

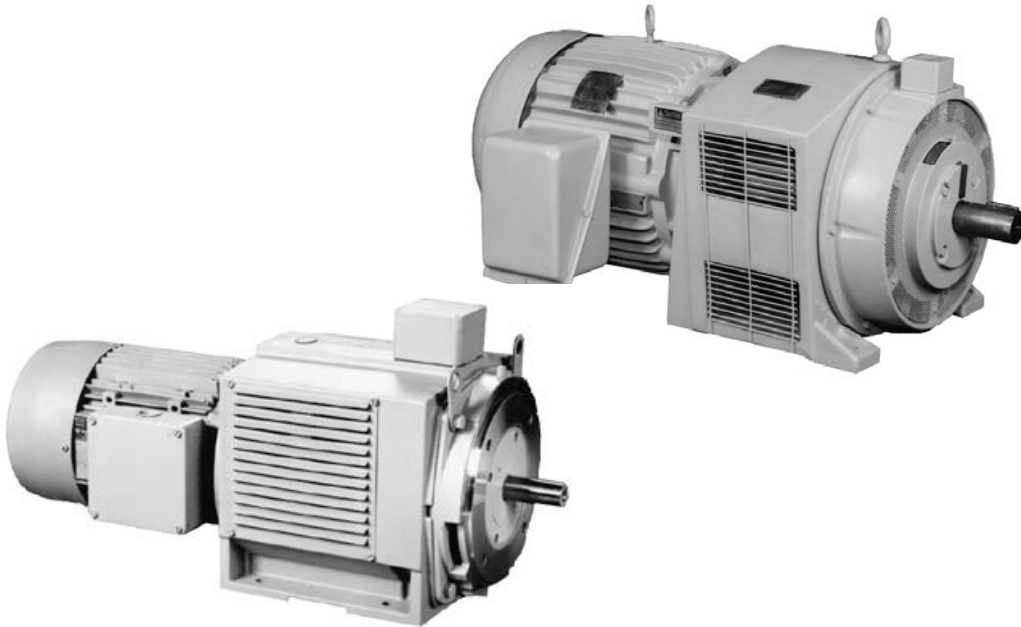
Dynamatic[®]

DRIVE SOURCE INTERNATIONAL, INC.

**AT Line Air Cooled Drives
Model AT-14 through AT-440**

BULLETIN LUBRICATION INSTRUCTIONS

(Revised 05/12)



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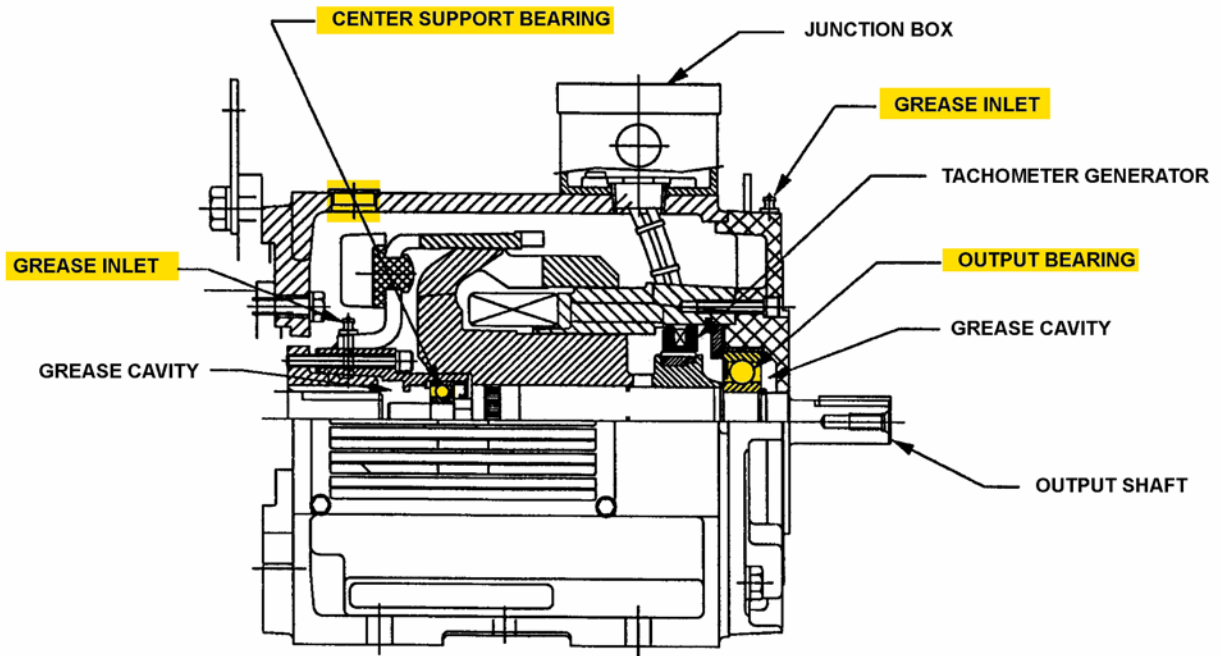
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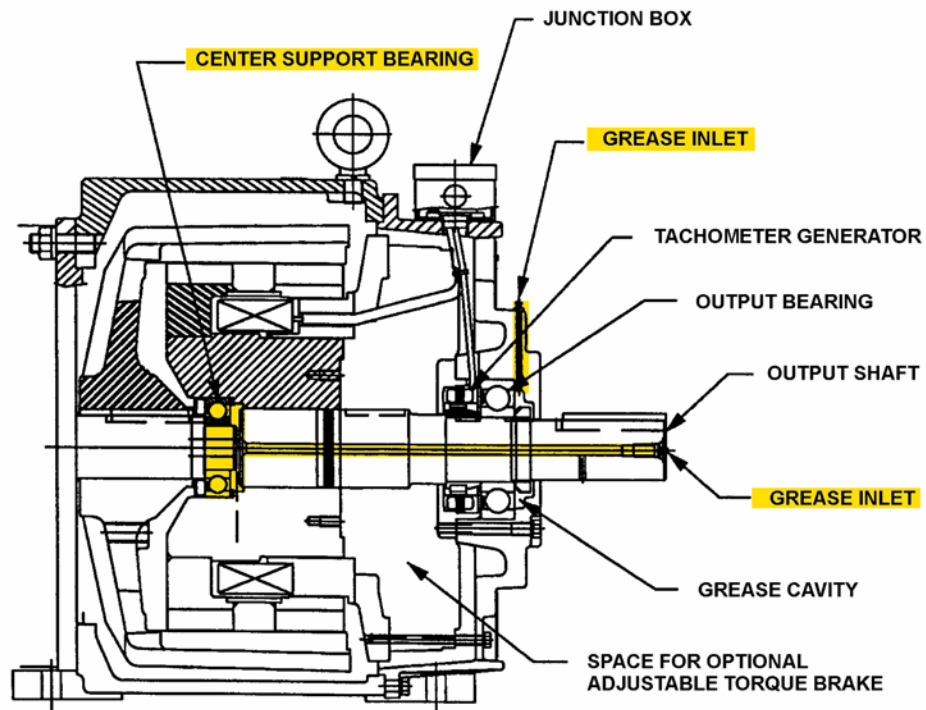
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Application Engineering ✦ Quality Products ✦ Total Solution



Typical Assembly Drawing of AT-140 through AT-280 Drives

Figure 6-1



Typical Assembly Drawing of AT-320 through AT-440 Drives

Figure 6-2

Lubrication

The only parts in the clutch requiring lubrication are two bearings. Standard units are grease lubricated and are provided with large grease chambers next to the bearings to permit a long period of operation before greasing is required. Grease fitting locations are shown in Figures 6-1 and 6-2.

The center support bearing in Models AT-140 through 280 is greased through a grease fitting located on the drum hub, as shown in Figure 6-1; a plug button must be removed from the housing to reach the grease fitting. In Models AT-320 through 440, this bearing is greased through a rifle-drilled hole through the output shaft, as shown in Figure 6-2, and is relieved through a lip seal located beside the bearing.

The outboard bearing is greased through a grease fitting located over the bearing in the output end bracket. The motor bearings are greased through grease fittings located in the end brackets over the bearings. Plugged relief vents are located below the bearings. Smaller motors have permanently sealed non-regreaseable bearings.

Since the two most prevalent causes of bearing failure are contamination and over greasing, do not over grease. For most operating conditions the bearings should not be greased more than twice a year. However, if the drive is to be run continuously or operated in a high ambient temperature [86°F to 104°F (30°C to 40°C)] or at a high slip RPM, re-greasing should be done more frequently.

The grease specification is per Dynamatic Engineering Standard MML 4-1.3. This is a premium grade of lithium base N.L.G.I. #2 EP grease. Recommended greases are listed in Table 6-2. Mobilux E.P. #2 is used at the factory. Recommended amounts of grease for the bearings are listed in Table 6-3. Any equivalent and compatible grease may be used. Special greases may be specified at the time of order entry. Consult your order papers if a special grease has been specified.

When lubrication is required, use the following procedure to grease the bearings:

1. Stop the motor and clutch and allow both to coast to a complete stop.
2. Wipe the surfaces on and around the grease fittings and relief holes clean. This is important and necessary to prevent contaminating the bearings.
3. Remove the plugs from the relief holes (when plugged). The relief hole for the center support bearing is inside the housing and is not accessible.
4. Lubricate the center support bearing. If the amount of grease applied for each stroke of the grease gun is not known, pump one stroke onto a piece of paper

and weigh it. Then calculate the number of strokes required. **For AT-140 through 280 drives:** remove the plug button from the top of the housing. Position the grease fitting, located on the drum assembly, directly below the hole by rotating the drum slowly. Clean the grease fitting and pump the recommended amount of grease into it. Excess grease will be dispelled into the drive housing. **For AT-320 through 440 Drives:** Clean the grease fitting in the end of the output shaft or in the cross drilled hole on the side of the shaft and pump the recommended quantity of grease into it. Excess grease will be dispelled into the drive housing.

5. Pump specified amount of grease into output end bracket bearing through grease fitting above bearing. If the unit is a separate clutch (without a motor attached), pump two ounces of grease into each input shaft bearing.
6. Pump two ounces of grease into each motor bearing through grease fittings above the bearings. Smaller motors have permanently sealed non-regreaseable bearings
7. Allow the drive to run for 20 minutes with the relief plugs removed to expel excess grease.
8. Wipe off all excess grease. Replace the plug button if removed in step 4.

Recommended Greases **Table 6-2**

Grease Specification for Ball & Spherical Roller Bearings - N.L.G.I. Grade #2 EP - MML 4-1.3	
Approved sources:	
Shell	Alvania EP #2
Gulf	Gulfcrown EP #2
Texaco	Multifak EP #2
Mobil	Mobilux EP #2

Recommended Amount of Grease (Oz.) **Table 6-3**

Model No.	Center Support Ball Bearing	Output Standard Ball Bearing	Output Spherical Bearing
AT-140	1.5	1.4	N/A
AT-180	2.5	2.0	N/A
AT-210	1.5	2.7	N/A
AT-250	2.2	2.6	N/A
AT-280	3.5	4.2	N/A
AT-320	2.0	1.5	3.0
AT-360	3.0	3.0	5.5
AT-440	4.5	N/A	11.5