

REX® 2000, 3000, 5000 & 9000 ROLLER BEARING GREASE LUBRICATION SCHEDULES

Size Code	Normal Duty 2000 Series	Medium Duty 3000 Series	Heavy Duty 5000 Series	Adapter 9000 Series	Initial Grease Fill (oz.)	Relube Grease Amount (oz.)	Suggested Months Between Re-lubrication					
							Up to 100 RPM	100-300 RPM	300-500 RPM	500-1000 RPM	1000-1750 RPM	1750-3000 RPM
2	2012-2100	-----	-----	-----	0.4	0.1	12	8	5	2	1	1/2
3	2102 - 2104	-----	-----	-----	0.5	0.1	12	8	5	2	1	1/2
4	2107 - 2108	3107 - 3108	5107	-----	0.6	0.1	12	8	5	2	1	1/2
5	2111 - 2112	3111 - 3112	5108 - 5111	-----	0.8	0.2	8	5	3	1	1/2	-----
6	2115 - 2200	3115 - 3200	5115	-----	0.9	0.2	8	5	3	1	1/2	-----
7	2203 - 2204	3203 - 3204	5200 - 5203	9115 - 9200	1.1	0.2	8	5	3	1	1/2	-----
8	2206 - 2208	3206 - 3208	5207	9203	1.5	0.3	8	5	3	1	1/2	-----
9	2211 - 2300	3211 - 3300	5208 - 5215	9207 - 9208	2.8	0.5	8	5	3	1	1/2	-----
10	2303 - 2308	3303 - 3308	5303 - 5307	9211 - 9300	3.7	0.6	6	4	2	1	1/2	-----
11	2311 - 2400	3311 - 3400	5311 - 5400	9303 - 9307	6.9	1.1	6	4	2	1	1/2	-----
12	-----	-----	5403 - 5407	9311 - 9400	8.4	1.5	6	4	2	1	1/2	-----
13	-----	-----	5415 - 5500	9403 - 9407	14.3	2.5	4	2	1	1/2	-----	-----
14	-----	-----	5507	9415 - 9500	22.1	4.0	4	2	1	1/2	-----	-----
15	-----	-----	5515 - 5600	9503 - 9507	25.3	4.5	4	2	1	1/2	-----	-----
16	-----	-----	5615 - 5700	9515 - 9607	33.0	6.0	4	2	1	1/2	-----	-----

* BASED ON ONE SHIFT, 40 HRS/WEEK OPERATION. ADJUST MONTHLY INTERVALS TO REFLECT ACTUAL USAGE HOURS/WEEK.

* OPERATING TEMPERATURES LIMITED TO -40 TO +225°F.

* "DIRTY", CORROSIVE OR WET ENVIRONMENTS REQUIRE MORE FREQUENT RE-LUBE.

* MAXIMUM SPEEDS FOR STANDARD SEALS ONLY

* **REDUCE LUBRICATION INTERVALS BY HALF FOR VERTICAL SHAFT APPLICATIONS**

* SUGGESTED GREASES ARE: MOBILITH AW2 (FACTORY FILL), TEXACO PREMIUM RB, SHELL ALVANIA GREASE 2, GULF CROWN NO.2 AND AMOCO RYKON 2.

(See other side for installation instructions)

DISASSEMBLY —

1. Remove set collars.
2. Remove seals.
3. Remove threaded cover by turning counter clockwise.
4. Place housing cover side down on arbor press with spacer blocks under
5. Press back outer ring or wedge block on face of inner ring and press between outer ring and inner ring assembly from housing.
6. To remove the back outer ring, large bore bearings from 4 1/8" thru 7" have drive pin holes. The back outer ring of smaller bore size units may be removed with a bearing puller or hammer and drift.

REASSEMBLY —

1. Place housing cover side up on arbor press with spacer blocks under housing.
2. Press in back outer ring and seat against housing shoulder.
3. Insert inner ring assembly and rotate to seat rollers against back outer ring.
4. Press in front outer ring.
5. Install threaded cover, turning clockwise until inner ring resists rotation or misalignment.
6. Lubricate bearing with amount of grease shown in LUBRICATION TABLE.
7. Install MICRO-LOCK key with nylon washer under head of screw.
8. **Using a soft drift or block, rap face of inner ring on side opposite threaded cover to seat front outer ring. Inner ring assembly should rotate freely.**
9. Install seals. **Z-Seal**-Place centering spring in seal groove with fingers facing up. Place U-shaped element on fingers. Place centering ring on element with projection on face up. Install snap ring so that projection on centering ring is between ends of snap ring. **K-Seal**-Place seal into seal groove with anti-rotation boss sticking up. Install snap ring so that the raised boss is between the snap ring ends. **M-Seal**-Place seal into seal groove with spring facing out. No snap ring is required with **M-Seal**.
10. Install collars.
11. Lubricate bearing with amount of grease shown in LUBRICATION TABLE. Rotate inner ring assembly during lubrication to assure distribution of grease in bearing.

LUBRICATION INSTRUCTIONS

GENERAL INFORMATION AND SELECTION

This information is to aid in the proper lubrication of Rex® bearings for the majority of applications. Mobilith AW2 grease. Mobilith AW2 is an N.L.G.I. Grade 2, EP (extreme pressure) grease with a lithium complex thickener. It can be used for high loads, and in some

other special service conditions, or for inquiries on other acceptable greases, please consult your local Rexnord representative or the Rex® Bearing Engineering Department. When rebuilding Rex® bearings for use in average operating conditions, the bearing should be lubricated with the amount of grease by weight as shown in the LUBRICATION TABLE.

RELUBRICATION

Bearings should be relubricated at regular intervals. The frequency and amount of lubricant will be determined by the type of service. General guidelines for relubrication frequency and amount are based upon the average application conditions. See LUBRICATION TABLE.

At high temperatures, greases tend to degrade more rapidly and thus require fresh grease more frequently. Most greases will eventually harden, causing relubrication to become less effective. When this occurs, the bearing should be disassembled, cleaned, and lubricated per LUBRICATION TABLE. When equipment will not be in operation for some time, grease should be added to provide corrosion protection. This is particularly important for equipment exposed to severe weather.

AUTOMATIC LUBRICATION SYSTEMS

A variety of automatic lubrication systems are available for use with roller bearings. Key considerations are:

1. NLGI grade of grease used, consistent with system layout.
2. An amount/frequency combination necessary to replenish the grease.

MIXING OF GREASES

Mixing of any two greases should be checked with the lubricant manufacturer. If the grease bases are different they should not be mixed.

OIL LUBRICATION

Rex housing designs do not include oil sumps, thus are not readily used with static oil lubrication. However, they can be adapted to re-circulating oil systems provided an adequate drain size and proper seals are incorporated.

LUBRICATION TABLE

SHAFT SIZE — (INCHES)					GREASE WT. REQUIRED (OZ.)		RECOMMENDED NUMBER OF MONTHS BETWEEN RELUBRICATION* (BASED ON 40 HR. WK.)						ADJUSTMENT TABLE (AXIAL CLEARANCE)						
Single Collar Series 2000 Series 3000	Double Set Collar Heavy Duty Series 5000	Adapter Series 9000	To Lubricate Rebuilt Units	To Relubricate Units	RPM						SHAFT SIZE INCHES (SERIES)			FACTORY SETTING (AVG. SPEEDS)	RECOMMENDED THREADED COVER ADJUSTMENT FOR HIGH SPEEDS				
					100	300	500	1000	1750	3000	2000 Series	5000 Series	9000 Series		Axial Clearance (Inches)	Speeds Over	Axial Clearance (Inches)	Inches Per 1/2 Turn	
3/4 - 1	0.4	0.1								3/4 thru 1 1/2	17/16007-.012	2000 RPM	.012-.017	.005
1 1/8 - 1 1/4	.....	.....	0.5	0.1	12	8	5	2	1	1/2		1 1/16 thru 2	1 1/2 thru 1 15/16	.....	.007-.012	1500 RPM	.012-.017	.005
1 7/16 - 1 1/2	1 7/16	.....	0.6	0.1								2 3/16 thru 2 3/8	2 thru 2 7/16	1 15/16 thru 2 1/2	.010-.017	1250 RPM	.017-.024	.007
1 11/16 - 1 3/4	1 1/2 - 1 11/16	.....	0.8	0.2	8	5	3	1	1/2	...		3 3/16 thru 3 11/16	3 thru 3 15/16	2 1/2 thru 3 1/2	.010-.017	1000 RPM	.017-.024	.007
1 5/8 - 2	1 5/8	.....	0.9	0.2								.....	4 3/16 thru 5	3 11/16 thru 4 7/16	.010-.020	750 RPM	.020-.030	.010
2 3/16 - 2 1/4	2 - 2 3/16	1 15/16 - 2	1.1	0.2									5 7/16 thru 6	4 15/16 thru 5 1/2	.015-.025	500 RPM	.025-.035	.010
2 3/8 - 2 1/2	2 7/16	2 3/16	1.5	0.3										6 7/16 - 7	5 15/16 - 6 7/16				
2 11/16 - 3	2 1/2 - 2 15/16	2 7/16 - 2 1/2	2.8	0.5															
3 3/16 - 3 1/2	3 3/16 - 3 7/16	2 11/16 - 3	3.7	0.6	6	4	2	1	1/2	...									
3 11/16 - 4	3 11/16 - 4	3 3/16 - 3 7/16	6.9	1.1															
.....	4 3/16 - 4 1/2	3 11/16 - 4	8.4	1.5															
.....	4 15/16 - 5	4 3/16 - 4 7/16	14.3	2.5															
.....	5 7/16	4 15/16 - 5	22.1	4.0	4	2	1	1/2	...	...							
.....	5 15/16 - 6	5 3/16 - 5 7/16	25.3	4.5															
.....	6 7/16 - 7	5 15/16 - 6 7/16	33.0	6.0															

* Relubrication amounts and frequencies shown in the table are based on standard clearances, moderate loads, etc., which yield housing temperatures of 150° F or less. Lubrication practices indicate that the relubrication frequency should be doubled for every 20° F above that level.



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BEARING MOUNTING PROCEDURE

SET COLLAR — FIXED UNITS ONLY

1. Position bearings on the shaft, applying all driving pressure to the face of the inner ring.
2. Align the bearing housing to its mounting base by measuring from the face of the inner ring to the face of the threaded cover.

3. Bolt housing securely to mounting base.

to axial location of shaft to the shaft. Proper tightening torque can be found in SET SCREW TORQUE TABLE. The remaining bearings should not be secured to the shaft at this time. Alternate torquing of the screws to prevent unequal loading. If an Allen wrench is used as a torque wrench, place length of pipe over the long end and pull until wrench begins to twist.

5. Rotate shaft under power to permit the remaining bearings to seek their natural running position on the shaft.
6. Shut off the power and torque down set screws in remaining bearings using procedure in Step 4.

SET COLLAR — EXPANSION UNITS ONLY

1. Center cartridge in outer housing. If maximum expansion capability is required, place cartridge in extreme position of housing to permit full movement of cartridge in direction of expansion.
2. The remainder of the installation procedure is the same as Fixed Units, follow Steps 2, 3 and 4.

2. Position and loosely bolt housing to mounting base.
3. Secure fixed bearing to shaft by tightening locknut until sleeve grips shaft. Turn a 1/2 turn more and bend one of the lockwasher tangs into one of the slots on the outside diameter of locknut.
4. Align each bearing housing as accurately as possible to its mounting base or cover.
5. Operate bearing under full load for several days to permit seating of bearing and cover.

ADAPTER UNITS — EXPANSION UNITS ONLY

1. Center Cartridge in outer housing. If maximum expansion capability is required, place cartridge in extreme position in housing to permit full movement of cartridge in direction of expansion.
2. The remainder of the installation procedure is the same as Fixed Units, follow Steps 2,3,4, and 5 above.

DUPLEX UNITS

When mounting Duplex Units, place end plate (bolted cover with pilot) into bore of housing. Press first outer ring until it seats against this pilot, then insert inner ring assembly and turn to free rollers. Press in second outer ring, turn inner ring assembly so rollers are free, then seat second outer ring. Using shims as a feeler, determine exact amount required to fill space between housing face and bolted

1. A. Free tapered split sleeve in bore of bearing by backing off locknut and rapping face of locknut.
- B. Position bearing on shaft with fixed bearing closest to drive (or most important to axial location of shaft).

ring on the side opposite the shim adjustment.

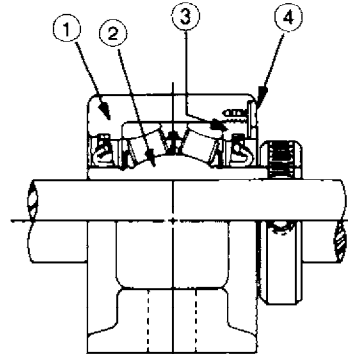
GENERAL INSTALLATION COMMENTS

1. Shaft Journal areas must be free of burrs, cleaned of fretting corrosion and within the tolerance range shown in the SHAFT TOLERANCE TABLE.
2. Mounted units are prelubricated at the factory with a multi-purpose lithium soap grease. No additional grease is required at time of installation.
3. Position housings for:
 - a. accessibility of grease fittings.
 - b. if thrust is present — place thrust force against shoulder side of housing, not against threaded cover side.
4. If spacer shims are used for alignment they must cover the entire housing base.
5. Spot drill or mill flats on shaft for increased holding power of set screws or ease of removal.
6. When an eccentric load condition exists, position set screws directly opposite from eccentric weight.
7. Shaft shoulders are recommended to support vertical shafts and high thrust loads. The shoulder diameter should not exceed the outside diameter of the inner ring.
8. When pillow blocks are mounted on an inclined plane or the work force is parallel with the base, either lateral bolts or welded "stop blocks" should be used to prevent shifting.
9. Avoid direct hammer blows to the bearing and it's components by using a soft drift or block.
10. New seals should be used whenever a bearing is rebuilt.

SET SCREW TORQUE TABLE

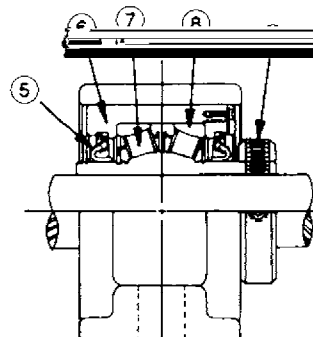
Shaft Size (Inches)		Set Screw Size	Tightening Torque (Inch-Pounds)
Normal Duty 2000 Series	Heavy Duty 5000 Series		
3/4 - 1 1/4	....	5/16	125
1 7/16 - 2	1 7/16 - 1 15/16	3/8	225
2 3/16 - 2 1/4	2 - 2 3/16	7/16	325
2 3/8 - 3 1/2	2 7/16 - 3 7/16	1/2	475
3 11/16 - 4	3 11/16 - 5 7/16	5/8	1150
....	5 15/16 - 7	3/4	1600

For more detailed instructions refer to the latest REXNORD CORP. Catalog.



FIXED

1. HOUSING
2. INNER RING
3. THREADED COVER
4. MICROLOCK ASSY
5. SEAL
6. CARTRIDGE



FLOATING

7. ROLLER
8. OUTER RING
9. SET COLLAR

Nominal Shaft Size	Commercial Shaft Tolerance* (Cold Finished Steel, Low Carbon)	RECOMMENDED SHAFT TOLERANCES		
		Set Collar Mounting	Adapter Mounting	Press Fit Mounting
		Severe Loading or High Speed		
1-2	+0.000 - .003	+0.000 - .001	+0.000 - .003	Consult Rexnord
2-4	+0.000 - .004	+0.000 - .001	+0.000 - .004	
4-6	+0.000 - .005	+0.000 - .0015	+0.000 - .005	
6-8	+0.000 - .006	+0.000 - .0015	+0.000 - .005	

* Commercial shafting tolerances are normally satisfactory for low to moderate loads in slow to moderate speed applications.