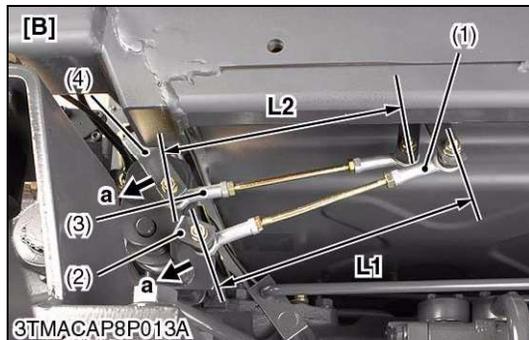
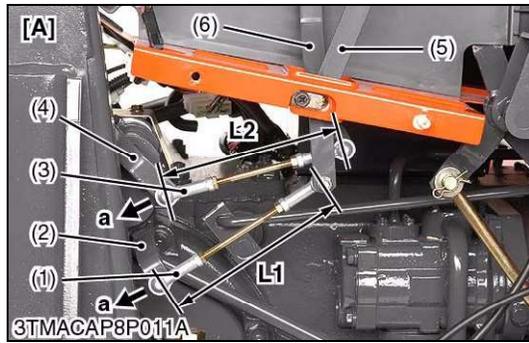


[3] POSITION AND DRAFT CONTROL LINKAGE



Adjusting Position Control Rod and Draft Control Rod

1. Be sure to adjust the position control rod (1) length (L1) and draft control rod (3) length (L2).

■ IMPORTANT

- Each draft control lever and position control lever should contact with lever guide lowest position when operate the position lever 1 (2) and draft lever 1 (4) to end of direction (a). If not, adjust the position control rod (1) length (L1) and/or draft control rod (3) length (L2).

[ROPS Model]

Position control rod length (L1)	Factory specification	Approx. 159 mm 6.26 in.
Draft control rod length (L2)	Factory specification	Approx. 146 mm 5.75 in.

[CABIN Model]

Position control rod length (L1)	Factory specification	Approx. 185 mm 7.28 in.
Draft control rod length (L2)	Factory specification	Approx. 182 mm 7.17 in.

- (1) Position Control Rod
- (2) Position Lever 1
- (3) Draft Control Rod
- (4) Draft Lever 1
- (5) Position Control Lever
- (6) Draft Control Lever

[A] ROPS Model

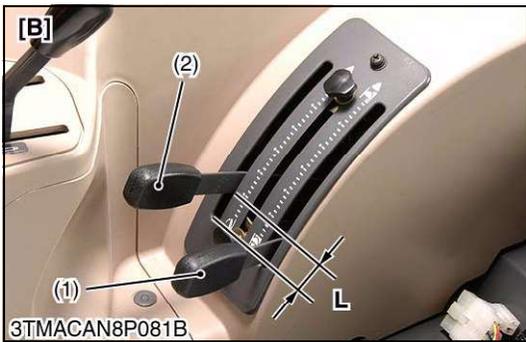
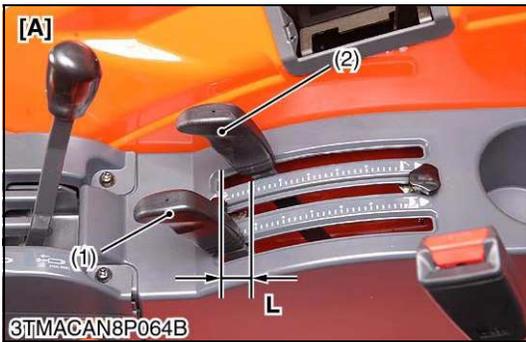
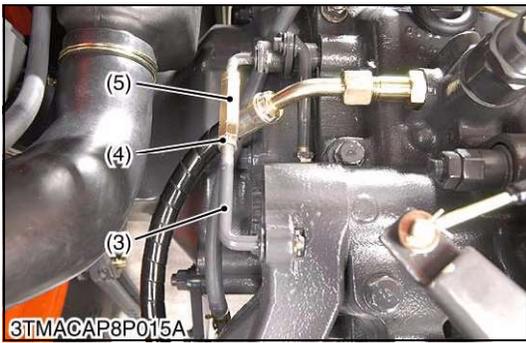
[B] CABIN Model

L1 :Length of Position Control Rod

L2 :Length of Draft Control Rod

a : Direction for Lower

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Adjusting Position Control

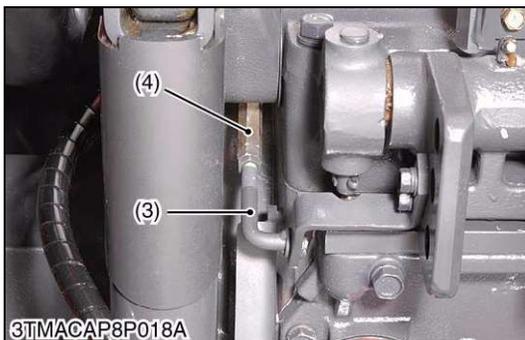
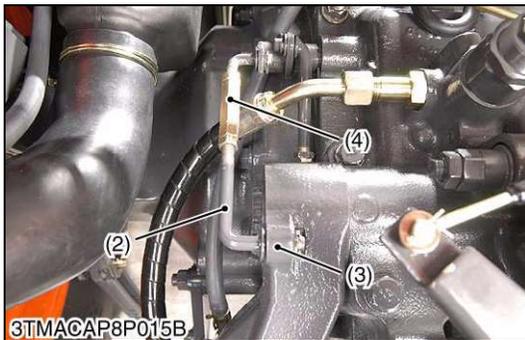
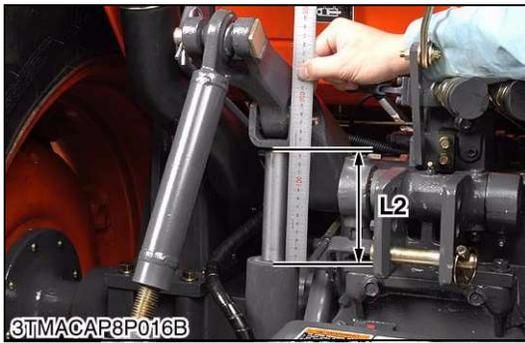
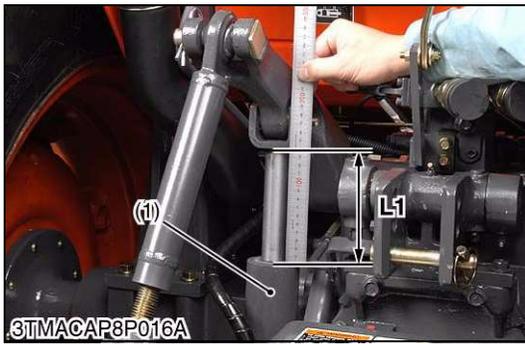
1. Attach a weight of approx. 490 N (50 kgf, 110 lbf) to the end of the lower links.
2. Set the position control lever (2) and draft control lever (1) to the lowest position.
3. Start the engine, and after warming-up, set the engine speed at 1000 min⁻¹ (rpm).
4. Move the position control lever (2) to the uppermost position. (Contact to the position control lever guide.)
5. Lengthen the position feedback rod (3) until the relief valve begins to be operated.
6. From the relief valve operating position, turn the turnbuckle (5) 1.5 turns to shorten the position feedback rod (3).
7. Tighten the lock nut (4).
8. Move the position control lever (2) to the lowest position to check the cylinder goes to lowest position.
9. Set the position control lever (2) to the lowest position, then slowly shift the lift arm to the upper until the lift arm begins to operated. Check the floating range length (L) guide end and position control lever.
10. If floating range (L) is not with in the factory specification, readjust with above procedure.

Floating range (L)	Factory specification	10 to 30 mm 0.39 to 1.18 in.
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- (1) Draft Control Lever
- (2) Position Control Lever
- (3) Position Feedback Rod
- (4) Lock Nut
- (5) Turnbuckle

- [A] ROPS Model
- [B] CABIN Model
- L : Floating Range

W1014181



Adjusting Uppermost Position of Lift Arm

1. Move the position and draft control levers all the way down.
2. Start the engine and set the engine speed at maximum speed.
3. Operate the position control lever to the uppermost position.
4. Measure the distance (L1) between cylinder body end and cylinder rod end.
5. Raise the lift arm (3) to the top dead center by hand.
6. Measure the distance (L2) and calculate the cylinder free play.
7. If the cylinder free play is not within the factory specifications adjust the position feedback rod (2).

Cylinder free play (L2 - L1)	Factory specification	5 to 8 mm 0.197 to 0.315 in.
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- | | |
|---------------------------|---------------------|
| (1) Hydraulic Cylinder | L1 :Distance |
| (2) Position Feedback Rod | L2 :Distance |
| (3) Lift Arm | |
| (4) Turnbuckle | |

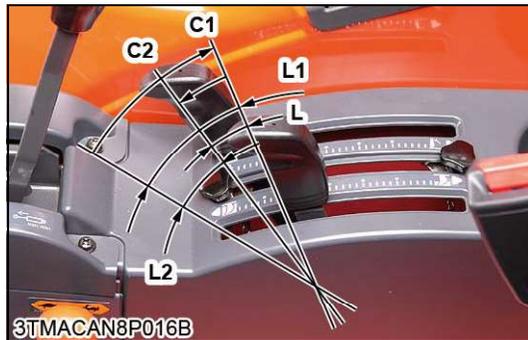
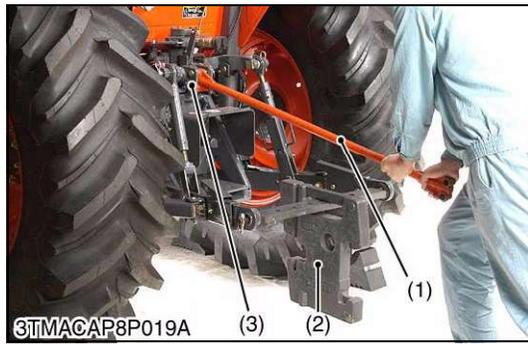
W1014511

Adjusting Draft Control

1. Attach a weight of approx. 490 N (50 kgf, 110 lbf) to the end of the lower links.
2. Start the engine and set the engine speed at 1000 min⁻¹ (rpm).
3. Move the position control lever (1) and draft control lever (2) all the way down.
4. Move the draft control lever (2) to uppermost position then lengthen the draft feedback rod (3) and check the point where the lift arms begin to rise.
5. When the lift arms begin to rise, turn the turnbuckle (4) 1 turn to shorten the draft feedback rod (3).
6. Move the position control lever (1) and draft control lever (2) to uppermost position to make sure the relief does not operate.
7. If the relief valve operate, adjust the draft feedback rod (3).
8. Tighten the lock nuts securely.

- | | |
|----------------------------|------------------------|
| (1) Position Control lever | (3) Draft Feedback Rod |
| (2) Draft Control Lever | (4) Turnbuckle |

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Draft Lever Free Range

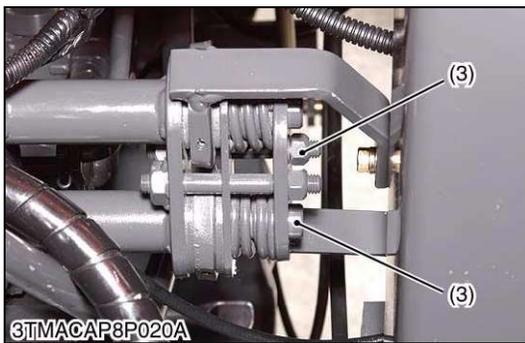
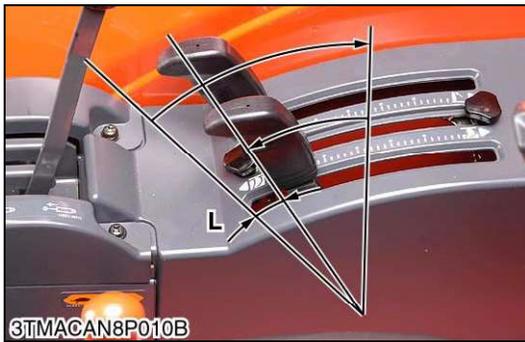
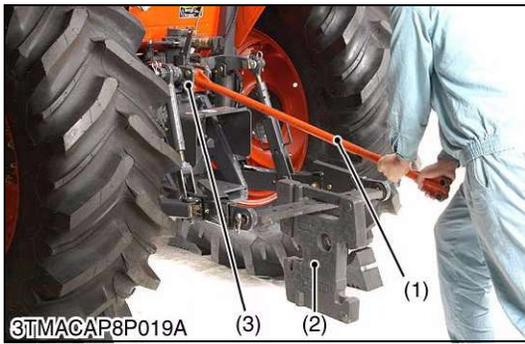
1. Attach the weight (2) of approx. 490 N (50 kgf, 110 lbf) to the end of the lower links.
2. Attach the test bar (1) (refer to "8. SPECIAL TOOLS" at "G. GENERAL" section) to the top link bracket (3).
3. Start the engine and set the engine speed at maximum speed.
4. Move the draft and position control lever (5), (4) all the way down.
5. Press the test bar (1) downward until the top link bracket (3) comes in contact with the body.
6. Slowly shift the draft control lever (5) upward until the lift arms begin to rise (**C1**). Then slowly shift the draft control lever (5) downward until the lift arms begin to down (**C2**). Calculate the free range (**L**) of the draft control lever (5) on the lever guide.

Free range L1 – L2	Factory specification	Less than 25.0 mm 0.984 in.
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- (1) Test Bar
- (2) Weight
- (3) Top Link Bracket
- (4) Position Control Lever
- (5) Draft Control Lever

- C1** : Begin to rise the lift arm
- C2** : Begin to down the lift arm
- L** : Free Range
- L1** : Distance for begin to rise the lift arm
- L2** : Distance for begin to down the lift arm

W1015369



Draft Floating Range Check

1. Attach the weight (2) of approx. 490 N (50 kgf, 110 lbf) to the end of the lower links.
2. Attach the test bar (1) to the top link bracket (3).
3. Start the engine and set the speed at maximum speed.
4. Move the draft and position control lever (5), (4) all the way down.
5. Press the test bar (1) downward until the top link bracket (3) comes in contact with the body.
6. Slowly shift the draft control lever (5) upward until the lift arms begin to rise. Then slowly shift the draft control lever (5) downward until the lift arms begin to down, measure the floating range (L) of the draft control lever (5) from the end of the lever guide (4).
7. If floating range (L) is not within the factory specification, adjust the draft control rod.

Floating range (L)	Factory specification	More than 15.0 mm 0.59 in.
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- (1) Test Bar
- (2) Weight
- (3) Top Link Bracket
- (4) Position Control Lever
- (5) Draft Control Lever

L : Floating Range

W1015844

Position and Draft Control Lever Operating Force

1. Check the position and draft control lever operating force.
2. If measurement is not within the factory specification, adjust the with tightening nuts (3).

Operating force for position and draft control lever	Factory specification	20 to 40 N 2.0 to 4.1 kgf 4.5 to 9.0 lbf
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- (1) Position Control Lever
- (2) Draft Control Lever
- (3) Nut

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