INSTRUCTION MANUAL FOR
DODGE®
Bearings with Replaceable Split Bronze Bushings

This manual applies to various types of DODGE® bronze bushed bearings using precision split replaceable bushings. The construction employed permits quick and convenient bushing replacement if wear should make that necessary.

Installation of Bearings Fitted with Bushings

1. The shaft journal surface must be equal to that of commercial steel shafting (about 32 micro inches), without nicks and burrs and the shaft diameter within the tolerance of commercial steel shafting. The shaft must be straight.
2. Position bearing when possible so that grease groove is opposite to most heavily loaded surface of bearing bore. Direction of load should not be closer than 30 degrees to grease groove or closer than 30 degrees to the joint between cap and base.
3. Remove cap from base of bearing and brass locking spool. Clean shaft and bore of bearing. Coat bore with grease.

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

4. Assemble bearing on shaft. Reinstall brass locking spool before replacing cap on base. Torque cap bolts to value listed in table(s).
5. Line up bearings accurately with shaft by using a feeler gage or shim stock. This will ensure clearances at the joints are equal at all four corners. Torque bearing mounting bolts to value given in table(s). Maintain proper bearing alignment for uniform distribution of load under all operating conditions.
6. Ambient temperature should not exceed 130 degrees Fahrenheit. If the shaft transmits heat from a source such as an oven, the shaft temperature at the bearing should not exceed 130 degrees Fahrenheit.
7. Bearings should be protected against adverse operating conditions.
8. Normal running loads must not exceed ratings shown in load tables (see catalog). Starting and occasional peak loads should not exceed ratings by more than 100%.

Lubrication

Bearings are designed for grease lubrication using grease cup or pressure lubrication fitting. In placing a new bearing in operation, add grease until it shows at both ends of bearing. During the run-in period while shaft is seating in bearing, it is especially necessary to provide frequent and ample lubrication. Add grease frequently, each time adding grease until there is little or no discoloration of the grease forced out of ends of bearing.

After the run-in period a regular schedule of greasing should be set up. The required lubrication period of a bearing depends upon speed, load and other conditions of the particular installation and can best be determined by observation. On many installations four-hour greasing periods are satisfactory; on other installations shorter or longer periods may be found necessary or desirable. Add grease at each lubrication until a little grease is forced out at ends of bearing.

Recommended Grease Properties if not specified otherwise

Grease base	Grease Melting Point F°	Water Resistance
Calcium	130 - 220	Good
Sodium	325 - 375	Poor
Lithium	360 - 570	Good
Bentonite	Non-melting	Excellent
Aluminum	475 - 500	Excellent

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 nor are the responsibility of Baldor Electric. 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.

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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.

SPLIT/RIGID BRONZE BEARINGS

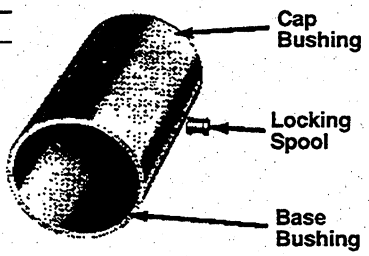
BEARING SIZE	MOUNTING BOLT SIZE	MOUNTING BOLT TORQUE (IN-LB)	BRG. CAP BOLT SIZE	BRG. CAP BOLT TORQUE (IN-LB)
1 15/16, 2 3/16	5/8	1200	1/2	420
2 7/16	5/8	1200	5/8	900
2 11/16	3/4	2100	5/8	900
2 15/16, 3 7/16, 3 15/16	3/4	2100	3/4	1560
4 7/16, 4 15/16	7/8	2040	7/8	1500
5 7/16	1	3000	1 1/8	3240
5 15/16, 6 1/2	1 1/8	4200	1 1/8	3240
7	1 1/4	6000	1 1/4	4560
7 1/2, 8	1 3/8	8040	1 1/4	4560

ANGLE BRONZE BEARINGS

BEARING SIZE	MOUNTING BOLT SIZE	MOUNTING BOLT TORQUE (IN-LB)	BRG. CAP BOLT SIZE	BRG. CAP BOLT TORQUE (IN-LB)
1 15/16, 2 3/16	1/2	600	1/2	420
2 7/16, 2 11/16, 2 15/16	5/8	1200	5/8	900
3 7/16, 3 15/16	3/4	2100	3/4	1560
4 7/16, 4 15/16	7/8	2040	7/8	1500
5 7/16	1	3000	1	2280
5 15/16	1 1/8	4200	1 1/8	3240
6 1/2	1 1/8	4200	1 1/4	4560
7	1 1/4	6000	1 1/4	4560
8	1 3/8	8040	1 1/4	4560

REPLACEMENT BRONZE BUSHINGS AND LOCKING SPOOLS

Description/Shaft Size		Part No.	Description/Shaft Size		Part No.	Description/Shaft Size		Part No.
	1 15/16"	005055		5 15/16"	005065		3 7/16"	005050
	2 3/16"	005056	Bronze	6 1/2"	005066		3 15/16"	005051
	2 7/16"	005057	Bushing	7"	005067		4 7/16"	005051
	2 11/16"	005058		7 1/2"	005117		4 15/16"	005051
Bronze	2 15/16"	005059		8"	005068	Locking	5 7/16"	005052
Bushing	3 7/16"	005060		1 15/16"	005050	Spool	5 15/16"	005052
	3 15/16"	005061		2 3/16"	005050		6 1/2"	005053
	4 7/16"	005062	Locking	2 7/16"	005050		7"	005053
	4 15/16"	005063	Spool	2 11/16"	005050		7 1/2"	005053
	5 7/16"	005064		2 15/16"	005050		8"	005053



Note: One set of bushings consists of cap bushing and base bushing. Bushings are available in sets only. Locking spools are not included.

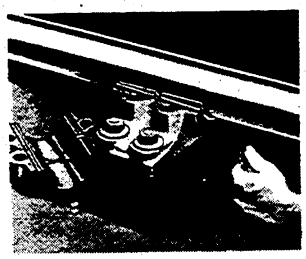
Locking spool can be ordered separately.

LUBRICATION FITTINGS

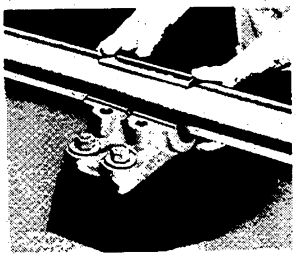
1/8 Grease fitting	405015
Reducer Bushings	
1/2 x 1/8	430081
3/8 x 1/8	430086
1/4 x 1/8	430087
3/8 x 1/4	430085
1/2 x 1/4	430088

Replacing Bronze Bushings

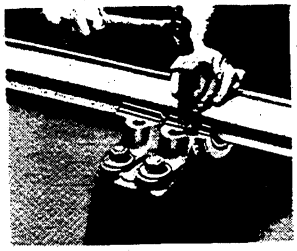
DODGE precision bushings can be conveniently replaced even without moving shaft from bearing base or moving base from its support. The following instructions show how this can be accomplished.



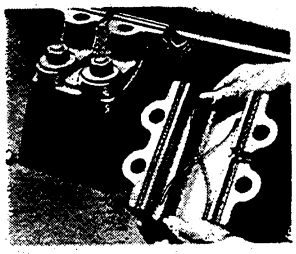
1. Remove bearing cap and brass locking spool. Wipe grease and dirt from cap, base and shaft so that replacement bushings can be installed properly. Raise shaft slightly. Pry bushing loose from base as illustrated. Also pry bushing loose from cap.



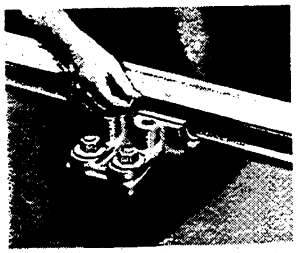
2. Hold base bushing against shaft, rotate bushing and remove. Run cloth between shaft and base and use air hose if available to insure freedom from dirt. Apply grease to bore of replacement base bushing (without grease groove) and roll in place, positioning notch for locking spool with notch in base.



3. Center the bushing lengthwise in the bearing base. Tap into position, being careful not to mutilate the bushing.



4. Center the replacement cap bushing (with grease groove) in bearing cap positioning notch for locking spool with notch in cap.



5. Lower the shaft. Put brass locking spool in place. This prevents all movement of bushings. Apply grease to bore of cap bushing. Install cap on base with notch in cap fitting over the locking spool. Torque cap bolts to value given in table(s). Bushing will seat when cap is bolted down.