

Disassembly and Assembly 247 and 257 Multi Terrain Loaders Machine Systems

Media Number -REN4855-02

Publication Date -01/10/2009

Date Updated -29/10/2009

i01989804

Lift Cylinder - Remove and Install

SMCS - 5102-010

Removal Procedure

Table 1

| Required Tools | | | |
|----------------|-------------|---------------------------------|-----|
| Tool | Part Number | Part Description | Qty |
| A | 1P-1860 | Retaining Ring Pliers | 1 |
| ZZ | 6V-6509 | Face Seal Plug (13/16 - 16 THD) | 4 |
| | 6V-9830 | Cap As (13/16 - 16 THD) | 4 |

Start By:

- A. Release the hydraulic system pressure. Refer to Disassembly and Assembly, "Hydraulic System Pressure - Release".

Note: SERVICE DATA: TOOLING (ZZ) WILL NOT BE IDENTIFIED IN PHOTOGRAPHS IN THE REMOVAL OR THE INSTALLATION. THIS TOOLING IS SHOWN IN ORDER TO ASSIST THE EXPERIENCED SERVICEMAN.



Cylinders equipped with lock valves can remain pressurized for very long periods of time, even with the hoses removed.

Failure to relieve pressure before removing a lock valve or disassembling a cylinder can result in personal injury or death.

Ensure all pressure is relieved before removing a lock valve or disassembling a cylinder.

 **WARNING**

Personal injury can result from hydraulic oil pressure and hot oil.

Hydraulic oil pressure can remain in the hydraulic system after the engine has been stopped. Serious injury can be caused if this pressure is not released before any service is done on the hydraulic system.

Make sure all of the work tools have been lowered to the ground, and the oil is cool before removing any components or lines. Remove the oil filler cap only when the engine is stopped, and the filler cap is cool enough to touch with your bare hand.

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.

Refer to Special Publication, NENG2500, "Caterpillar Tools and Shop Products Guide" for tools and supplies suitable to collect and contain fluids on Caterpillar products.

Dispose of all fluids according to local regulations and mandates.

Note: Put identification marks on all hoses, on all hose assemblies, on all wires, and on all tube assemblies for installation purposes. Plug all hose assemblies and all tube assemblies. This helps to prevent fluid loss, and this helps to keep contaminants from entering the system.

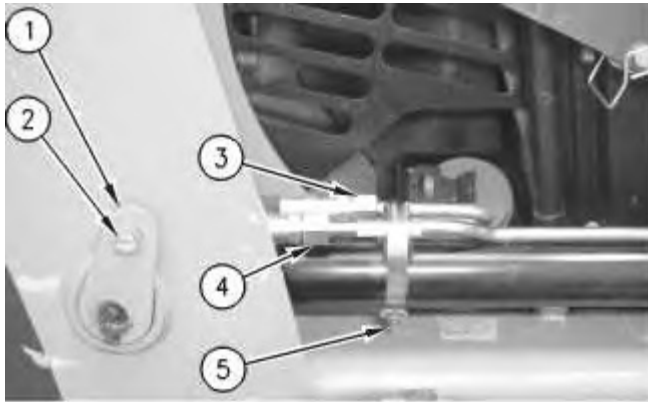


Illustration 1

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1. Loosen clamp (5). Disconnect tube assemblies (3) and (4). Remove bolt (2). Remove pin assembly (1) .

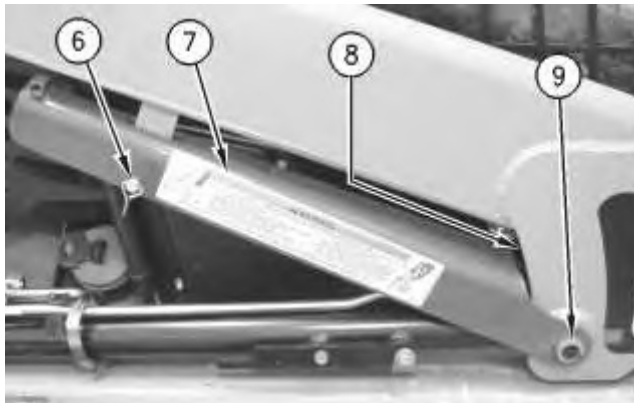


Illustration 2

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The lift arm brace does not exist on the other side of the machine.

2. Remove pin (6). Lower the lift arm brace (7). Use Tooling (A) to remove retaining ring (8). Remove pin (9). Remove the lift arm brace (7) .

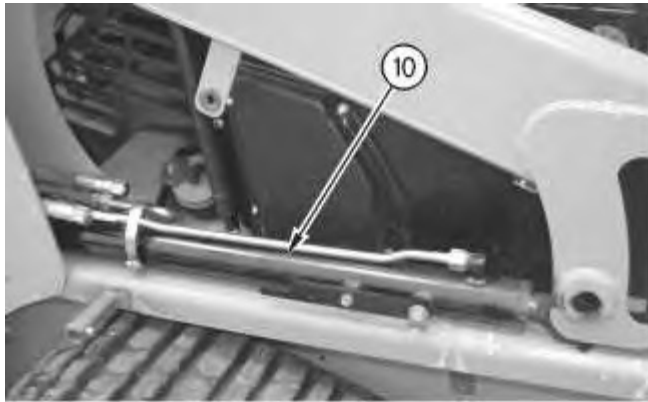


Illustration 3

g00891205

3. Remove cylinder assembly (10) .
4. Repeat Steps 1 through 3 for the other side.

Disassembly and Assembly Information

Table 2

| Required Tools | | | |
|----------------|-------------|-------------------|-----|
| Tool | Part Number | Part Description | Qty |
| A | 127-4904 | Repair Stand | 1 |
| B | 195-4609 | Seal Pick | 1 |
| C | 5P-0960 | Molybdenum Grease | |



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Ensure all pressure is relieved before removing a lock valve or disassembling a cylinder.

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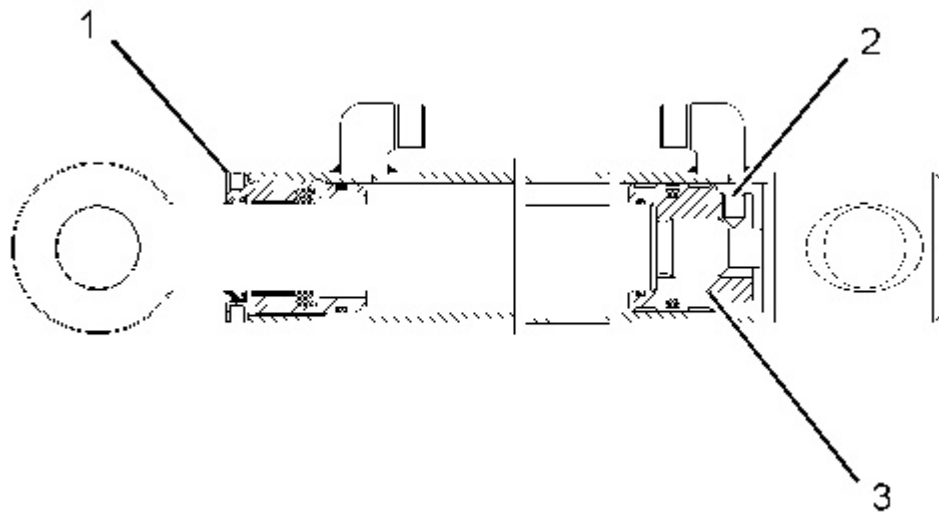


Illustration 4

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(1) Torque for the head ... $265 \pm 15 \text{ N}\cdot\text{m}$ ($195 \pm 11 \text{ lb ft}$)

(2) Torque for the setscrew ... $22 \pm 2 \text{ N}\cdot\text{m}$ ($16 \pm 1 \text{ lb ft}$)

(3) Torque for the nut ... $485 \pm 15 \text{ N}\cdot\text{m}$ ($358 \pm 11 \text{ lb ft}$)

Note: Lubricate seals and sealing lips with Tooling (C) before assembly.

Installation Procedure

Table 3

| Required Tools | | | |
|----------------|-------------|-----------------------|-----|
| Tool | Part Number | Part Description | Qty |
| A | 1P-1860 | Retaining Ring Pliers | 1 |

WARNING

Personal injury can result from hydraulic oil pressure and hot oil.

Hydraulic oil pressure can remain in the hydraulic system after the engine has been stopped. Serious injury can be caused if this pressure is not released before any service is done on the hydraulic system.

Make sure all of the work tools have been lowered to the ground, and the oil is cool before removing any components or lines. Remove the oil filler cap only when the engine is stopped, and the filler cap is cool enough to touch with your bare hand.

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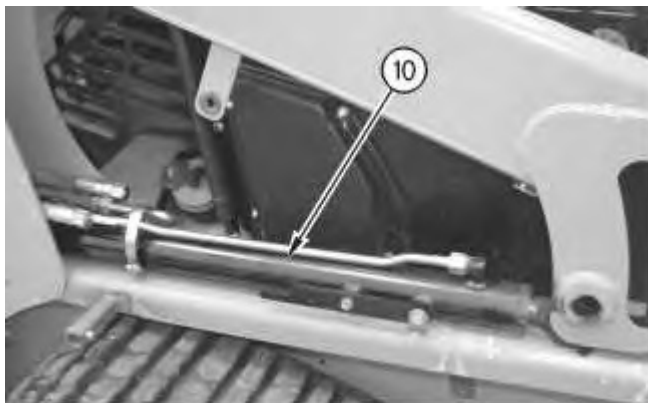


Illustration 5

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1. Install cylinder assembly (10) .

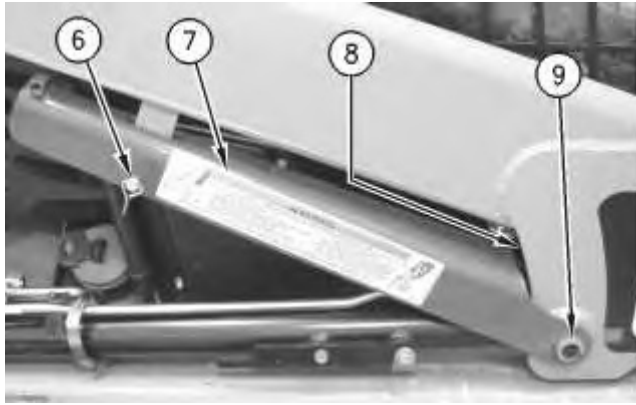


Illustration 6

g00891204

The lift arm brace does not exist on the other side of the machine.

2. Install the lift arm brace (7). Install pin (9). Use Tooling (A) to install retaining ring (8). Raise the lift arm brace (7). Install pin (6) .

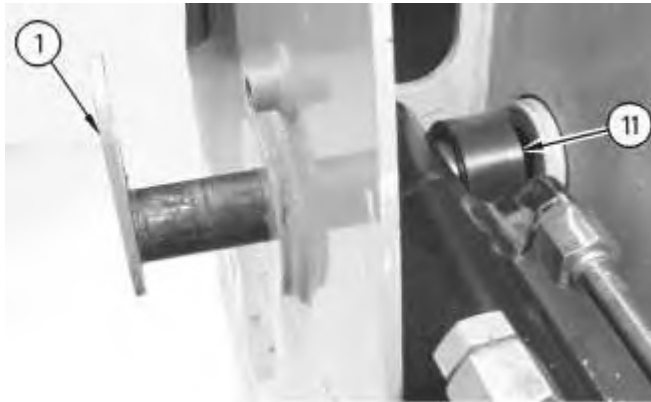


Illustration 7

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3. Position spacer (11) to the inside of the machine. Install pin assembly (1) .
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