



# Service Repair Manual

## **Models**

302.4D Mini Hydraulic  
Excavator

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Product: MINI HYD EXCAVATOR  
Model: 302.4D MINI HYD EXCAVATOR LJJ  
Configuration: 302.4D Mini Hydraulic Excavator LJJ00001-UP (MACHINE)

## Disassembly and Assembly

### 301.7D, 302.2D and 302.4D Mini Hydraulic Excavators Machine Systems

Media Number -UENR3254-01

Publication Date -01/05/2015

Date Updated -12/05/2015

i05221254

## Final Drive and Travel Motor - Disassemble

SMCS - 4050-015; 4351-015

### Disassembly Procedure

#### Start By:

- A. Remove the final drive.



Illustration 1

g03337634

1. Remove sprocket (1).

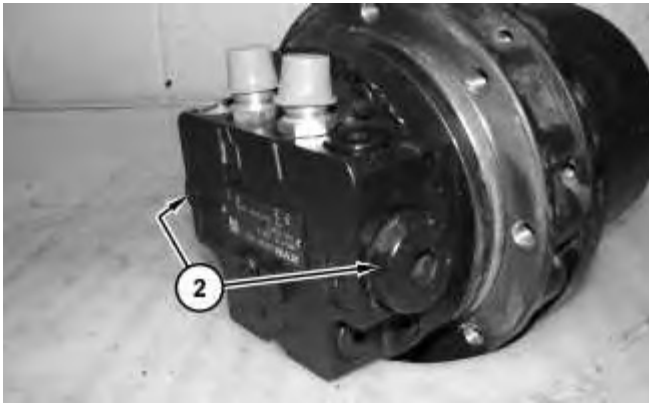


Illustration 2

g03337638

## **WARNING**

**Personal injury can result from being struck by parts propelled by a released spring force.**

**Make sure to wear all necessary protective equipment.**

**Follow the recommended procedure and use all recommended tooling to release the spring force.**

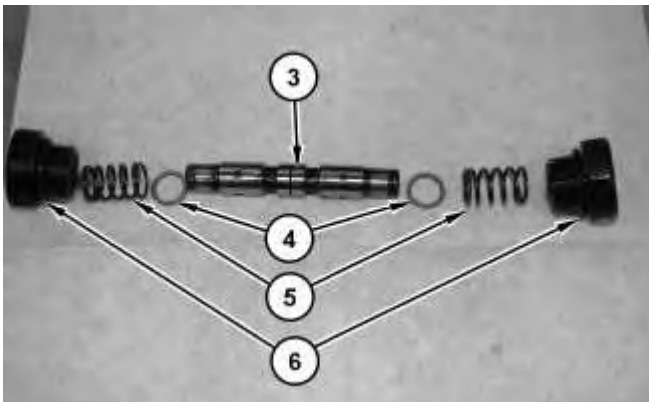


Illustration 3

g03337661

2. Remove plugs (2) and O-ring seals (6). Remove springs (5). Remove washers (4) and valve spool (3).

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 Model: 302.4D MINI HYD EXCAVATOR LJN  
 Configuration: 302.4D Mini Hydraulic Excavator LJN00001-UP (MACHINE)

**Disassembly and Assembly**  
**301.7D, 302.2D and 302.4D Mini Hydraulic Excavators Machine Systems**

Media Number -UENR3254-01

Publication Date -01/05/2015

Date Updated -12/05/2015

i05221337

**Final Drive and Travel Motor - Assemble**

SMCS - 4050-016; 4351-016

**Specifications**

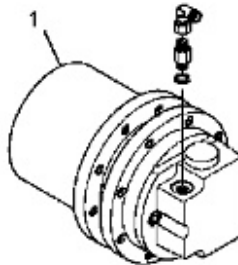


Illustration 1

g03176957

Table 1

Specification for 399-3043 Travel Motor Gp			
Item	Qty	Part	Specification Description
1	-	-	Maximum displacement per revolution is 20.7 cc (1.3 cubic inch).
			Maximum motor speed is 1250 rpm.

**Assembly Procedure**

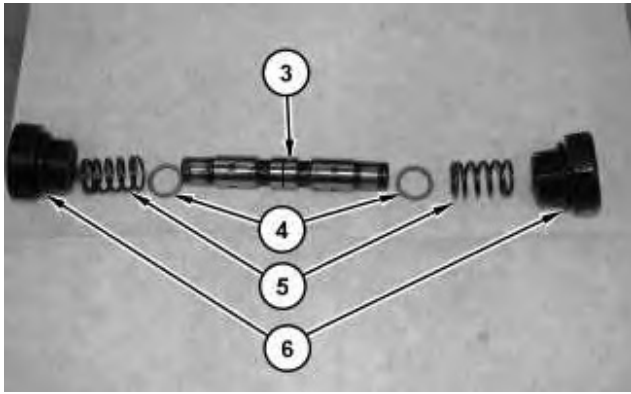


Illustration 2

g03337703

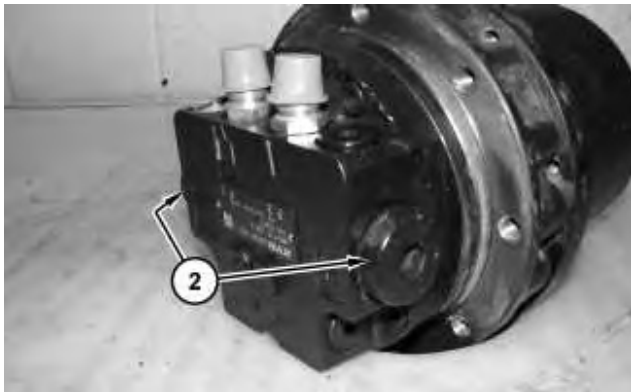


Illustration 3

g03337715

## **WARNING**

**Personal injury can result from being struck by parts propelled by a released spring force.**

**Make sure to wear all necessary protective equipment.**

**Follow the recommended procedure and use all recommended tooling to release the spring force.**

1. Install valve spool (3) and washers (4). Install springs (5). Install O-ring seals (6) onto plugs (2) .
2. Install plugs (2) into the final drive motor.



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Illustration 4

g03337724

3. Install sprocket (1).

**End By:** Install the final drive and travel motor.

Previous Screen

Product: MINI HYD EXCAVATOR  
 Model: 302.4D MINI HYD EXCAVATOR LJM  
 Configuration: 302.4D Mini Hydraulic Excavator LJM00001-UP (MACHINE)

**Disassembly and Assembly**  
**301.7D, 302.2D and 302.4D Mini Hydraulic Excavators Machine Systems**

Media Number -UENR3254-01

Publication Date -01/05/2015

Date Updated -12/05/2015

i05210988

**Swivel - Remove and Install**

SMCS - 5060-010

**Specifications**

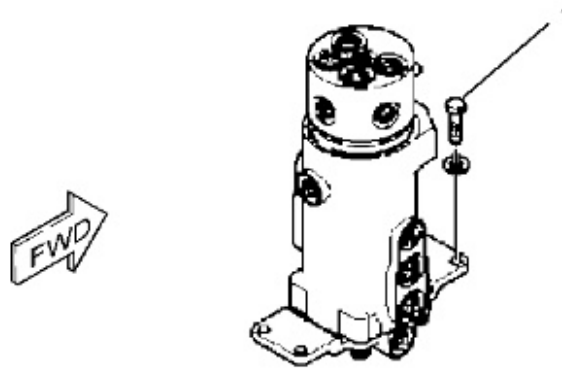


Illustration 1

g03184037

Table 1

Specification for 394-5494 Swivel			
Item	Qty	Part	Specification Description
1	4	209-8296 Bolt	Before assembly, lubricate the threads.
			Torque to 64 N·m (47 lb ft).

# Removal Procedure

## Start By:

- A. Remove Cab

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### NOTICE

**Keep all parts clean from contaminants.**

**Contamination of the hydraulic system with foreign material will reduce the service life of the hydraulic system components.**

**To prevent contaminants from entering the hydraulic system, always plug or cap the lines, fittings, or hoses as they are disconnected. Cover any disassembled components and clean them properly before assembly.**

**Clean the hydraulic system properly after any major component exchange or especially after a component failure, to remove any contamination.**

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1. Drain Hydraulic Oil. Refer to Operation and Maintenance Manual, "Hydraulic System Oil - Change" for the correct draining and filling procedure.



Illustration 2

g03335419

1. Remove floor plate (1) .
-



Illustration 3

g03335436

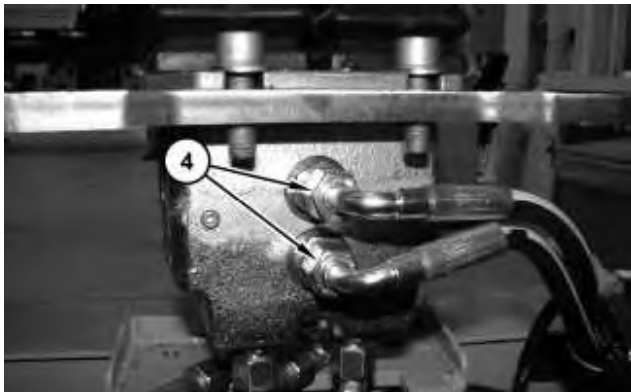


Illustration 4

g03335437

2. Remove bolts (2) in order to relocate pedal assembly (3). Remove hose assemblies (4) and relocate pedal assembly (3) out of the way.

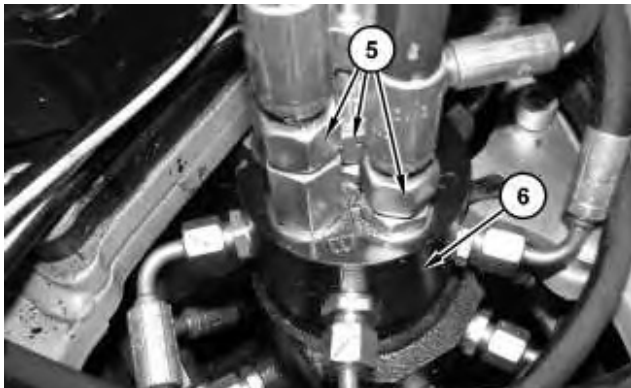


Illustration 5

g03335442

3. Disconnect hose assemblies (5) from the top of swivel (6) .

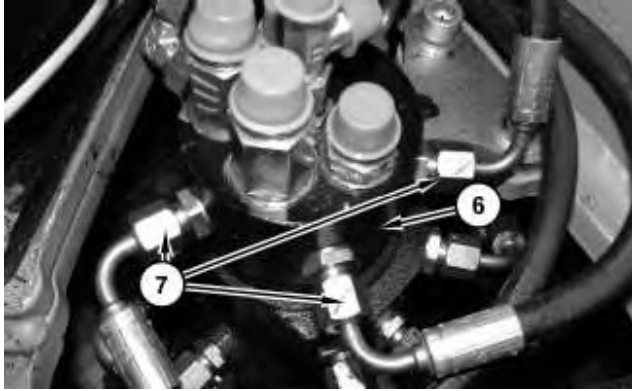


Illustration 6

g03335451

4. Disconnect hose assemblies (7) from the side of swivel (6) .

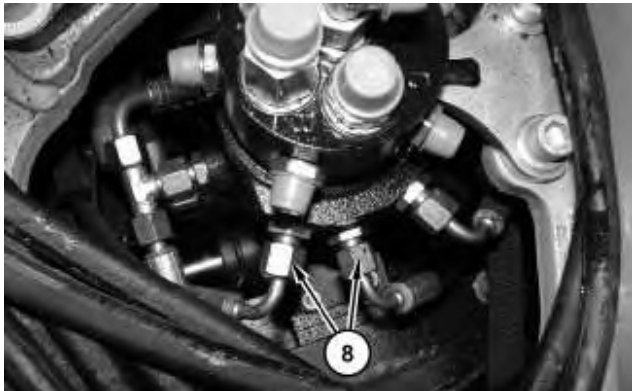


Illustration 7

g03335457

5. Remove remaining hose assemblies (8) .

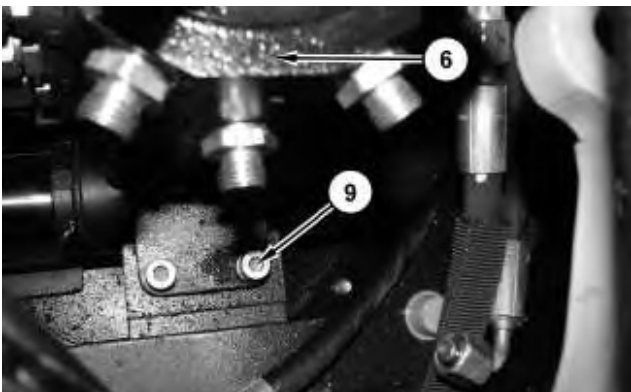


Illustration 8

g03335462

1. Remove bolts (9) from the swivel base plate.

2. Remove swivel (6) .

## **Installation Procedure**

1. Install swivel (6) in the reverse order of removal.

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Model: 302.4D MINI HYD EXCAVATOR LJN  
Configuration: 302.4D Mini Hydraulic Excavator LJN00001-UP (MACHINE)

## Disassembly and Assembly

### 301.7D, 302.2D and 302.4D Mini Hydraulic Excavators Machine Systems

Media Number -UENR3254-01

Publication Date -01/05/2015

Date Updated -12/05/2015

i05206404

## Swing Motor and Swing Drive - Remove and Install

SMCS - 5058-010-ZW; 5459-010-ZW

### Removal Procedure

#### Start By:

- A. Remove cab.
  1. Drain hydraulic oil. Refer to Operations and Maintenance Manual, "Hydraulic System Oil - Change" for the correct draining and filling procedures.



Illustration 1

g03334376

2. Remove floor plate (1) .

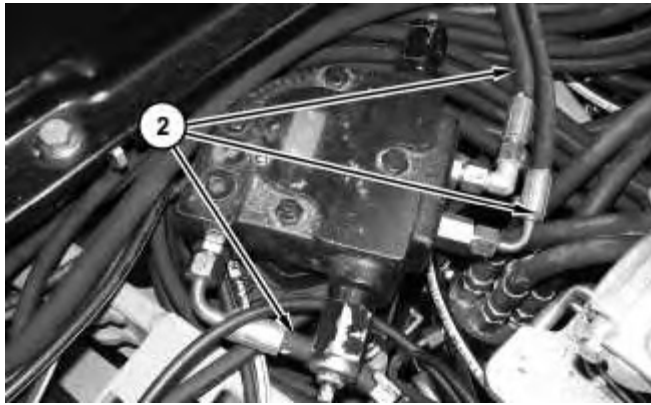


Illustration 2

g03334377

3. Disconnect hose assemblies (2) .



Illustration 3

g03334379

4. Remove bolts (3) .



Illustration 4

g03334382

5. Attach a suitable lifting device to swing motor and swing drive (4). Remove swing motor and swing drive (4). The weight of swing motor and swing drive (4) is approximately 27 kg (60 lb).

## Installation Procedure

1. Install swing motor and swing drive (4) in the reverse order of removal.
2. Tighten bolts (3) to a torque of 108 N·m (80 lb ft)

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Product: MINI HYD EXCAVATOR  
Model: 302.4D MINI HYD EXCAVATOR LJM  
Configuration: 302.4D Mini Hydraulic Excavator LJM00001-UP (MACHINE)

## Disassembly and Assembly

### 301.7D, 302.2D and 302.4D Mini Hydraulic Excavators Machine Systems

Media Number -UENR3254-01

Publication Date -01/05/2015

Date Updated -12/05/2015

i05212046

# Ball Valve (Adjustable Undercarriage) - Remove and Install

SMCS - 5051-010

## Removal Procedure

### Start By:

- A. Raise seat platform (trim)

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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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1. Drain hydraulic oil. Refer to Operation and Maintenance Manual, "Hydraulic System Oil - Change".
-

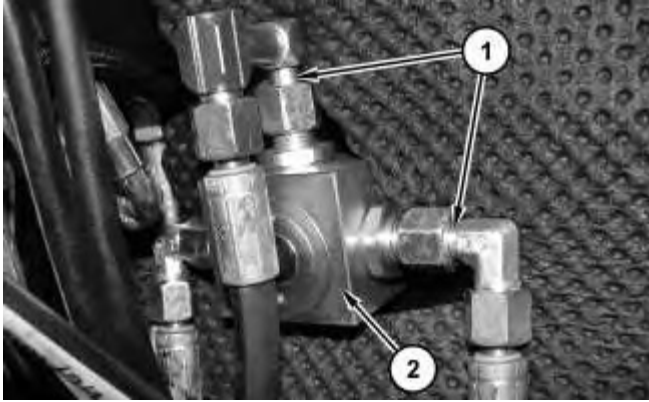


Illustration 1

g03335508

2. Disconnect hose assemblies (1) from ball valve assembly (2) .

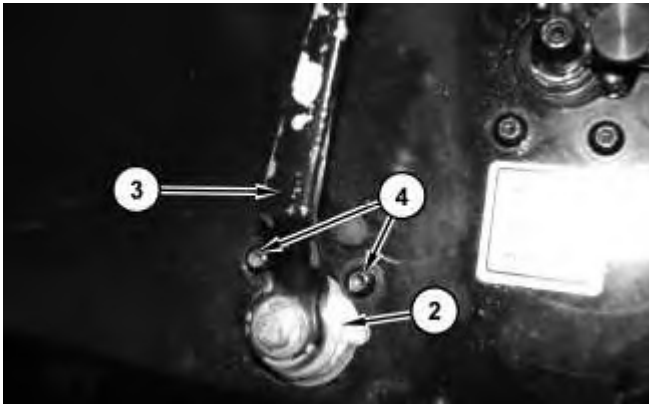


Illustration 2

g03335518

3. Remove handle (3). Remove bolts (4) and ball valve assembly (2).

## Installation Procedure

1. Install ball valve assembly (2) in the reverse order of removal.

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**Disassembly and Assembly**  
**301.7D, 302.2D and 302.4D Mini Hydraulic Excavators Machine Systems**

Media Number -UENR3254-01

Publication Date -01/05/2015

Date Updated -12/05/2015

i05224914

**Undercarriage Cylinder (Adjustable Gauge) - Remove and Install**

SMCS - 7562-010-UK

**Specifications**

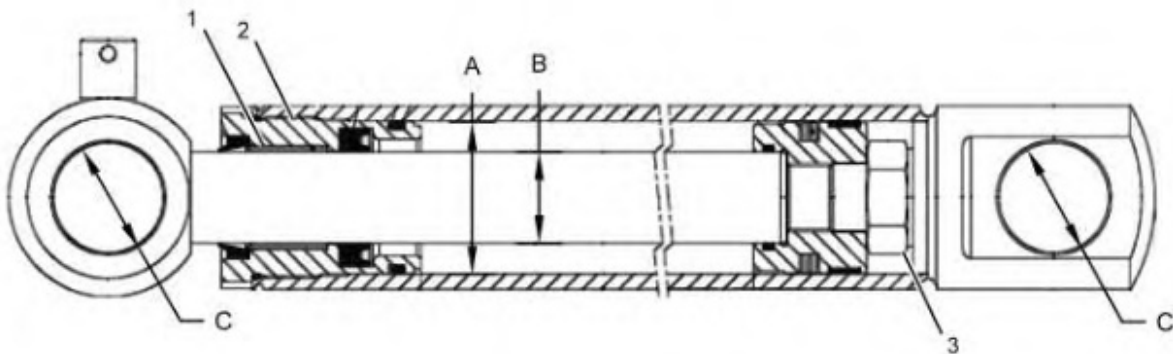


Illustration 1

g03340100

Table 1

Specification for 395-1280 Hydraulic Cylinder Gp			
Item	Qty	Part	Specification Description
1	1	-	Before assembly, apply Loctite 638 to the bearing surfaces.
2	1	-	Tighten the head to 220 to 250 N·m (162 to 184 lb ft).
3	1	-	Tighten the nut to 290 to 340 N·m (214 to 251 lb ft).

A	1	395-1254 Cylinder As	Bore is 50 mm (2.0 inch).
B	1	395-1290 Piston Rod	Diameter is 30 mm (1.2 inch).
C	2	Bushing	Bore after assembly is 36.08 to 36.18 mm (1.420 to 1.424 inch).
-	-	-	Stroke length is 320.0 ± 1.5 mm (12.60 ± 0.06 inch).

## Removal Procedure

### Start By:

- A. Remove track.
- B. Remove undercarriage frame (one side).



**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.**

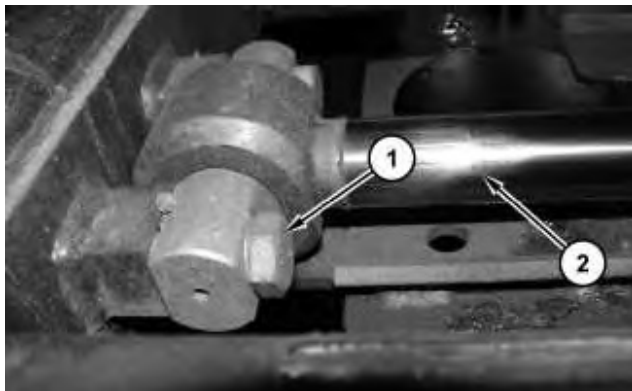


Illustration 2

g03338777

1. Remove bolts (1) from opposite side of undercarriage cylinder (2)



Illustration 3

g03338823

2. Remove lower cover (3).



Illustration 4

g03338843

3. Disconnect hose assemblies (4) through lower cover (3).

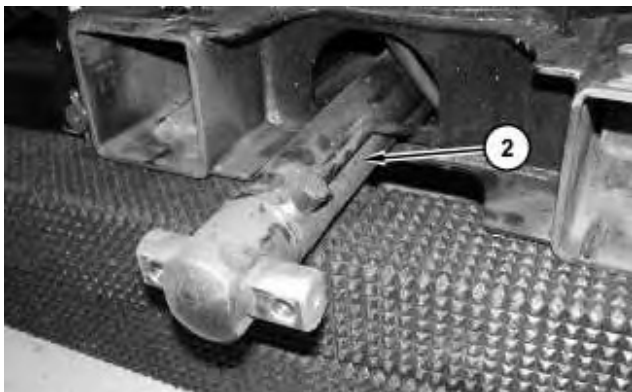


Illustration 5

g03338847

4. Remove undercarriage cylinder (2) from the frame assembly.

# Installation Procedure

1. Install undercarriage cylinder (2) in the reverse order of removal.

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**Disassembly and Assembly**

**301.7D, 302.2D and 302.4D Mini Hydraulic Excavators Machine Systems**

Media Number -UENR3254-01

Publication Date -01/05/2015

Date Updated -12/05/2015

i05204265

**Undercarriage Frame (Adjustable Gauge) - Remove and Install**

SMCS - 7050-010-AE

**Removal Procedure**

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	189-0408	Shackle As	2



Illustration 1

g03334559

1. Remove bolts (1) and plate (2) .



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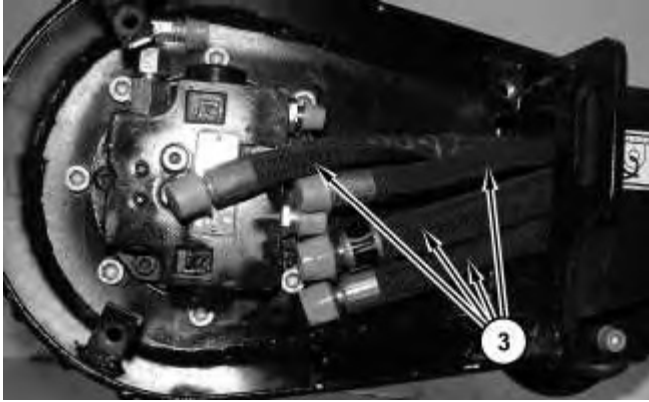


Illustration 2

g03334560

2. Disconnect hose assemblies (3) .

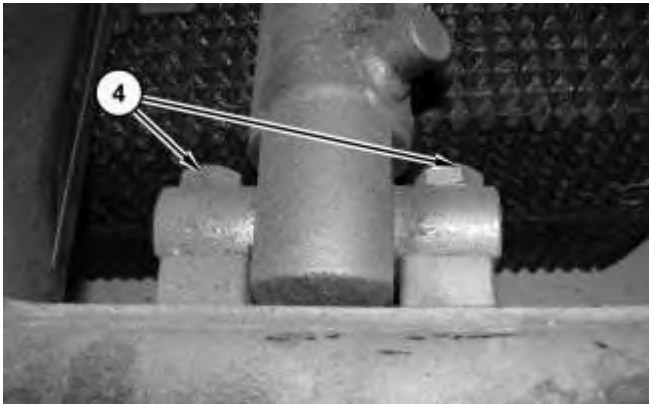


Illustration 3

g03334562

3. Remove bolts (4) .

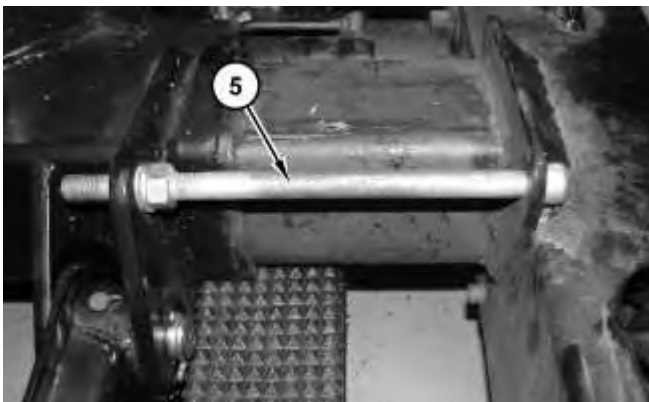


Illustration 4

g03334653

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