# **CATERPILLAR®**

# Service Repair Manual

## **Models**

345C and 345C L Excavator

Model: 345C EXCAVATOR PJW

Configuration: 345C L Hydraulic Excavator PJW00001-UP (MACHINE) POWERED BY C13 Engine

#### Disassembly and Assembly 345C Excavator and 345C MHPU Mobile Hydraulic Power Unit Machine Systems

Media Number -RENR8612-06

Publication Date -01/02/2013

Date Updated -21/02/2013

i05970668

### **Final Drive - Assemble**

**SMCS - 4050-016** 

### **Assembly Procedure**

Table 1

| Required Tools |             |                            |     |
|----------------|-------------|----------------------------|-----|
| Tool           | Part Number | Part Description           | Qty |
| A              | 1P-2420     | Transmission Repair Stand  | 1   |
| В              | 138-7573    | Link Bracket               | 2   |
| С              | 1P-1860     | Retaining Ring Pliers      | 1   |
| D              | 4C-8359     | Eyebolt                    | 3   |
| Е              | 4C-8359     | Eyebolt                    | 2   |
| F              | 138-7574    | Link Bracket               | 2   |
| G              | 8T-0531     | Duo-Cone Seal Installer As | 1   |
| Н              | 4C-5599     | Anti-Seize Compound        | 1   |
| J              | 9S-3263     | Thread Lock Compound       | 1   |
| K              | 1U-8846     | Gasket Sealant             | 1   |
| L              | 6V-7059     | Micrometer                 | 1   |
| M              | 1U-9895     | Crossblock                 | 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

g01208879

- 2. Apply Tooling (H) to the surfaces inside sprocket housing (35) that makes contact with 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 motor housing that makes contact with bearing cones (42).
- 4. Install inner bearing cone (42) on the motor housing.

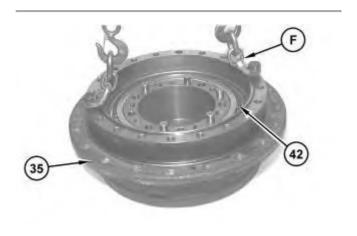


Illustration 2

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5. Apply Tooling (F) and a suitable lifting device to sprocket housing (35), as shown. The weight of sprocket housing (35) is approximately 127 kg (280 lb). Install sprocket housing (35) on the motor housing. Carefully install outer bearing cone (42) on the sprocket housing.

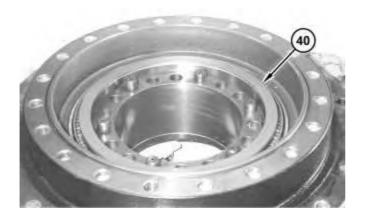


Illustration 3

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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:

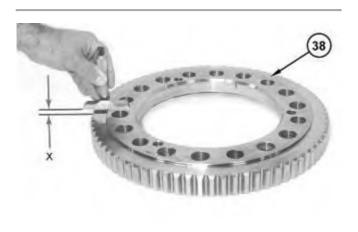


Illustration 4

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- a. Use a depth micrometer in order 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 10000 kg (22000 lb)to bearing cones (42).
- c. Rotate sprocket housing (35) several times in order to seat the bearing cones.
- d. Reduce the load to  $3500 \pm 350 \text{ kg}$  (7700 ± 770 lb).



Illustration 5 g00631001

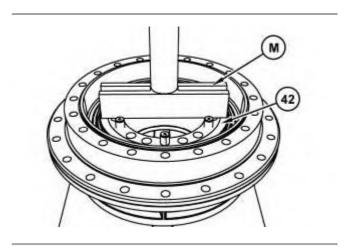


Illustration 6 g03742848

- e. While the load is still on the bearing cones, measure the distance between the top face of the motor housing and the top face of bearing cone (42). 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 shims (40) which are used between bearing cone (42) and coupling gear (38). Use the following equation in order to determine the shim pack thickness.

Shim pack thickness ...  $(X) - (Y) \pm 0.05$  mm (0.002 inch)

**Note:** If shims (40) are required, install the thinnest shim next to coupling gear (38) during final assembly.



Illustration 7 g01208625

7. Apply Tooling (F) and a suitable lifting device to sprocket housing (35), as shown. Separate sprocket housing (35) from the motor housing.

ReferenceRefer to Disassembly and Assembly, "Duo-Cone Conventional Seals - Install".

**Note:** The rubber seals and all surfaces that makes contact with 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.

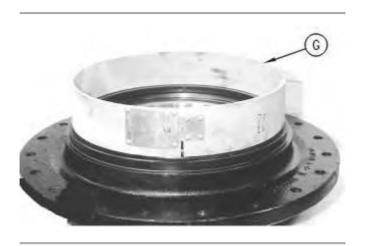


Illustration 8 g00631006



Illustration 9 g01208999

8. Install Duo-Cone seal kit (43) in the sprocket housing with Tooling (G) .



Illustration 10 g00631014

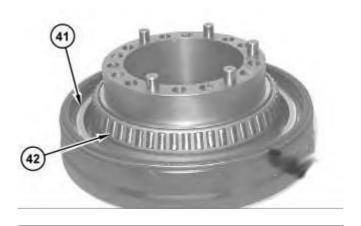


Illustration 11 g01208626

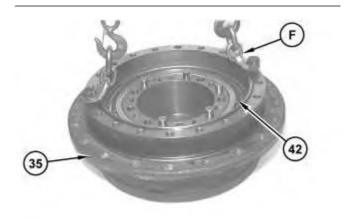


Illustration 12 g01208625

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