SEALMASTER®

ROLLER BEARINGS INSTALLATION & MAINTENANCE

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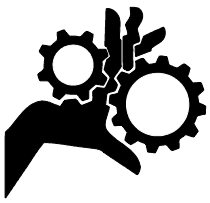

⚠WARNING

High voltage and rotating parts may cause serious or fatal injury.

Turn off power to install or service.

Operate with guards in place.

Read and follow all instructions in this manual.

BORE AND SHAFT TOLERANCES

All SEALMASTER roller bearing races have bore diameters for a sliding or snug fit over the shaft. They are locked to the shaft by means of locking collars with double cup point setscrews. Bearing bore and shaft tolerances are shown in Table 1.

Table 1

RECOMMENDED SHAFT TOLERANCES		
Shaft Diameters (Inches)	Bearing Bore Tolerance	Recommended Shaft Tolerance
1 3/16 - 1 7/16	+.0010 - .0000	+.0000 - .0005
1 1/2 - 3	+.0010 - .0000	+.0000 - .0010
3 - 3 15/16	+.0020 - .0000	+.0000 - .0010
4 - 4 15/16	+.0020 - .0000	+.0000 - .0015

MOUNTING INSTRUCTIONS

Prior to securing the unit to the shaft, make certain that shafting is free of burrs. Slide the unit onto the shaft to the point desired for mounting and bolt the unit to the supporting base. To prevent bearing damage avoid hammering on the ends of the inner race. After bolting the unit to the support, tighten the self-locking setscrews securely onto the shaft. Recommended torques for tightening the setscrews are shown in Table 2.

Table 2

RPB LOCKING COLLAR SET SCREW TIGHTENING TORQUE			
Shaft Diameters (Inches)	Set Screw Size	Tightening Torque	
		inch-pounds	foot-pounds
1 3/16 - 1 11/16	5/16 - 24	110 - 140	9 - 11.5
1 3/4 - 2 1/2	3/8 - 24	180 - 230	15 - 19
2 11/16 - 3 1/2	1/2 - 20	400 - 525	33 - 43
3 15/16 - 4	5/8 - 18	875 - 1000	73 - 83
4 7/16 - 4 15/16	3/4 - 16	1450 - 1850	120 - 155

Note: Bearing Design will allow up to 3° misalignment.
Installation at higher than 3° will lead to premature bearing failure

CARTRIDGE INSERT

General: This cartridge is for use in SEALMASTER housing or in SEALMASTER approved OEM applications only. No other use is authorized.

Removal & Replacement: To remove the cartridge from the housing, remove the housing assembly cap bolts and lift off the top housing half so that the shaft plane can be adjusted to allow removal of the cartridge. When replacing the cartridge insert, first check to assure that the rubber grommet is properly seated in the lube hole. Then position the cartridge lock pin so that it lines up with the lock pin slot in the housing. BE SURE the lock pin is not put in the lube hole. The shaft can be returned to its normal position and the housing can then be reassembled by tightening the cap bolts. Cap bolt tightening torques are shown in Tables 3, 4,5, & 6. Locking collars can be reaffixed to the shaft by tightening the setscrews to the torques shown above. (See Table 2.)

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TORQUE VALUES FOR ASSEMBLING HOUSING HALVES

Table 3

PILLOW BLOCK HOUSING		
Shaft Size (Inches)	Tightening Torque	
	(Lbs. Inches)	(Lbs. Feet)
1 3/16 - 1 1/4	204	17
1 3/8 - 2 3/16	372	31
2 1/4 - 3	900	75
3 3/16 - 4 1/2	3192	266
4 15/16 - 5	4728	394

Table 4

FLANGE BEARING HOUSING		
Shaft Size (Inches)	Tightening Torque	
	(Lbs. Inches)	(Lbs. Feet)
1 3/16 - 2	372	31
2 3/16 - 3	900	75
3 7/16 - 3 15/16	1800	150

Table 5

PILOTED FLANGE HOUSING				
Shaft Size (Inches)	Outside Bolts		Inside Bolts	
	(Lbs.-Inches)	(Lbs.-Feet)	(Lbs.-Inches)	(Lbs.-Feet)
1 3/16 - 2	204	17	48	4
2 3/16 - 3	588	49	96	8
3 3/16 - 4	900	75	204	17
4 7/16 - 5	1800	150	900	75

Table 6

EXPANSION PILLOW BLOCKS		
Shaft Size (Inches)	Tightening Torque	
	(Lbs. Inches)	(Lbs. Feet)
1 3/4 - 2 3/16	372	31
2 1/4 - 3	900	75
3 3/16 - 3 1/2	3192	266
3 15/16 - 4 1/2	1800	150
4 15/16 - 5	3192	266

LUBRICATION

All SEALMASTER roller bearings are prelubricated at the factory with a lithium soap grease which is compatible with multi-purpose grease readily available from local suppliers. The factory lubrication conforms to NLGI grade 2 consistency and is suitable for an operating temperature range of -20° F. to 250° F.

Examples:
Texaco Multifak EP2
Exxon Lidok EP2
Mobil Mobilith AW2
Shell Alvania EP2
Chevron Dura-lith EP2
Amoco Amolith 2EP

For extremely dirty or wet applications with shaft speeds below 200 RPM, completely fill the bearing prior to running.

Proper relubrication is important to the life of the bearing. A general relubrication guide is shown in Table 8. This can be used as a starting point for relubrication frequency. Experience will dictate if changes are needed to optimize the relubrication frquency. The bearing should be relubricated while rotating, the grease pumped in slowly until a bead forms around the seals. If necessary to relubricate while idle, refer to relubrication Table 7 for maximum grease capacity for various size bearings.

Table 7

LUBRICATION OF SEALMASTER ROLLER BEARINGS	
Shaft Size (Inches)	Recommended Relube Grease Charge (ozs.)
1 3/16 - 1 1/4	.10
1 3/8 - 1 7/16	.22
1 1/2 - 1 11/16	.32
1 3/4 - 2	.50
2 3/16	.55
2 1/4 - 2 1/2	.65
2 11/16 - 3	.85
3 3/16 - 3 1/2	1.25
3 15/16 - 4	2.50
4 7/16 - 4 1/2	3.10
4 15/16	4.75

Table 8

RECOMMENDED RELUBRICATION FREQUENCY			
Speed	Temperature	Cleanliness	Greasing Interval
100 RPM	Up to 125° F.	Clean	6 months
500 RPM	Up to 150° F.	Clean	2 months
1000 RPM	Up to 210° F.	Clean	2 weeks
1500 RPM	Up to 210° F.	Clean	Weekly
Any Speed	Up to 150° F.	Dirty	1 wk. to 1 mo.
Any Speed	Up to 150° F.	Dirty	Daily to 1 wk.
Any Speed	Any Temperature	Very Dirty	Daily to 1 wk.
Any Speed	Any Temperature	Extreme conditions	Daily to 1 wk.

⚠WARNING **Disconnect all power before adjusting units**

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