



Service Repair Manual

Models

301.6 Mini Hydraulic Excavator

Previous Screen

Product: MINI HYD EXCAVATOR

Model: 301.6 MINI HYD EXCAVATOR MY6

Configuration: 301.6 Mini Hydraulic Excavator MY600001-UP (MACHINE) POWERED BY C1.1 Engine

Disassembly and Assembly

301.5,301.6,301.7,301.8,302 Mini Hydraulic Excavator Machine Systems

Media Number -M0092231-00

Publication Date -01/09/2018

Date Updated -11/09/2018

i07362008

Blade Cylinder - Disassemble

SMCS - 7562-015-BG

Disassembly Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	152-4251	Cylinder Repair Bench	1
B	1P-2853	Spanner Wrench	1
C	280-2060	Offset Spanner Wrench	1
D	8H-8539	1 5/8" Socket	1
	5P-3588	Adapter	1

Start By:

- a. Remove blade cylinder.
-



Illustration 1

g06295269



Illustration 2

g06295274

1. Remove seals (1) from barrel end of blade cylinder (2). Remove seals (3) from rod end of blade cylinder (4).

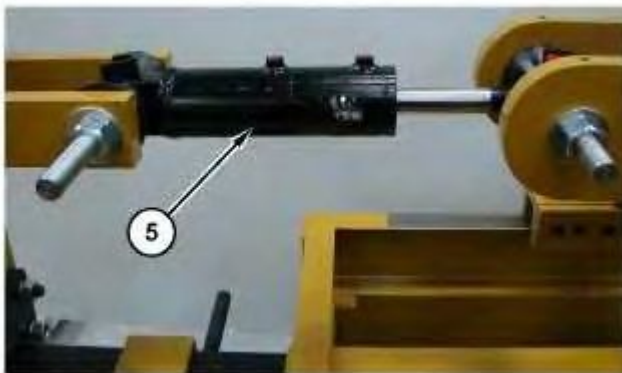


Illustration 3

g06295283

2. Mount blade cylinder (5) into Tooling (A).
-

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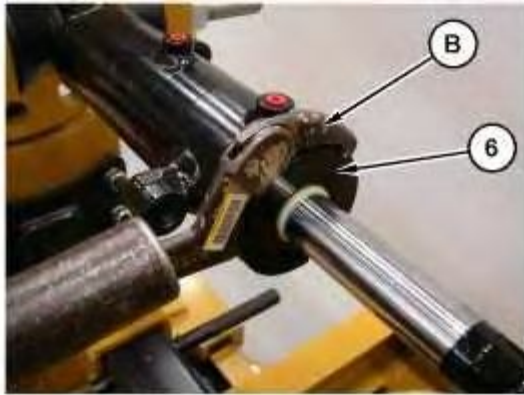


Illustration 4

g06295331

3. Use Tooling (B) to loosen cylinder nut (6).

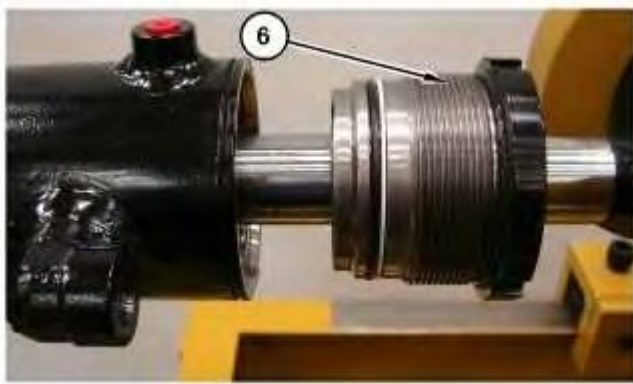


Illustration 5

g06295371

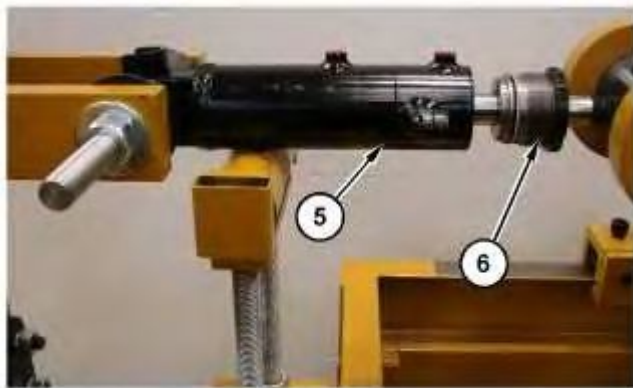


Illustration 6

g06295383

4. Remove cylinder nut (6) from the barrel. Place support under barrel end of cylinder (5).

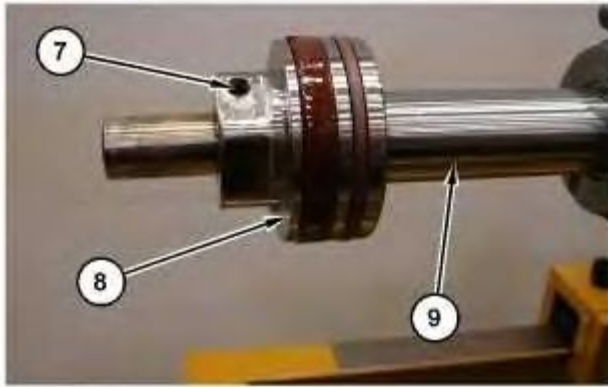


Illustration 7

g06295398

5. Back the cylinder bench out to remove rod end (9) from the cylinder barrel. Remove set screw and ball (7) from piston (8).

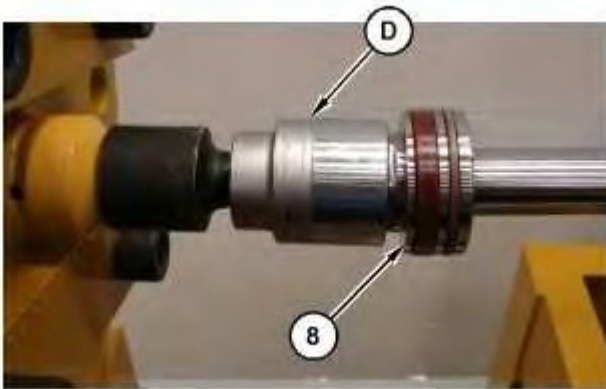


Illustration 8

g06295422

6. Use Tooling (D) to remove piston (8).

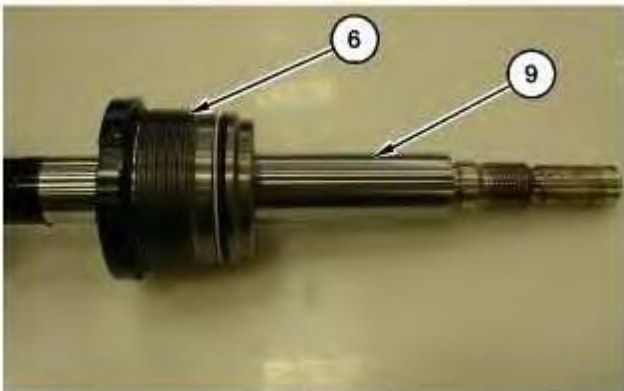


Illustration 9

g06296653

7. Remove cylinder nut (6) from rod end (9).



Illustration 10

g06295640

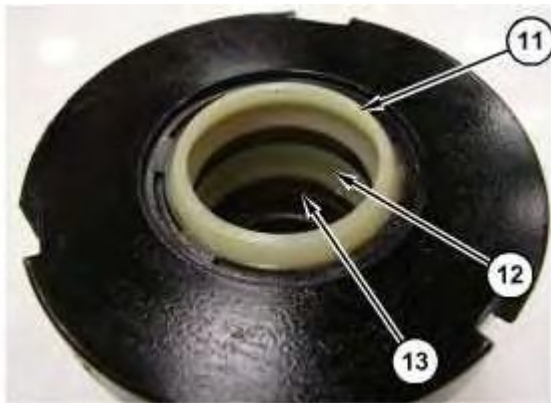


Illustration 11

g06295645

8. Remove bushing (10). Remove outer seal (11), inner seal (12), and O-ring seal (13).
-



Illustration 12

g06295654

9. Remove O-ring seal and backup ring (14). Remove O-ring seal (15).
-



Illustration 13

g06295667

10. Remove seal (16) and spacer (17).

Previous Screen

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Disassembly and Assembly

301.5,301.6,301.7,301.8,302 Mini Hydraulic Excavator Machine Systems

Media Number -M0092231-00

Publication Date -01/09/2018

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i07366569

Blade Cylinder - Assemble

SMCS - 7562-016-BG

Assembly Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	152-4251	Cylinder Repair Bench	1
B	1P-2853	Spanner Wrench	1
C	280-2060	Offset Spanner Wrench	1
D	8H-8539	1 5/8" Socket	1
	5P-3588	Adapter	1



Illustration 1

g06295667

1. Install seal (16) and spacer (17).



Illustration 2

g06295654

2. Install O-ring seal and backup ring (14). Install O-ring seal (15).



Illustration 3

g06295640

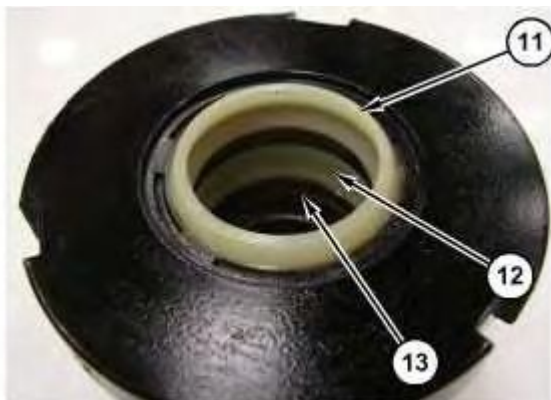


Illustration 4

g06295645

3. Install bushing (10). Install O-ring seal (13). Install inner seal (12), and outer seal (11).

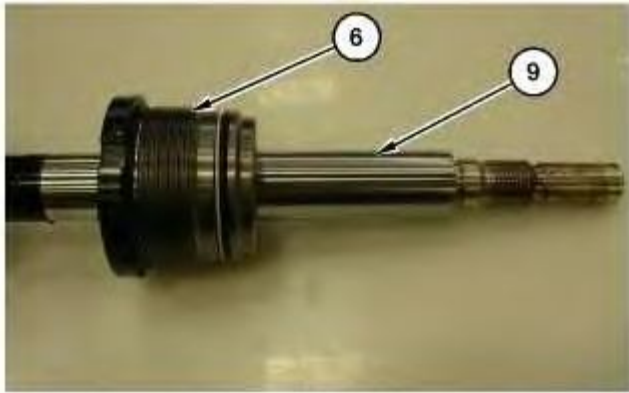


Illustration 5

g06296653

4. Install cylinder nut (6) onto rod end (9). Apply oil on seals and rod end for assembly.

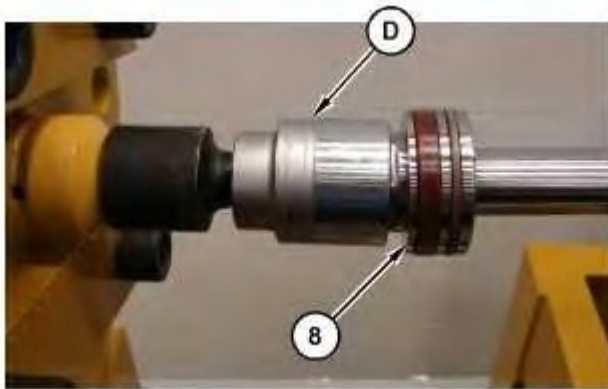


Illustration 6

g06295422

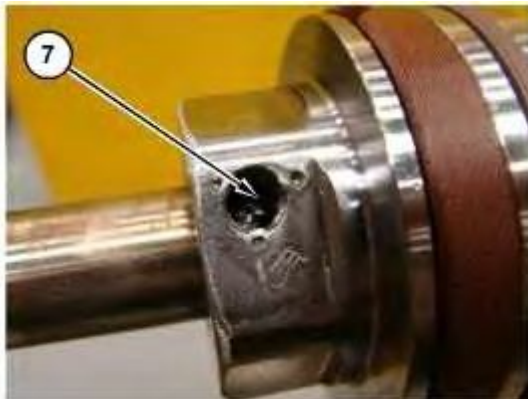


Illustration 7

g06295757

5. Mount the rod end onto Tooling (A).

Install piston (8). Use Tooling (D) to tighten piston (8). Tighten piston (8) to a torque of $400 \pm 20 \text{ N}\cdot\text{m}$ ($295 \pm 15 \text{ lb ft}$).

Install ball and set screw (7). Tighten set screw (7) to a torque of 17 ± 2 N·m (150 ± 18 lb in). Stake set screw in place once torque is applied.

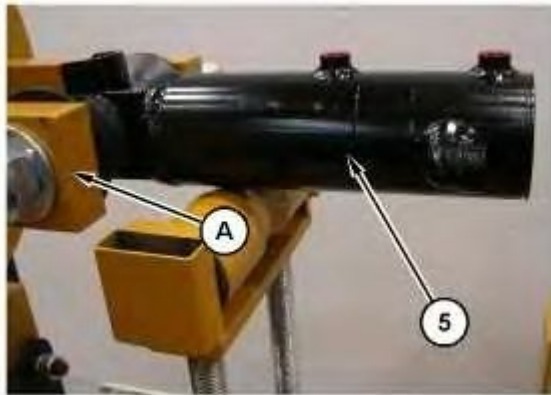


Illustration 8

g06319794

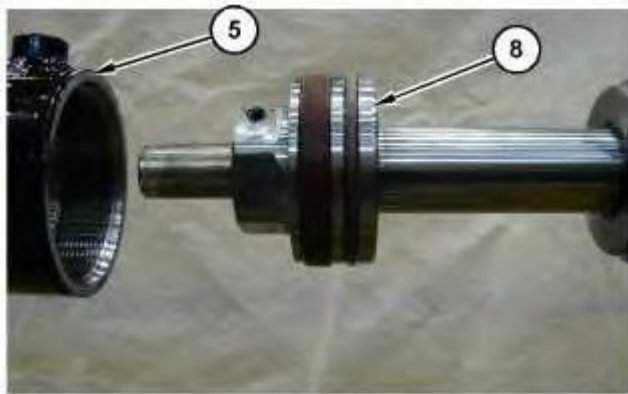


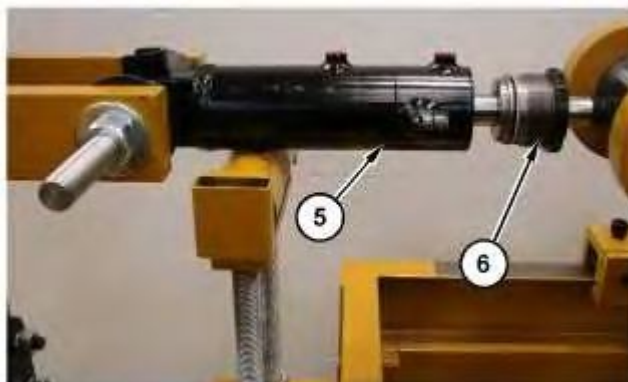
Illustration 9

g06295798

6. Mount barrel end of cylinder (5) on Tooling (A).

Align barrel assembly (5) and the rod assembly for installation. Apply hydraulic oil inside barrel assembly and on piston (8).

Install the piston and rod assembly inside the barrel assembly.



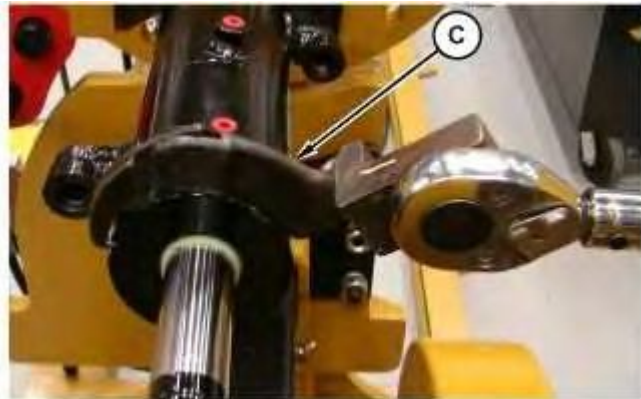


Illustration 11

7. Install cylinder nut (6) into barrel assembly (5). Apply hydraulic oil to seals before installation.

Use Tooling (C) to tighten cylinder nut (6) to a torque of 226 N·m (167 lb ft).



Illustration 12



Illustration 13

8. Install seals (1) into barrel end of blade cylinder (2). Install seals (3) into rod end of blade cylinder (4).

End By:

a. Install blade cylinder.

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Media Number -M0092231-00

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i07397606

Blade - Remove and Install

SMCS - 6060-010

Removal Procedure

Start By:

- a. Remove blade cylinder

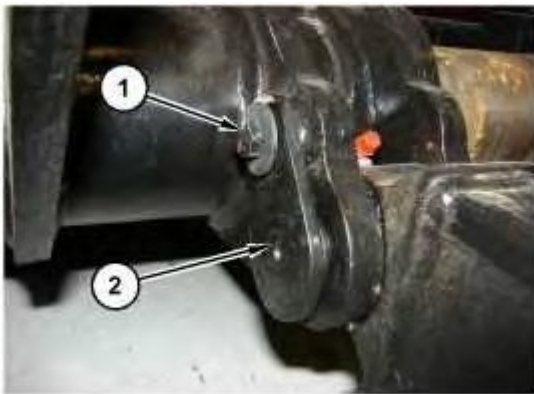


Illustration 1

g06310423

1. Place suitable blocking under blade assembly. Remove bolts (1) and pin assemblies (2).
-



Illustration 2

g06310444



Illustration 3

g06310445

2. Attach strap and a suitable lifting device around blade assembly (3). The weight of blade assembly (3) is approximately 68 kg (150 lb). Remove blade assembly (3).

Installation Procedure

1. Install blade assembly (3) in the reverse order of removal.

End By:

- a. Install blade cylinder

[Previous Screen](#)

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Media Number -M0092231-00

Publication Date -01/09/2018

Date Updated -11/09/2018

i07394729

Bucket - Remove and Install

SMCS - 6001-010; 6101-010

Removal Procedure

1. Lower bucket to the ground.



Illustration 1

g06306012

1. Remove retainer bolts (1).
-



Illustration 2

g06306014

2. Remove pins (2) from bucket linkage and stick. Remove bucket (3).

Installation Procedure



Illustration 3

g06306014

1. Position the stick over the bucket (3). Install pins (2) through the bucket linkage and the stick.



Illustration 4

g06306012

2. Install retainer bolts (1). Place two nuts on the retainer bolts (1) to lock in place.

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Publication Date -01/09/2018

Date Updated -11/09/2018

i07390177

Bucket - Remove

SMCS - 6101-011

Removal Procedure

1. Lower bucket to the ground.



Illustration 1

g06306012

1. Remove retainer bolts (1).
-



Illustration 2

g06306014

2. Remove pins (2) from bucket linkage and stick. Remove bucket (3).

Installation Procedure



Illustration 3

g06306014

1. Position the stick over the bucket (3). Install pins (2) through the bucket linkage and the stick.



Illustration 4

g06306012



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2. Install retainer bolts (1). Place two nuts on the retainer bolts (1) to lock in place.

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