# **CATERPILLAR®**

# Service Repair Manual

## **Models**

434F BACKHOE LOADER

Model: 434F BACKHOE LOADER FLY

Configuration: 434F Backhoe Loader FLY00001-UP (MACHINE) POWERED BY C4.4 Engine

#### **Disassembly and Assembly**

#### C4.4 (Mech) Engines for Caterpillar Built Machines

Media Number -KENR9210-10

Publication Date -01/12/2014

Date Updated -08/08/2018

i07030539

### Flywheel - Install

**SMCS -** 1156-012

### **Installation Procedure**

Table 1

Required Tools				
Tool	Part Number	Part Description	Qty	
A	-	Guide Bolt (1/2 inch - 20 UNF by 4 inch)	2	

#### **NOTICE**

Keep all parts clean from contaminants.

Contaminants may cause rapid wear and shortened component life.

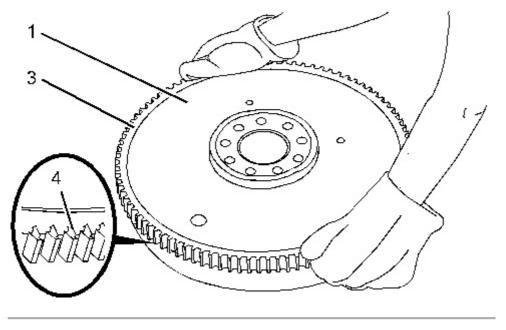


Illustration 1 g01343963

Typical example



Always wear protective gloves when handling parts that have been heated.

- 1. If the flywheel ring gear was removed, follow Steps 1.a through 1.c to install a new ring gear to the flywheel.
  - a. Identify the orientation of teeth (4) on the new ring gear (4).

**Note:** The chamfered side of the ring gear teeth must face toward the starting motor when the flywheel is installed. The correct orientation of the chamfered will ensure the correct engagement of the starting motor.

b. Heat flywheel ring gear (3) in an oven to a maximum temperature of 250 °C (482 °F) prior to installation.

**Note:** Do not use a torch to heat the ring gear.

- c. Ensure that the orientation of ring gear (3) is correct and quickly install the ring gear onto flywheel (1).
- 2. Inspect the crankshaft rear seal for leaks. If there are any oil leaks, replace the crankshaft rear seal. Refer to Disassembly and Assembly, "Crankshaft Rear Seal Remove" for the correct procedure.

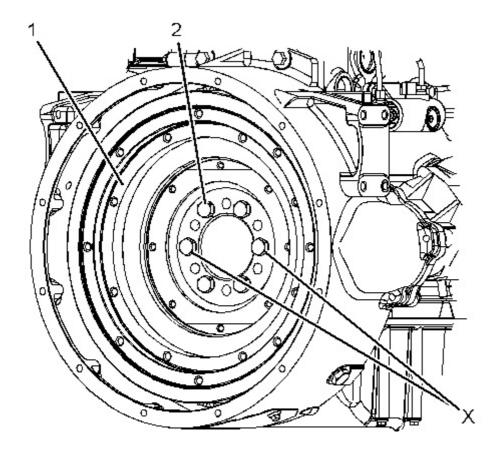


Illustration 2 g01245126
Typical example

3. Install a suitable lifting device to flywheel (1). The flywheel weighs approximately 71 kg

- (155 lb).4. Install Tooling (A) to positions (X) on the crankshaft.
- 5. Use the lifting device to position flywheel (1) onto Tooling (A).
- 6. Install bolts (2) to flywheel (1) finger tight.
- 7. Remove Tooling (A) and install remaining bolts (2) to flywheel (1).
- 8. Remove the lifting device from flywheel (1).
- 9. Use a suitable tool to prevent the flywheel from rotating. Tighten bolts (2) to a torque of  $140 \text{ N} \cdot \text{m}$  (103 lb ft).
- 10. Check the run out of the flywheel. Refer to System Operation, Test, and Adjusting, "Flywheel Inspect" for further information.

#### **End By:**

a. Install the electric starting motor. Refer to Disassembly and Assembly, "Electric Starting Motor - Remove and Install".

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#### Crankshaft Rear Seal - Remove

SMCS - 1161-011

#### **Removal Procedure**

Table 1

Required Tools					
Tool	Part Number	Part Description	Qty		
A	227-4390	E12 Torx Socket	1		

#### **Start By:**

a. Remove the flywheel. Refer to Disassembly and Assembly, "Flywheel - Remove".

#### NOTICE

Keep all parts clean from contaminants.

Contaminants may cause rapid wear and shortened component life.

#### **NOTICE**

Care must be taken to ensure that fluids are contained during performance of inspection, maintenance, testing, adjusting and repair of the product. Be prepared to collect the fluid with suitable containers before opening any compartment or disassembling any component containing fluids. Thank you so much for reading.

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