Solidlube® Bearings: 700, 800, and 1000 Series
Instruction Manual

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.

WARNING: To ensure the 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.

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

WARNING: Solidlube bore surfaces should be protected from damage. Impacts, point, and edge loading should be avoided.

INSTALLATION

Solid Film Lubrication

Solid film lubricating bearing material will transfer a film or coating of lubricant to the shaft as the shaft rotates. This film or coating reduces friction between the shaft and bearing material. Because it is a solid, the lubricant will not squeeze out when the shaft is not rotating, the bearing will not need additional lubrication since the solid lubricant is impregnated into the bushing material and is transferred or "worn" onto the rotating shaft. Since this is a "wear type" bushing, wear will be experienced under normal operating conditions.

NOTE: Solidlube bearings are not designed for rotating housing applications.

Pre-Assembly Instructions

Refer to applicable contract / assembly drawings to verify that all parts are available prior to assembly. 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. Check mounting structure to ensure it is rigid, level and well supported.

For ease of installation, the split housings are match marched. The split-halves are machined together and must not be interchanged. The match-mark on the housing is found on the bearing joint.

MM Pillow Block Assemblies' Installation

1. Loosen the cap bolts, being careful not to lose housing shims.
2. Slide the assembled pillow block on the shaft and position for mounting.
3. Insert hold-down bolts but do not torque down.
4. Align the bearing with the shaft using shims when necessary and tighten hold-down bolts.
5. Rotate shaft to allow the inner unit to align itself in the outer housing and tighten the bearing cap bolts.

NOTE: Inner unit assemblies are installed properly at the factory. For added service, the bearing inner unit may be rotated 180° while on the shaft to utilize a new bearing surface.

CAUTION: Units should not be rotated 180° with the stop-pin in place as this may restrict self-aligning capabilities.

Thrust Loads

Shaft locating collars may be used for slight amounts of thrust loads only. Total collar to bearing clearance should be .010 to .020 or .005 to .010 inches per collar.

Shaft Preparation

The bearing journal should not be exposed to grease, oils, or dirt to ensure good life of the bearing.

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.

CAUTION: No oil or grease should be used on the bushing or shaft when assembling this bearing.

The shaft should be clean and free of burrs and nicks. The shaft should be held to a minimum amount of taper and as little eccentricity as possible so a uniformly distributed rubbing surface can be maintained. For best results, the shaft finish should be held to 10 to 20 micro-inches (0.25 to 0.50 micro-meters) and hardness should be 35 Rockwell "C" or higher. Shaft tolerance should be +0.000/-0.002 inches (+0.000/-0.051 millimeters) for commercial steel shafting.

NOTE: The Solidlube bearing has a high coefficient of friction which can result in stalling when many bearings run off the same drive system. Please contact Dodge for further information.

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

WARNING: Insert assembly has critical machined surfaces which are easily damaged. Use care in handling to protect these surfaces.

Installation of LT, LTB, and LM Pillow Block Assembly

NOTE: The 1000 Series bushings may have a white film in the bore which should be wiped off with a clean cloth before assembly.

1. Slide the assembled pillow block on the shaft.
2. Align the pillow block on the shaft and tighten the hold-down bolts. Shim the pillow block base, if necessary.

NOTE: Inner unit assemblies are installed properly at the factory. For added service, the bearing inner unit may be rotated 180° while on the shaft to utilize a new bearing surface.

CAUTION: Units should not be rotated 180° with the stop-pin in place as this may restrict self-aligning capabilities.

OPERATION & START-UP

Prior to system start, verify shaft alignment and bolt torques. Ensure all guarding and local safety codes and procedures are followed.

To improve life expectancy from this type of bearing, a brief run-in or break-in can be performed. This may not be possible, but to obtain optimal service, it is advisable to break in this type of bearing. The break-in should be run with a bearing mounted on its mating shaft, as in service, with all possible loading removed. The break-in period will build up the solid film of lubricant on the shaft to reduce potential start-up damage to the bushing.

Solidlube bearings are commonly used in high temperature applications. If the temperature difference between the bearing bore and ambient environment is significant, a process should be developed so that the increase in equipment temperature is slow and deliberate. If the temperature is increased too quickly, radial shaft expansion can occur before the bearing has a chance to properly acclimate to the increase in temperature. This can cause damage to the bearing or equipment.

NOTE: Bearings (and shafts) allowed to sit idle for extended periods MUST be protected against corrosion. It is recommended that the shaft turns in the bearing a few times per week MINIMUM. This will prevent the shaft from seizing the bore.

When commercial steel shafting is exposed to corrosive media, the shaft will oxidize, (rust), pit, etc. The Solidlube bushing is chemically inert but a rusty shaft will grow into the Solidlube bushing, thus eliminating clearances and restricting movement. Corrective action is to use corrosive resistant shafting such as stainless steel and/or to provide for regularly scheduled movement of the shaft.

SPECIAL OPERATING CONDITIONS

Consult Dodge Product Support, Simpsonville, SC for application assistance, acid, chemical, extreme or other special conditions.

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MN3049 REV-C 05/24