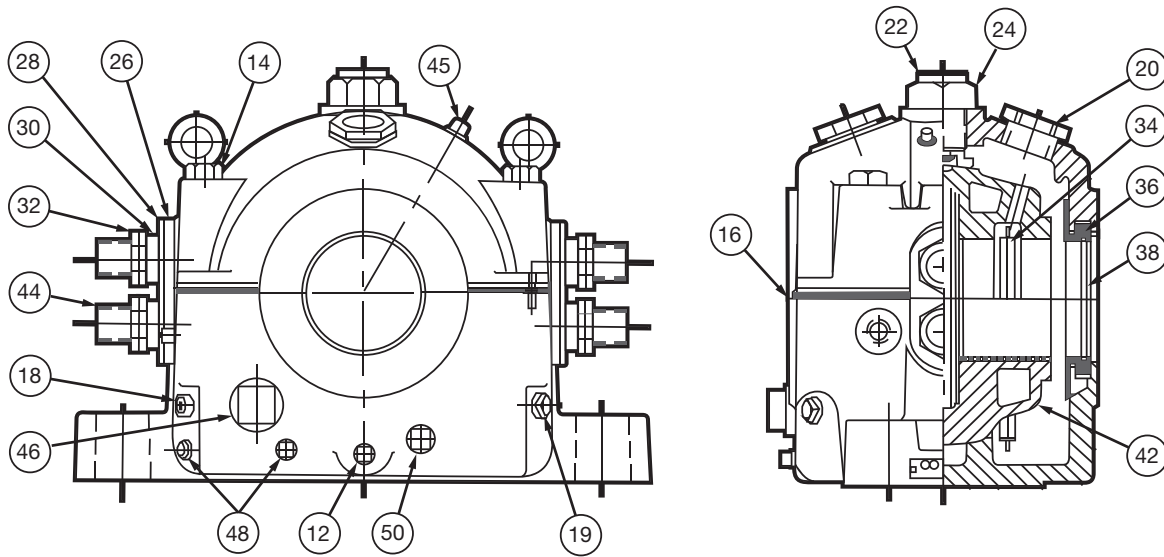
CAUTION: This product is not to be used for person moving applications.

NOTE: Care has been taken to keep instruction manuals accurate and timely. The most recent version of the instruction manual can be found on our website: www.dodgeindustrial.com

Weights:

Table 7 - Weight of RTL Sleeveoil

| RTL SLEEVOIL Size | Approximate Weights (lbs.) | | |
|-------------------|----------------------------|------------------------|----------------|
| | Non-Expansion Pillow Block | Expansion Pillow Block | Liner Assembly |
| 3-7/16 | 195 | 190 | 47 |
| 3-15/16 | 238 | 230 | 65 |
| 4-7/16 | 311 | 300 | 82 |
| 4-15/16 | 441 | 425 | 113 |
| 5-7/16 | 521 | 500 | 144 |
| 6 | 854 | 825 | 182 |
| 7 | 1018 | 978 | 257 |
| 8 | 1368 | 1310 | 412 |
| 9 | 1738 | 1650 | 623 |
| 10 | 2262 | 2150 | 955 |
| 12 | 3670 | 3500 | 1405 |



Sleevoil RTL Pillow Blocks - Parts Diagram

| Item | Description | Number Required | Replacement Part Number | | | | | | | | | | | |
|---------------------------|---|-----------------|-------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|--|
| | | | 3-7/16 | 3-15/16 | 4-7/16 | 4-15/16 | 5-7/16 | 6 | 7 | 8 | 9 | 10 | 12 | |
| | RTL Expansion Pillow Block ① ⑥ RTL Modular Housing ② | | 132474 132373 | 132475 132374 | 132476 132397 | 132477 132398 | 132383 132399 | 132384 132411 | 132385 132412 | 132386 132413 | 132387 132414 | 132388 132437 | 132389 132438 | |
| 12 | Drain Plug ② | 1 | 430012 | 430012 | 430012 | 430012 | 430012 | 430012 | 430012 | 430012 | 430012 | 430014 | 430014 | |
| 14 | Housing Bolt ② | 4 | 411189 | 411190 | 411196 | 411197 | 411205 | 411205 | 411224 | 411227 | 411228 | 411229 | 411230 | |
| 16 | Gasket Eliminator-515 ② | varies | 427359 | 427359 | 427359 | 427359 | 427359 | 427359 | 427359 | 427359 | 427359 | 427359 | 427359 | |
| 18 | Oil Gage ② | 1 | 430135 | 430135 | 430135 | 430135 | 430135 | 430135 | 430135 | 430135 | 430135 | 430135 | 430135 | |
| 19 | Oil Level Plug ② | 1 | 430014 | 430014 | 430014 | 430014 | 430014 | 430014 | 430014 | 430014 | 430014 | 430014 | 430014 | |
| 20 | Inspection Cover ② | 2 | 432198 | 432198 | 432198 | 432198 | 432198 | 432198 | 432198 | 432198 | 432198 | 432198 | 432198 | |
| 45 | Circulating Oil Inlet Plug ② | 2 | 430014 | 430014 | 430014 | 430014 | 430014 | 430016 | 430016 | 430016 | 430016 | 430016 | 430016 | |
| 46 | Circulating Oil Drain Plug ② | 1 | 430018 | 430018 | 430018 | 430019 | 430019 | 430019 | 430019 | 430019 | 430019 | 430019 | 430022 | |
| 48 | Thermostat Plug ② | 1 | 430012 | 430012 | 430012 | 430012 | 430012 | 430012 | 430012 | 430012 | 430012 | 430012 | 430012 | |
| 50 | Heater Plug ② | 1 | 430014 | 430016 | 430016 | 430017 | 430017 | 430017 | 430017 | 430017 | 430017 | 430017 | 430017 | |
| | Plunger Screw Kit ① | | 435012 | 435012 | 435013 | 435014 | 435015 | 435015 | 435016 | 435017 | 435018 | 435019 | 435019 | |
| 22 | Plunger Screw Assembly ② | 1 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |  |
| 24 | Plunger Screw Nut ② | 1 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |  |
| | RTL Grommet Kit ① | 1 | 435027 | 435028 | 435028 | 435029 | 435029 | 435029 | 435029 | 435030 | 435030 | 435031 | 435032 | |
| 26 | RTL Grommet ② | 2 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |  |
| 28 | RTL Grommet Plate ② | 4 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |  |
| 30 | RTL Bushing (Locktube) ② | 4 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |  |
| 32 | RTL Locknut ② | 8 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |  |
| 44 | RTL Coolant Pipe ② | 4 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |  |
| 34 | Trapezoidal Oil Ring ④ | 2 | 135290 | 135291 | 135292 | 135293 | 135294 | 135295 | 135296 | 135297 | 135298 | 135299 | 135135 | |
| | RTL Seal Kit ① | 2 | 435001 | 435002 | 435003 | 435004 | 435005 | 435006 | 435007 | 435008 | 435009 | 435010 | 435011 | |
| 36 | Clamp Seal Assembly ② | 2 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |  |
| 38 | O-Ring ② | 2 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |  |
| 42 | RTL Liner Assembly ① | 1 | 132420 | 132421 | 132422 | 132423 | 132424 | 132425 | 132426 | 132427 | 132428 | 132429 | 132430 | |
| 44 | RTL Coolant Pipe ② | 4 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |  |
| ③ | Dowel Pin ② | 2 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |  |
| ③ | Cap Screw ② | 2 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |  |
| Non-Expansion Accessories | | | | | | | | | | | | | | |
| ③ | Thrust Plate Kit ⑦ | 1 | 137101 | 137102 | 137103 | 137104 | 137105 | 137106 | 137107 | 137108 | 137109 | 137110 | 137111 | |
| ③ | Split Thrust Collar ⑦ | 1 | 132151 | 132152 | 132153 | 132154 | 132155 | 132156 | 132157 | 132158 | 132159 | 132160 | 132161 | |
| Optional Accessories | | | | | | | | | | | | | | |
| ③ | Auxiliary Seal Kit | 2 | 132811 | 432181 | 432184 | 432187 | 133932 | 133933 | 133937 | 133938 | 132814 | 132816 | 132819 | |
| ③ | Sleevoil Isolator | 2 | 434706 | 434707 | 434708 | 434709 | 434710 | 434711 | 434712 | 434713 | 434714 | 434715 | 434716 | |
| ③ | Housing End Cap Kit ⑤ | 1 | 132542 | 432190 | 432193 | 432196 | 132546 | 132547 | 132548 | 132549 | 132564 | 132565 | 132566 | |
| ③ | Circulating Oil Grommet Kit | 1 | 132203 | 132203 | 132203 | 132203 | 132203 | 132205 | 132205 | 132205 | 132205 | 132205 | 132205 | |
| ③ | Vibration Detection Adapter Kit | 1 | 430153 | 430153 | 430153 | 430153 | 430153 | 430153 | 430153 | 430153 | 430153 | 430153 | 430153 | |
| ③ | Coolant Hose Kit | 1 | 434770 | 434771 | 434771 | 434772 | 434772 | 434772 | 434772 | 434772 | 434773 | 434774 | 434775 | |
| ③ | 110V Heater / Thermostat Combo | 1 | 434721 | 434725 | 434725 | 434727 | 434727 | 434727 | 434729 | 434729 | 434729 | 434729 | 434735 | |
| ③ | 220V Heater / Thermostat Combo | 1 | 434722 | 434726 | 434726 | 434728 | 434728 | 434728 | 434730 | 434730 | 434730 | 434730 | 434736 | |
| ③ | Oil Sump Thermometer | 1 | 435093 | 435093 | 435093 | 435093 | 435093 | 435093 | 435093 | 435093 | 435093 | 435093 | 435093 | |
| ③ | RTD Kit | 2 | 435147 | 435147 | 435147 | 435147 | 435147 | 435147 | 435147 | 435147 | 435147 | 435147 | 435147 | |

① These parts are assemblies and include the parts listed below them.

② These parts make up the assemblies under which they are listed.

③ Not shown on drawing.

④ Older "T Section" rings have been discontinued

⑤ To be used when shaft does not extend through expansion bearing housing.

⑥ Expansion Pillow Block includes modular housing and liner assembly

⑦ Required for Non-Expansion Pillow Block

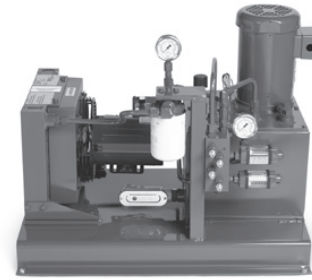
Sleevoil Accessories

The following accessories are available for Sleeveoil bearing to enhance operation and extend bearing life. For compatibility and technical information contact DODGE product support.



OIL LEVEL AND FILTRATION (OLF-2) SYSTEM

- Increase bearing longevity and reliability.
- One OLF-2 system supplies two bearings with a continuous flow of filtered oil.
- The oil is supplied directly to the circulating oil inlets on the bearings, which helps minimize wear during startups and shutdowns.



COOL LUBE 2

- All the features of the OLF-2 system plus a built-in heat exchanger for continuous oil cooling and adjustable oil flow controls.
- Particularly well suited in applications where bearing operating temperatures and speeds approach the maximum permissible levels.



DODGE SLEEVOIL BEARING ISOLATOR

- Fully split multi-labyrinth sealing system.
- Provides outstanding protection in harsh and dirty environments.
- IP56 rated



HEATER/THERMOSTAT

- The bearing sump heater and thermostat have been combined into one user-friendly unit.
- Sump heaters are a necessity to ensure safe startups when bearings are exposed to ambient temperatures below 70°F.



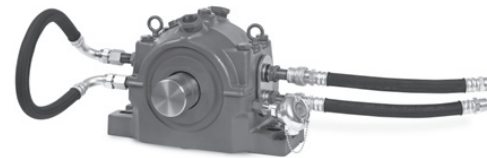
THERMOMETER

- Dial thermometer for convenient monitoring of the oil sump temperature
- All stainless steel construction with glass face



RTD KIT

- Prevent catastrophes by accurately measuring bearing temperature.
- Features a field-cuttable stainless steel probe, a platinum sensing element and a spring-loaded fitting with an oil seal.



COOLANT HOSE KIT

- An easy to install solution for connecting coolant lines to your Sleeveoil bearing.
- Durable flexible hoses are composed of a synthetic rubber inner tube reinforced with fiber and steel braids.

Dodge Industrial, Inc.
1061 Holland Road
Simpsonville, SC 29681
+1 864 297 4800

