CATERPILLAR®

Service Repair Manual

Models

330F L Excavator

Disassembly and Assembly
326F, 329F and 330F Excavators Machine Systems
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Final Drive - Assemble

SMCS - 4050-016

Assembly Procedure

Table 1

Required Tools			
Tool	**Part Number**	**Part Description**	**Qty**
A	1P-2420	Transmission Stand Group	1
B	138-7573	Link Bracket	2
C	1P-1863	Retaining Ring Pliers	1
D	138-7575	Link Bracket	3
E	4C-8359	Eyebolt	2
F	138-7574	Link Bracket	2
G	8T-9206	Duo-Cone Seal Installer As	1
	169-0503	Installation Kit	1
H	-	Loctite C5A Copper Antiseize	-
J	-	Loctite 242 Threadlocker	-
K	-	Loctite Highflex GM	-
L	FT-2770	Leak down Test Tool	1

1. Make sure that all parts of the final drive are thoroughly clean and free of dirt and debris prior to assembly. Check the condition of all O-ring seals that are used in the final drive. If any of the seals are damaged, use new parts for replacement. Reassemble the final drive on Tooling (A).

Illustration 1 g03431464

Note: New final drives are equipped with angular contact ball bearings.

2. Apply Tooling (H) to the surfaces inside sprocket housing (35) that contacts the bearing cups. Install a bearing cup that is in each side of the sprocket housing with a press. Make sure that the bearing cups are properly seated.

3. Apply Tooling (H) to the surfaces inside the sprocket housing that contacts bearing cones (44).

4. Install outer bearing cone (44) in the sprocket housing.

Illustration 2 g01208625

5. Attach Tooling (F) and a suitable lifting device to sprocket housing (35). The weight of sprocket housing (35) is approximately 109 kg (240 lb). Install sprocket housing (35) on the motor housing. Carefully install inner bearing cone (42) on the sprocket housing.

Illustration 3 g01208578

6. Adjust the bearing preload of the final drive. Determine the correct number of shims (40) that are required for the proper bearing preload, as follows:

   Note: New final drives are equipped with angular contact ball bearings that require pre-load like the old roller bearings.

Illustration 4 g01208987

   a. Use a depth micrometer to measure the step height of coupling gear (38) at several locations around the gear. Find the average for the measured dimensions around the gear and record the dimension. Call this Dimension (X).

   b. Apply a load of 4000 kg (8820 lb) to the bearing cones.

   c. Rotate sprocket housing (35) several times to seat the bearing cones.

   d. Reduce the load to 1000 ± 100 kg (2205 ± 220 lb).

Illustration 5 g00631001

e. With the bearing cones loaded, measure the distance between the top face of the motor housing and the top face of the bearing cone. Take measurements in several locations around the motor housing. Find the average of the measured dimensions, and record the dimensions. Call this Dimension (Y).

f. Determine the correct thickness of the shims which are used between the bearing cones and the coupling gear . Use the following equation to determine the shim pack thickness.

   Shim pack thickness ... (Y) − (X) ± 0.05 mm (0.002 inch)

   Note: If two shims are required, install the thinnest shim next to the coupling gear during final assembly.

Illustration 6 g03431699

7. Attach Tooling (F) and a suitable lifting device to sprocket housing (35). Separate sprocket housing (35) from the motor housing.

   Reference: Refer to Disassembly and Assembly, "Duo-Cone Conventional Seals - Install".

   Note: The rubber seals and all surfaces that contacts the seals must be clean and dry. After installation of the seals, put clean SAE 30 oil on the contact surfaces of the metal seals.