



# Service Repair Manual

## **Model**

320C, 320C L, 320C LN,  
320C S Excavator

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Product: EXCAVATOR

Model: 320C EXCAVATOR BDE

Configuration: 320C, 320C L, 320C LN, 320C S Excavators BDE00001-UP (MACHINE) POWERED BY 3066 Engine

## **Disassembly and Assembly 320C Excavator Machine Systems**

Media Number -REN3826-16

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# **Stick Cylinder - Remove and Install**

SMCS - 5458-010

## **Removal Procedure**

### **Start By:**

- a. Relieve hydraulic system pressure.



**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.**

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### **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, "Dealer Service Tool Catalog" for tools and supplies suitable to collect and contain fluids on Cat® products.**

**Dispose of all fluids according to local regulations and mandates.**

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## **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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1. Relieve hydraulic system pressure.



Illustration 1

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2. Attach a suitable lifting device to stick cylinder (1), as shown.
3. Put slight lifting tension on the stick cylinder.

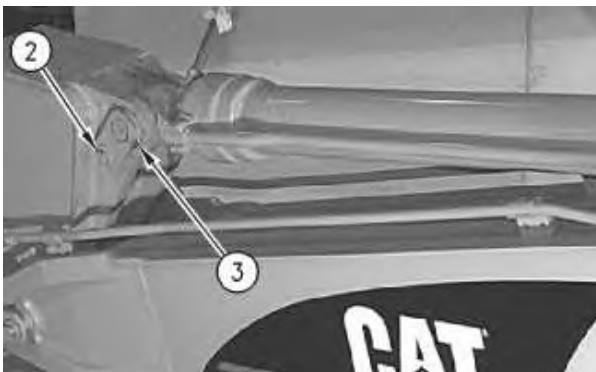


Illustration 2

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4. Remove retaining bolt (2).
  5. Remove pin assembly (3) and the spacer.
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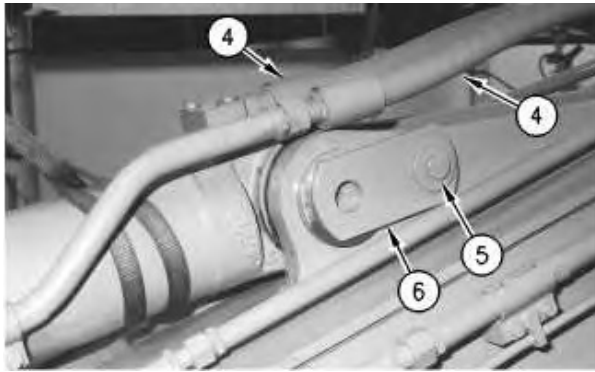


Illustration 3

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6. Disconnect hose assemblies (4).
7. Remove retaining bolt (5).
8. Remove pin assembly (6) and the spacer.
9. Remove the stick cylinder from the machine. The weight of the stick cylinder is approximately 278 kg (615 lb).

**Note:** Some machines may be equipped with shims between the stick cylinder and the stick at the pin bore. Put identification marks on the shims for assembly purposes.

10. Remove the shims from the stick.

## Disassembly and Assembly Information

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	127-4904	Hydraulic Cylinder Repair Stand Gp	1
	1P-0520	Driver Gp	1
	9U-7868	Spanner Wrench	1
	127-8064	Adapter Plate Gp	1
	195-4609	Seal Pick	1
B	4C-4032	Bearing Mount Compound	1
C	5P-0960	Grease Cartridge	1



**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.**

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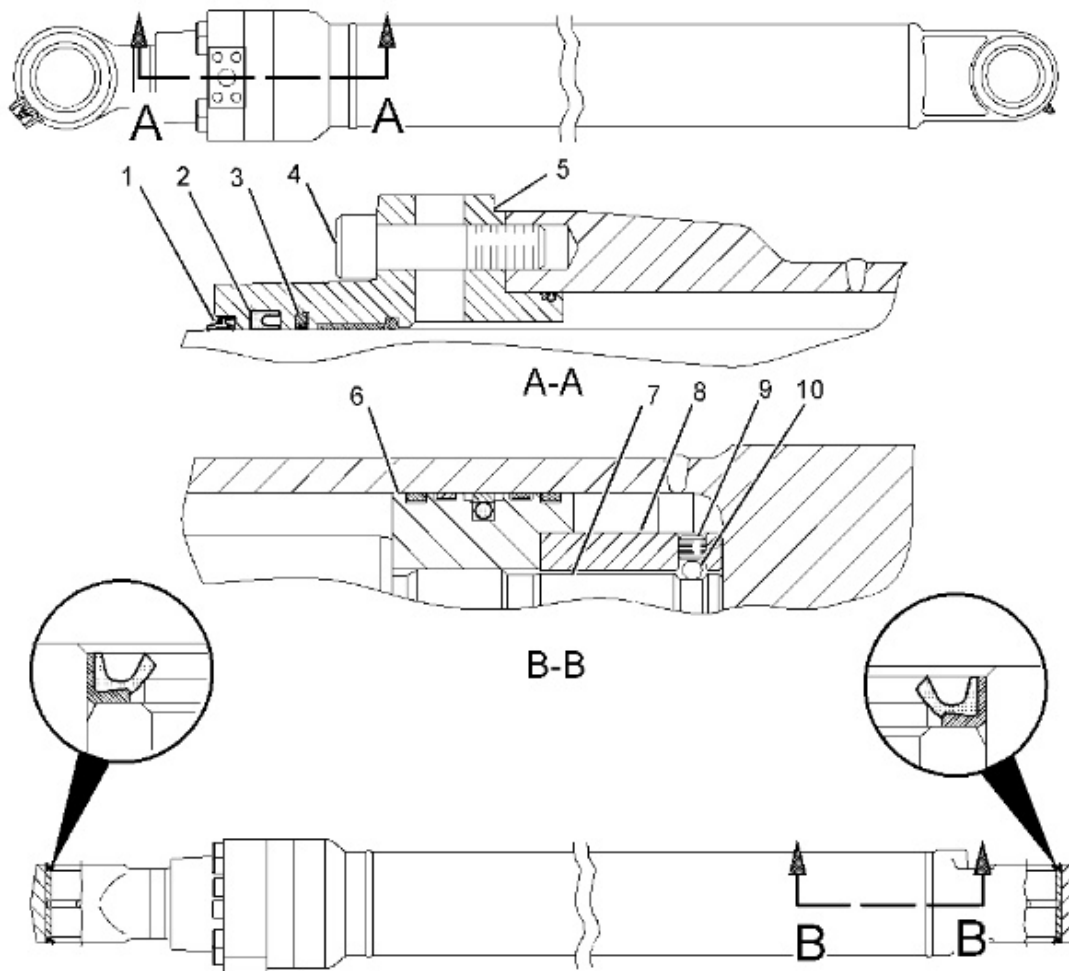


Illustration 4

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**Note:** Apply a light film of hydraulic oil to all components before assembly.

1. Apply Tooling (B) to seal (1) prior to assembly.
2. Apply clean hydraulic oil on the lip of seal (1), seal (2), and seal (3).
3. Apply Tooling (C) to the threads of head (5).
4. Lubricate the threads of rod assembly (7) with Tooling (C).
5. Tighten locknut (8). Refer to "Specifications" , Stick Cylinder for torque specification.
6. Install ball (10) and setscrew (9) in locknut (8). Tighten setscrew (9) to a torque of  $57 \pm 10$  N·m ( $42 \pm 7$  lb ft).
7. Lubricate the outside of piston (6) with Tooling (C).
8. Tighten bolts (4) to a torque of  $367 \pm 55$  N·m ( $271 \pm 41$  lb ft).

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