

INSTRUCTION MANUAL for 3³/₁₆" to 5" and 80mm to 125 mm BORE DODGE® TYPE E BEARINGS

INSTALLATION INSTRUCTIONS

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.

1. Clean shaft and bore of bearing. Lubricate with light oil or antiseize compound.
2. Slip bearing into position.
3. Bolt bearing to support, using shims where necessary to align bearing. The effort required to turn the shaft should be the same before and after bolting bearing to the support.
4. Tighten set screws to the torque values shown in Table 1.

LUBRICATION INSTRUCTIONS

Storage or Special Shutdown – If exposed to wet or dusty conditions or to corrosive vapors, extra protection is necessary: Add grease until it shows at the seals; rotate the bearing to distribute grease over the bearing. After storage or idle period, add a little fresh grease before running.

High Speed Operation – In the higher speed ranges too much grease will cause overheating. The amount of grease that the bearing will take for a particular high speed application can only be determined by experience – see “Operating Temperature.” If excess grease in the bearing causes overheating, it will be necessary to remove grease fitting (also drain plug when furnished) to permit excess grease to escape. The bearing has been greased at the factory and is ready to run. When establishing a relubrication schedule, note that a small amount of grease at frequent intervals is preferable to a large amount at infrequent intervals.

Operation in Presence of Dust, Water or Corrosive Vapors – Under these conditions the bearing should contain as much grease as speed will permit, since a full bearing with consequent slight leakage is the best protection against entrance of foreign material. In the higher speed ranges too much grease will cause overheating – see “High Speed Operation” above. In the lower speed ranges it is advisable to add extra grease to a new bearing before putting into operation. Bearings should be greased as often as necessary (daily if required) to maintain a slight leakage at the seals.

Average Operation – This bearing has been greased at the factory and is ready to run. The following table is a general guide for relubrication. However, certain conditions may

require a change of lubricating periods as dictated by experience. See “High Speed Operation” and “Operation in Presence of Dust, Water or Corrosive Vapors.”

Operating Temperature – Abnormal bearing temperature may indicate faulty lubrication. Normal temperature may range from “cool to warm to the touch” up to a point “too hot to touch for more than a few seconds,” depending on bearing size and speed, and surrounding conditions. Unusually high temperature accompanied by excessive leakage of grease indicates too much grease. High temperature with no grease showing at the seals, particularly if the bearing seems noisy, usually indicates too little grease. Normal temperature and a slight showing of grease at the seals indicate proper lubrication.

**TABLE 1
Setscrew Torque**

Shaft Size	Setscrew Size	Tightening Torque
3 ³ / ₁₆ " – 3 ¹ / ₂ "	¹ / ₂ – 13	620 IN.-LBS.
3 ¹⁵ / ₁₆ " – 5"	⁵ / ₈ – 11	1325 IN.-LBS.
80–90MM	M12	57 NM
100–125MM	M16	126 NM

Lubrication Guide

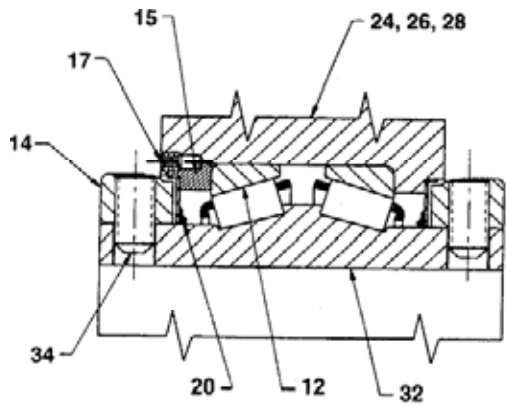
Read Preceding Paragraphs Before Establishing Lubrication Schedule.

Hours Run Per Day	Suggested Lubrication Period in Weeks				
	1 to 250 RPM	251 to 500 RPM	501 to 750 RPM	751 to 1000 RPM	1001 to 1500 RPM
8	12	12	10	7	5
16	12	7	5	4	2
24	10	5	3	2	1

Kind of Grease – Many ordinary cup greases will disintegrate at speeds far below those at which DODGE bearings will operate successfully if proper grease is used. DODGE bearings have been lubricated at the factory with No. 2 consistency lithium complex-base grease which is suitable for normal operating conditions. Relubricate with lithium complex-base grease or a grease which is compatible with original lubricant and suitable for roller bearing service. In unusual or doubtful cases the recommendation of a reputable grease manufacturer should be secured.

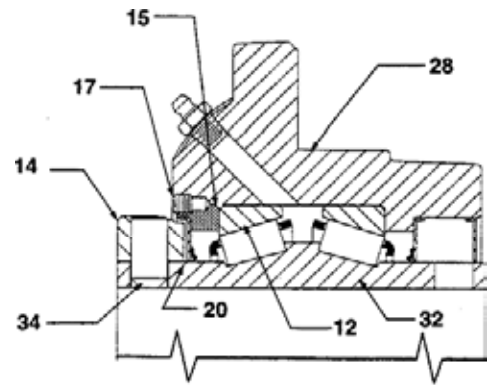
Special Operating Conditions – Refer acid, chemical, extreme or other special operating conditions to DODGE/Reliance Industrial Company, Greenville, S.C.

WARNING: Because of the possible danger to persons(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 Baldor Electric Company nor are the responsibility of Baldor Electric Company. 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.



3^{3/16}" to 5" Type E Bearings
(Except 3^{3/16}" to 3^{1/2}" Piloted Flange Bearings)

NOTE: The two-digit numbers are for reference only. Order parts by the six-digit numbers in the Parts List. Each six-digit number is a complete identification of the part or assembly.



3^{3/16}" to 3^{1/2}" Piloted Flange Bearings Only

Parts for 3^{3/16}" to 5" Type E Bearing

Reference	Name of Part	Required for One Assembly					Part Number for Various Shaft Sizes			
		2-Bolt Pillow Block	4-Bolt Pillow Block	Flange Bearing	Piloted Flange Bearing	Take-Up Bearing	3 ^{3/16} , 3 ^{3/4} , 3 ^{7/16} , 3 ^{1/2}	3 ^{15/16} , 4	4 ^{7/16} , 4 ^{1/2}	4 ^{15/16} , 5
12	Cup	2	2	2	2		403016	390779	390782	390785
14	Drive Collar (65° S.S. Angle)	2	2	2	▲		060945	060946	060947	040059
15	Adjustment Nut	1	1	1	1		060490	060491	060492	060493
17	Adj. Nut Lockscrew	1	1	1	1		400530	400530	400530	400530
20	Seal, Single Lip	2	2	2	2		061362	061363	061364	061365
24	2-Bolt Gray Iron Pillow Block Housing	1	0	0	0		060407
	4-Bolt Gray Iron Pillow Block Housing	0	1	0	0		060413	060408	060409	060410
	Top Angle Housing*	0	0	0	0	1	122269	012270
	Steel Pillow Block Housing	1	1	0	0		060059†	060060‡	060061‡	060062‡
26	Flange Housing	0	0	1	0		059107	059108
28	Piloted Flange Housing	0	0	0	1		059176	059177	059178	059179
↓	Lubrication Fitting	1	1	1	1		405015	405015	405015	405015

Reference	Name of Part	Part Number for Various Shaft Sizes									
		3 ^{5/16}	3 ^{3/4}	3 ^{7/16}	3 ^{1/2}	3 ^{15/16}	4	4 ^{1/16}	4 ^{1/2}	4 ^{15/16}	5
32	Cone* (65° S.S. Angle)	389801	389802	389803	389804	389805	389806	389807	389808	389809	389810
34	Drive Collar Screw ■	400154	400154	400154	400154	400186	400186	400186	400186	400190	400190

↓ Not shown on drawing.

* One required.

■ Two required per collar.

† Two Bolt Base.

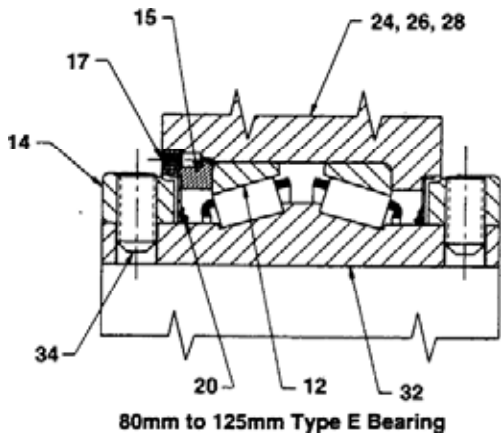
‡ 4 Bolt Base.

▲ One required for 3^{3/16} to 3^{1/2}; 2 required for larger sizes.

* Uses 405016 Lubrication Fitting.

Shaft Tolerances: 3^{3/16}" to 4" +.0000 -.0010

4^{3/16}" to 5" +.0000 -.0015



NOTE: The two-digit numbers are for reference only. Order parts by the six-digit numbers in the Parts List. Each six-digit number is a complete identification of the part or assembly.

Parts for 80mm To 125mm Type E Pillow Block Bearings

Item	24		32	12	14	15	20	34	17	+
Shaft Size	2-Bolt Housing	4-Bolt Housing	Cone*	Cup	Collar*	Adjusting Nut	Seal	Setscrew	Adj. Nut Lock Screw	Lube Fitting
80 MM	061326	—	389749	403016	061049	060490	061362	400714	400530	405601
85 MM	061326	—	389750	403016	061049	060490	061362	400710	400530	405601
90 MM	061326	—	389751	403016	061049	060490	061362	400710	400530	405601
100 MM	—	061327	389752	390779	061050	060491	061363	400711	400530	405601
110 MM	—	061328	389753	390782	061051	060492	061364	400711	400530	405601
115 MM	—	061328	389754	390782	061051	060492	061364	400711	400530	405601
125 MM	—	061329	389755	390785	061052	060493	061365	400712	400530	405601
Quantity Per	1	1	1	2	2	1	2	4	1	1

* 65° Setscrew Angle

+ Not Shown On Drawing

www.baldor.com www.ptplace.com www.dodge-pt.com www.reliance.com

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This material is not intended to provide operational instructions. Appropriate instruction manuals and precautions should be studied prior to installation, operation or maintenance of equipment.