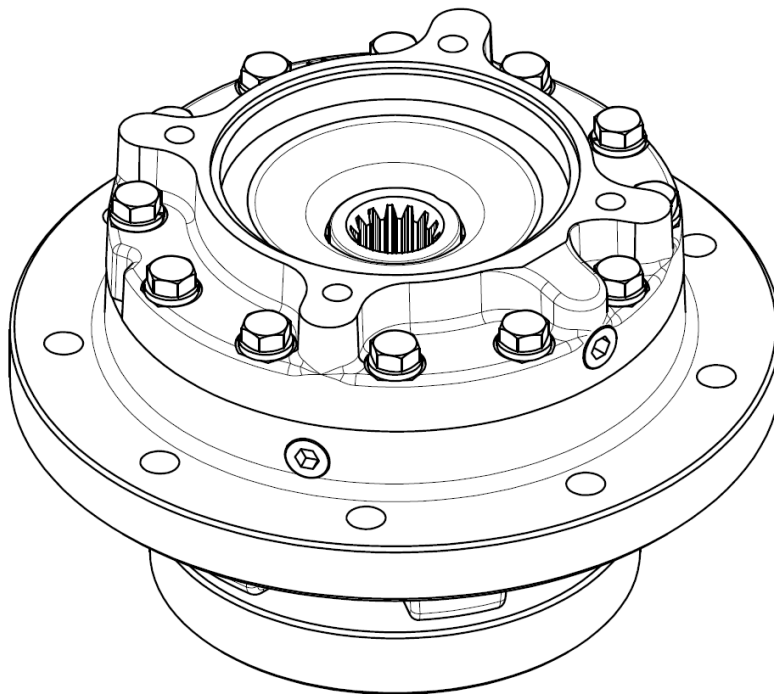




SERVICE MANUAL MODEL 50 BEARING ADAPTERS



WARNING: While working on this equipment, use safe lifting procedures, wear adequate clothing and wear hearing, eye and respiratory protection.

THIS SERVICE MANUAL IS EFFECTIVE:
S/N: 117321 TO CURRENT
DATE: 10/23/2013 TO CURRENT
VERSION: SM50LM-AA



MODEL 50 BEARING ADAPTER

EFFECTIVE FROM: SN-117321 10-23-2013

PARTS LIST				
GROUP	ITEM	QTY	PART NUMBER	DESCRIPTION
	1	1	50-004-3377	BASE
	2	1	50-004-4679	OUTPUT SHAFT - 50L
	3	1	A	COVER
16	-	(1)	50-016-2155	SEAL KIT
	16A	1	01-405-0530	SEAL
	16B	1	01-406-0108	SEAL - V RING
	16C	1	01-402-0560	O-RING
20	--	-	-	SHAFT BEARINGS
	20A	1	01-102-0140	BEARING CONE
	20B	1	01-103-0130	BEARING CUP
	20C	1	01-102-0150	BEARING CONE
	20D	1	01-103-0140	BEARING CUP
25	-	-	-	HARDWARE
	25A	12	01-150-2066	HHCS
	25G	12	01-166-0340	7/16 LOCK WASHER
30	-	-	-	PLUGS AND FITTINGS
	30A	2	01-207-0070	PIPE PLUG (3/8 MAGNETIC)
	30B	1	01-207-0030	PIPE PLUG 1/8 NPT HOLLOW HEX
35	-	-	-	MISCELLANEOUS
	35A	*	50-004-1521	SHIM
	35B	1	50-004-1452	SPLIT RING
	35C	1	50-004-1462	LOCK RING



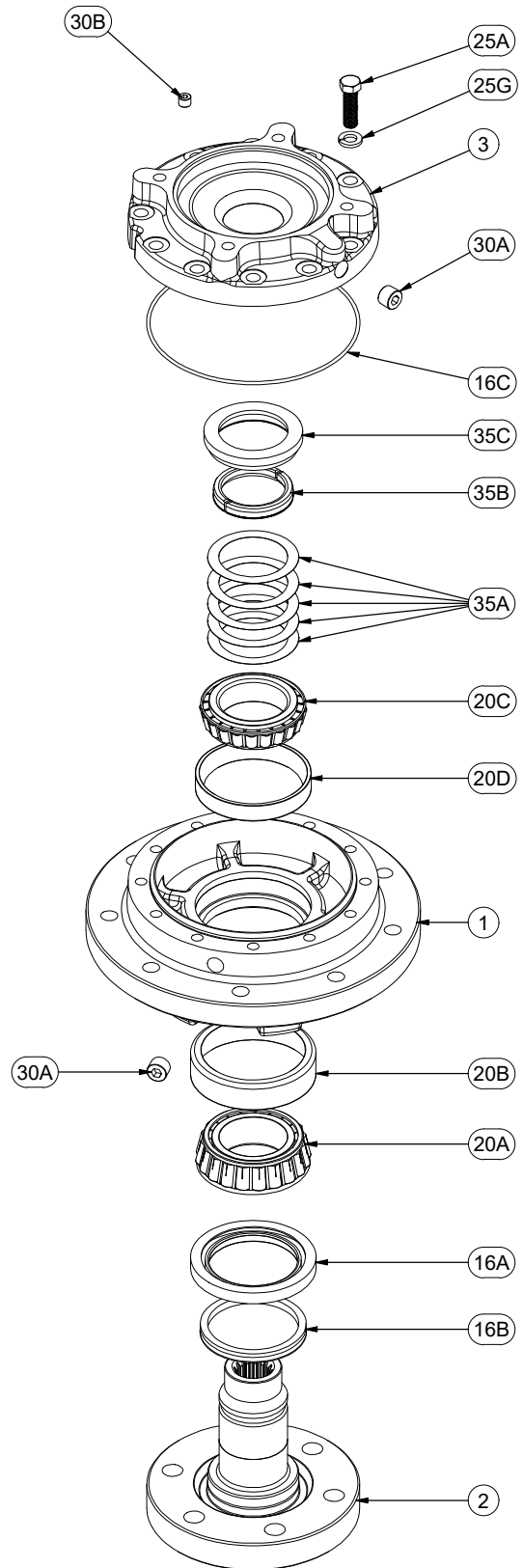
*QUANTITY DEPENDANT UPON DESIRED BEARING PRELOAD
X50LM ECN: - REV: A 09-04-20 HWP

A

ITEM 3 (COVER) OPTIONS	
PART NUMBER	DESCRIPTION
50-004-1173	SAE 'A' 2 & MOD 4-BOLT
50-004-1183	SAE 'B' 2-BOLT
50-004-1233	SAE 'C' 4-BOLT
50-004-1333	SAE 'C' 2-BOLT

NOTES: ▷

1. USED ONLY WITH SAE 'C' COVERS

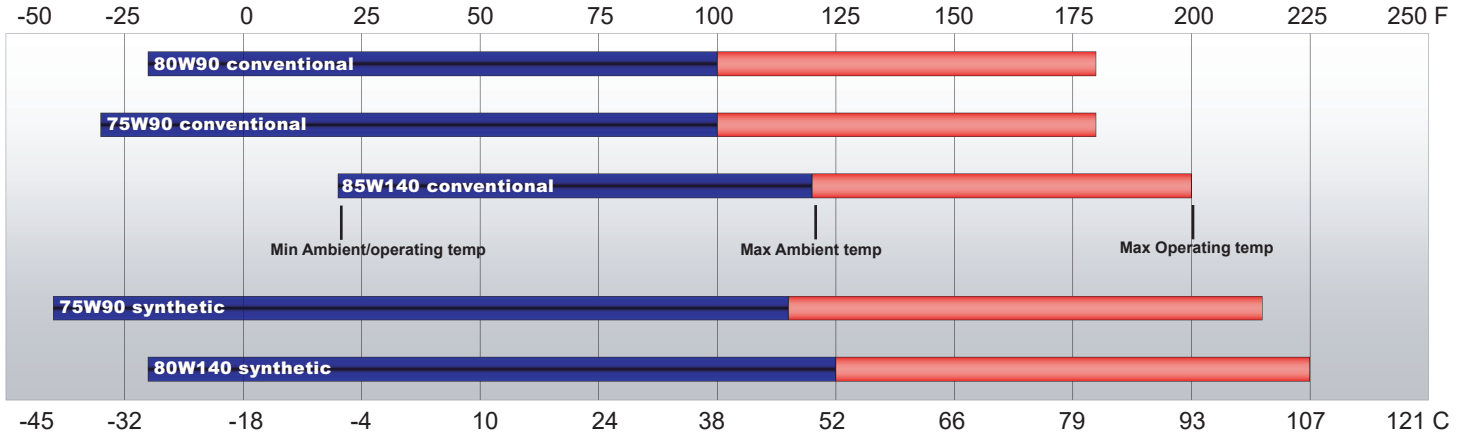


Note: Refer to customer drawing for more details.

LUBRICATION & MAINTENANCE

Using the chart below, determine an appropriate lubricant viscosity. Use only EP (extreme pressure) or API GL-5 designated lubricants. Change the lubricant after the first 50 hours of operation and at 500 hour intervals or annually thereafter, whichever comes first.







Recommended ambient and operating temperatures for conventional and synthetic gear lubricants



Note: Ambient temperature is the air temperature measured in the immediate vicinity of the bearing adapter. A bearing adapter exposed to the direct rays of the sun or other radiant heat sources will operate at higher temperatures and therefore must be given special consideration. The max operating temperature must not be exceeded under any circumstances, regardless of ambient temperature.

Bearing adapters should be used in the “spindle up” orientation only with special considerations. Consult your Eskridge representative for more information.

ESKRIDGE MODEL 70BL OIL CAPACITIES

Operating Position		Oil Capacity	Oil Level
	Horizontal Shaft	Single/Double stage 16 oz / .47 L	To horizontal centerline of gear drive 
	Vertical Shaft (Spindle Up)	-	To side port on gear drive base 
	Vertical Shaft (Spindle Down)	12 oz / .35 L	To plug in base 

ESKRIDGE PART NUMBER INTERPRETATION

Note: All non custom Eskridge Bearing Adapters are issued a descriptive part number which includes information regarding the Model, means of shaft retention, base style, shaft style, input mounting, input shaft size, overall ratio and various available options. For a detailed breakdown of this information, please refer to Eskridge product specification sheets found at: <https://eskridgeinc.net/index.php/product/bearing-adapters/>

Unit Disassembly Procedure

All number references refer to the exploded drawing on Page 2.

- 1) Scribe a diagonal line across the outside of the unit from the cover (3) to the base (1) before disassembly to aid in the proper positioning of pieces during reassembly.
- 2) Remove drain plugs (30A, 30B) and drain oil from unit. The oil will drain faster and more completely if warm. Tilt the unit so that the drain port in the base (1) points downward to drain as much oil as possible.
- 3) Remove the twelve hex-head capscrews (25A) and lock-washers (25G).
- 4) Remove cover (3), and inspect o-ring (16C). Discard o-ring if damaged or deformed.
- 5) Remove the lock ring (35C) using a heel bar or puller. Be careful not to pry against the bearing cage (20C). Remove split ring segments (35B) and shims (35A).

Caution: Since the output shaft is no longer retained, care should be taken to avoid personal injury. Care should also be taken not to damage the shaft while pressing through base.

- 6) Base (1) should be set spindle side down, as shown, on a plate or table. Press output shaft (2) through the bottom of base by applying a load to top end (internal end) of shaft until it passes through inner shaft bearing cone (20C). Shaft seal (16A) will also be pressed out and likely damaged.
- 7) A gear puller or bearing splitter may be used to remove the outer bearing cone (20A) from the shaft (2). If reusing old bearing cone, do not pull on or damage roller cage. Remove the shaft seal (16A) and v-ring seal (16B) for inspection or replacement.
- 8) Inspect inner and outer bearing cups (20D & 20B). If cups are damaged, drive them out using a brass drift or remove with a puller.

Unit Assembly Procedure

- 1) Clean all foreign material from oil plugs (30A & 30B).
- 2) Place base (1) (output side up, opposite shown) on the table.
- 3) Apply a layer of lithium or general purpose bearing grease to the roller contact surface of outer bearing cup (20B).
- 4) Place outer bearing cone (20A) in outer bearing cup (20B), large end up.
- 5) Lubricate inner lip of shaft seal (16A) with grease. Press into base (1) with open side of seal toward bearing (20A) until seal is flush with base. Be careful not to damage seal when pressing into place.
- 6) Fit v-ring seal (16B) onto the shaft (2) seal diameter and against the shaft shoulder. The thin inner lip should point away from the shoulder. Lubricate inner lip liberally with grease.
- 7) Press shaft (2), with v-ring seal (16B) installed, through shaft seal (16A) and outer bearing cone (20A) until bearing cone seats against shaft shoulder.

Note: Use care when pressing shaft into place. All pieces must be axially aligned. Use no more than 16,000 lb of press force to avoid damaging the bearing.

- 8) Flip this assembly, resting it on the end of the output shaft (2).
- 9) Apply a layer of lithium or general purpose bearing grease to the roller contact surface of the inner bearing cup (20D). Press the inner bearing cone (20C) (large end up as shown) onto the shaft (2) until it is seated against inner bearing cup.
- 10) Bearing preload should be set to result in a rolling torque between 55 and 85 in-lbs. Adding shims (35A) will increase the preload. Install the Load-N-Lock split ring segments (35B) over the shims and into the groove in the output shaft (2).
- 11) With the Load-N-Lock split ring segments (35B) firmly installed, place lock ring (35C) over the segments. Press lock ring over split ring. There will be a "snap" sound when the detent snaps into place. Check the rolling torque again. It may increase with the lock ring in place.
- 12) Lubricate o-ring (16C) and install in the pilot of the cover (3). Noting the scribed line made during disassembly, install the cover.
- 13) Install the twelve hex-head cap-screws (25A) with lockwashers (25G). **Torque the cap-screws to 80 ft-lb dry or 60 ft-lb if the fasteners are lubricated.**
- 14) Fill the unit with GL5 EP 80/90 gear oil to the proper level, as specified, using the oil fill hole in the cover (3).

The bearing adapter is now ready to use.