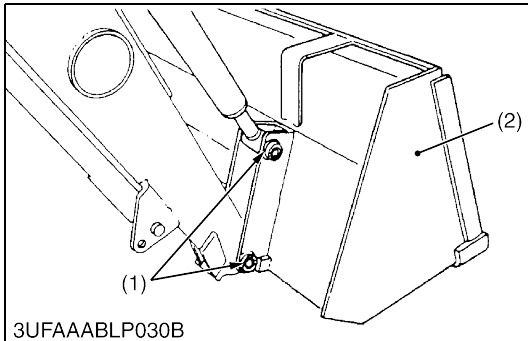


[2] BUCKET, BOOM AND HYDRAULIC CYLINDERS

(1) Disassembling and Assembling



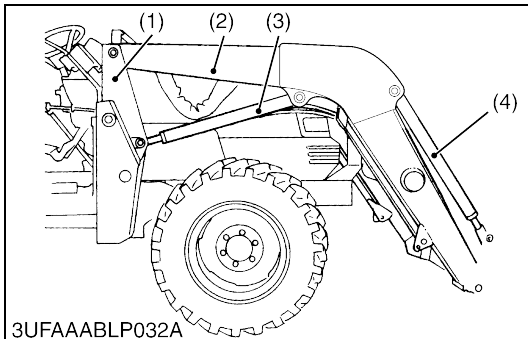
Bucket

1. Remove the pins (1) and remove the bucket (2).

(1) Pin

(2) Bucket

W1022133



Boom and Hydraulic Cylinders

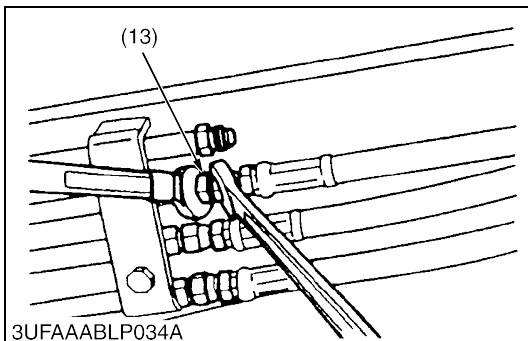
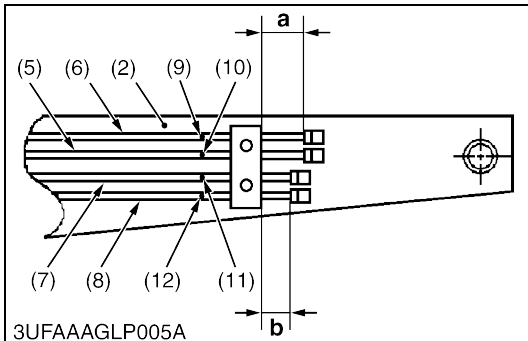
1. Disconnect the hydraulic hoses from the hydraulic cylinders (3), (4).
2. Remove the external snap ring and remove the indicator assembly. (If equipped)
3. Remove the cotter pin and remove the level indicator rod. (If equipped)
4. Remove the pins and remove the hydraulic cylinders (3), (4).
5. Disconnect the hydraulic hoses from the hydraulic tubes on the boom (2).
6. Remove the pins and remove the boom (2) from the side frame (1).
7. Remove the hydraulic tubes from the boom (2).

(When reassembling)

- Assemble the hydraulic tubes (5), (6), (7), (8) to the boom as shown in the figure.
- When installing the hydraulic cylinders (3), (4), the hydraulic port should face inside and be careful of the direction of grease fittings.

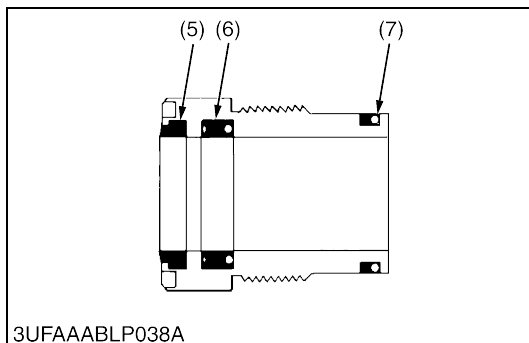
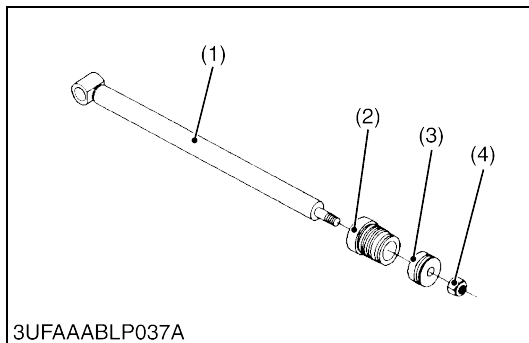
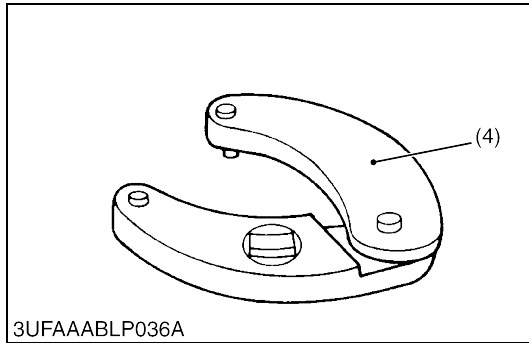
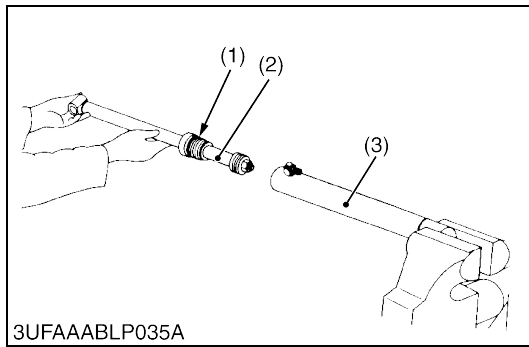
■ NOTE

- **For fastening hydraulic hose with tube fitting (13), use two wrenches. Hold the fitting with a wrench, turn the hose with another wrench to avoid damage at welded area.**



- | | |
|--------------------------------------|------------------------------------|
| (1) Side Frame | a : 35 to 45 mm (1.38 to 1.77 in) |
| (2) Boom | b : 15 to 25 mm (0.59 to 0.98 in.) |
| (3) Boom Cylinder | |
| (4) Bucket Cylinder | |
| (5) Hydraulic Tube 3 | |
| (6) Hydraulic Tube 4 | |
| (7) Hydraulic Tube 2 | |
| (8) Hydraulic Tube 1 | |
| (9) Hydraulic Tube with Red Mark | |
| (10) Hydraulic Tube with Blue Mark | |
| (11) Hydraulic Tube with Yellow Mark | |
| (12) Hydraulic Tube with White Mark | |
| (13) Tube Fittings | |

W1022205



Piston Rod Assembly

1. Drain hydraulic oil from the cylinder, and secure the tube end of the cylinder in a vise.
2. Unscrew the cylinder head (1) with the adjustable gland nut wrench (4).
3. Pull out the piston rod assembly (2) from the cylinder tube (3).

(When reassembling)

- Visually inspect the cylinder tube for signs of scoring or damage.
- Insert the piston rod assembly to the cylinder tube, using care not to damage the piston seal on the piston.
- Install the cylinder head to the cylinder tube, using care not to damage the O-ring on the cylinder head.

Tightening torque	Cylinder head	196.1 to 215.7 N·m 20.0 to 22.0 kgf·m 145 to 159 lbf·ft
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(1) Cylinder Head

(2) Piston Rod Assembly

(3) Cylinder Tube

(4) Adjustable Gland Nut Wrench

W1017050

Cylinder Head, Piston and Nut

1. Secure the rod end in a vise.
2. Unscrew the nut (4), and remove the piston (3) and cylinder head (2) from the piston rod (1).

(When reassembling)

- Visually inspect all parts for signs of scoring or damage.
- Insert the piston rod to the cylinder head, using care not to damage the wiper seal (5) and oil seal (6).

Tightening torque	Boom and bucket cylinder piston mounting nut	157 to 196 N·m 16.0 to 20.0 kgf·m 116 to 145 lbf·ft
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(1) Piston Rod

(2) Cylinder Head

(3) Piston

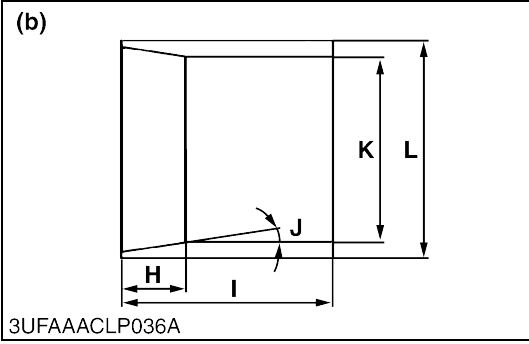
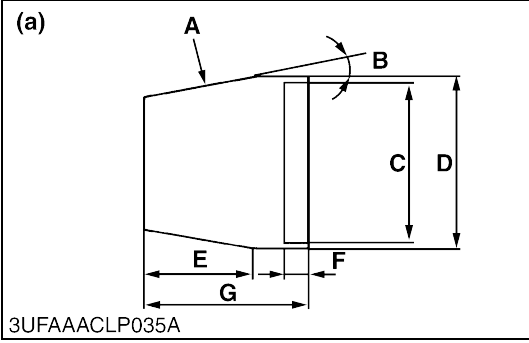
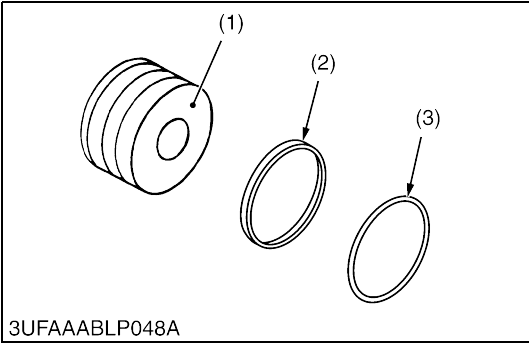
(4) Nut

(5) Wiper Seal

(6) Oil Seal

(7) O-ring

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Piston Seal and O-ring

1. Remove the piston seal (2) and expander (3) from the piston (1).

■ **IMPORTANT**

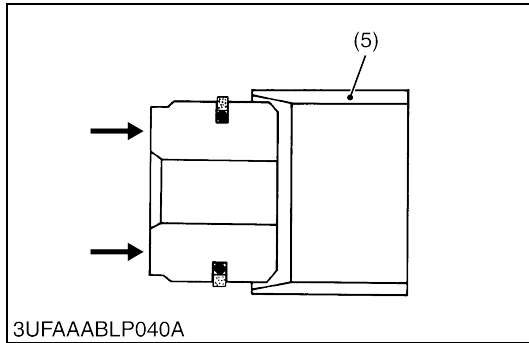
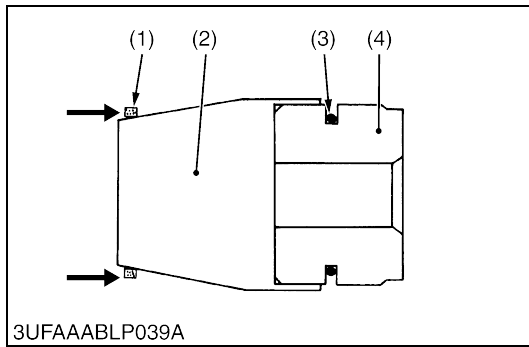
- When installing the expander (3) and piston seal (2) to the piston (1), use the slide jig and correcting jig as shown in the figure.

	LA463 (Boom and Bucket)
A	80 √
B	0.157 rad (9 °)
C	45.18 mm dia. (1.779 in. dia.)
D	46.18 mm dia. (1.818 in. dia.)
E	42.0 mm (1.65 in.)
F	10.0 mm (0.4 in.)
G	58.5 mm (2.30 in.)
H	14.0 mm (0.55 in.)
I	35.0 mm (1.38 in.)
J	0.122 rad (7 °)
K	45.2 mm dia. (1.780 in. dia.)
L	53.9 mm dia. (2.122 in. dia.)

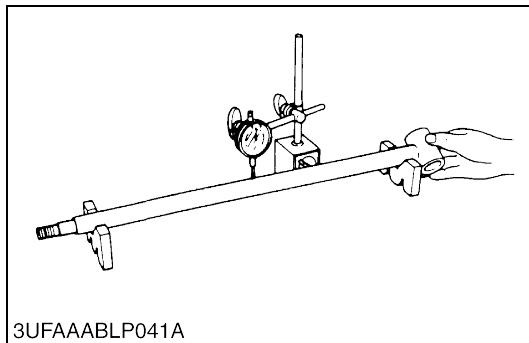
- (1) Piston
(2) Piston Seal
(3) Expander

- (a) Slide Jig
(b) Correcting Jig

W1017590



(2) Servicing



Installing Expander and Piston Seal

1. Place the slide jig (2) on the piston (4).
2. Install the expander (3) on the piston using the slide jig.
3. Install the piston seal (1) over the expander using the slide jig.
4. Compress the piston seal to the correct size by installing the piston into the correcting jig (5).

■ NOTE

- Do not turn (roll) the piston seal as you install it.

- (1) Piston Seal
(2) Slide Jig
(3) Expander

- (4) Piston
(5) Correcting Jig

W1018156

Piston Rod Bend

1. Place piston rod on V blocks.
2. Set a dial indicator on the center of the rod.
3. Turn the piston rod and read the dial indicator.
4. If the measurement exceeds the allowable limit, replace it.

Piston rod bend	Allowable limit	0.25 mm 0.0098 in.
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