

GROUP 21A

CLUTCH

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GENERAL INFORMATION

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The clutch is a dry single-disc, diaphragm type; hydraulic pressure is used for the clutch control. The clutch shares a brake fluid reservoir with the brake system.

SERVICE SPECIFICATIONS

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Item	Standard value
Clutch pedal lateral play mm (in)	4 (0.16) or less
Clutch pedal play mm (in)	4 -9 (0.16 -0.35)
Clutch pedal height mm (in)	100 -104 (3.94 -4.09)
Distance between the clutch pedal and the pedal stopper when the clutch pedal is released mm (in)	13.5 (0.53) or more

LUBRICANTS

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Item	Specified lubricant	Quantity
Clutch fluid	Brake Fluid DOT 3 or DOT 4	As required

ON-VEHICLE SERVICE

CLUTCH PEDAL CHECK AND ADJUSTMENT

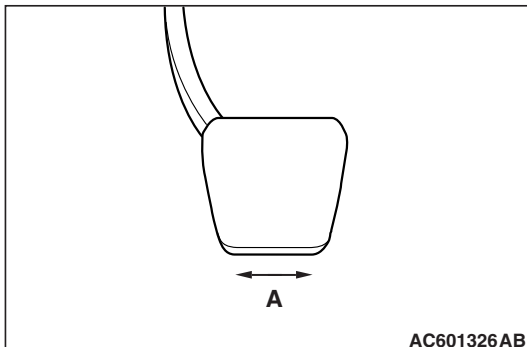
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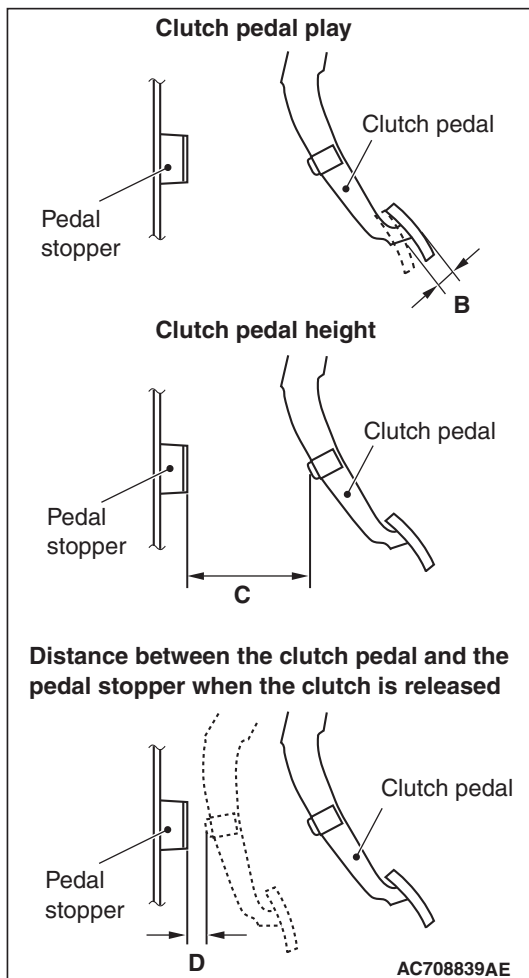
NOTE: This clutch pedal assembly is unadjustable because of its structure.

1. Measure the clutch pedal looseness (A).

Standard value (A): 4 mm (0.16 inch) or less

2. When the clutch pedal looseness is not within the standard value, the clutch pedal assembly may be faulty. In this case, check the clutch pedal assembly, and replace it if necessary.





3. Check that the clutch pedal play (B), the clutch pedal height (C) and the clearance (D) between the clutch pedal and the pedal stopper when the clutch is disengaged are within the standard value.

Standard value (B): 4 –9 mm (0.16 –0.35 inch)

Standard value (C): 100 –104 mm (3.94 –4.09 inch)

Standard value (D): 13.5 mm (0.53 inch) or more

4. When the clutch pedal play, clutch pedal height and the clearance between the clutch pedal and pedal stopper when the clutch is disengaged are not within the standard value, air may enter the hydraulic system, or either the clutch master cylinder or the concentric slave cylinder may be faulty. In this case, perform air bleeding, or check the clutch master cylinder or the concentric slave cylinder, and replace it if necessary.

CLUTCH BLEEDING

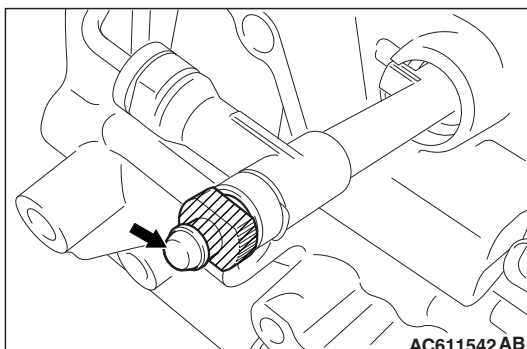
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⚠ CAUTION

Use the specified brake fluid. Do not mix brake fluids.

Specified fluid: Brake fluid DOT 3 or DOT 4

1. Connect a hose with a bottle to the bleeder screw.
2. Turn the nipple (the shaded area in the figure) counterclockwise to release it. (It can be turned only 180°)
3. Depress the clutch pedal slowly. Open the bleeder screw to let air and brake fluid out. Close the bleeder screw. Release the clutch pedal. Repeat until only brake fluid and no air comes out.
4. Check that the brake fluid reservoir level stays between "MAX" and "MIN" marks throughout the clutch bleeding process.



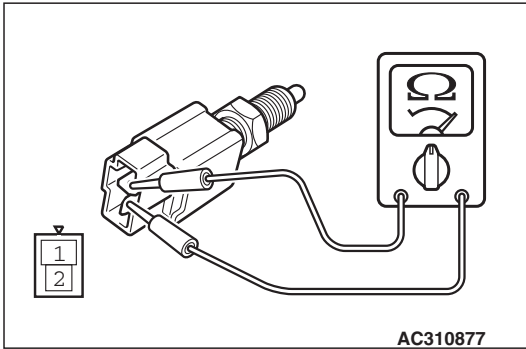
CLUTCH SWITCH CHECK

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⚠ CAUTION

Do not apply grease or lubricant to the switch and the switch installation section to avoid malfunction of the switch. In addition, do not use gloves which have grease on them.

1. Check the clutch pedal.
2. Connect an ohmmeter to the clutch switch connector, and then check for continuity when the clutch pedal is fully depressed and when it is released outward.



Tester connection	Pedal position	Specified condition
1-2	Fully depressed	Continuity (Less than 2 ohms)
	Released	Open circuit

3. If the continuity is incorrect, replace the clutch switch.

CLUTCH PEDAL AND MASTER CYLINDER

REMOVAL AND INSTALLATION

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CAUTION

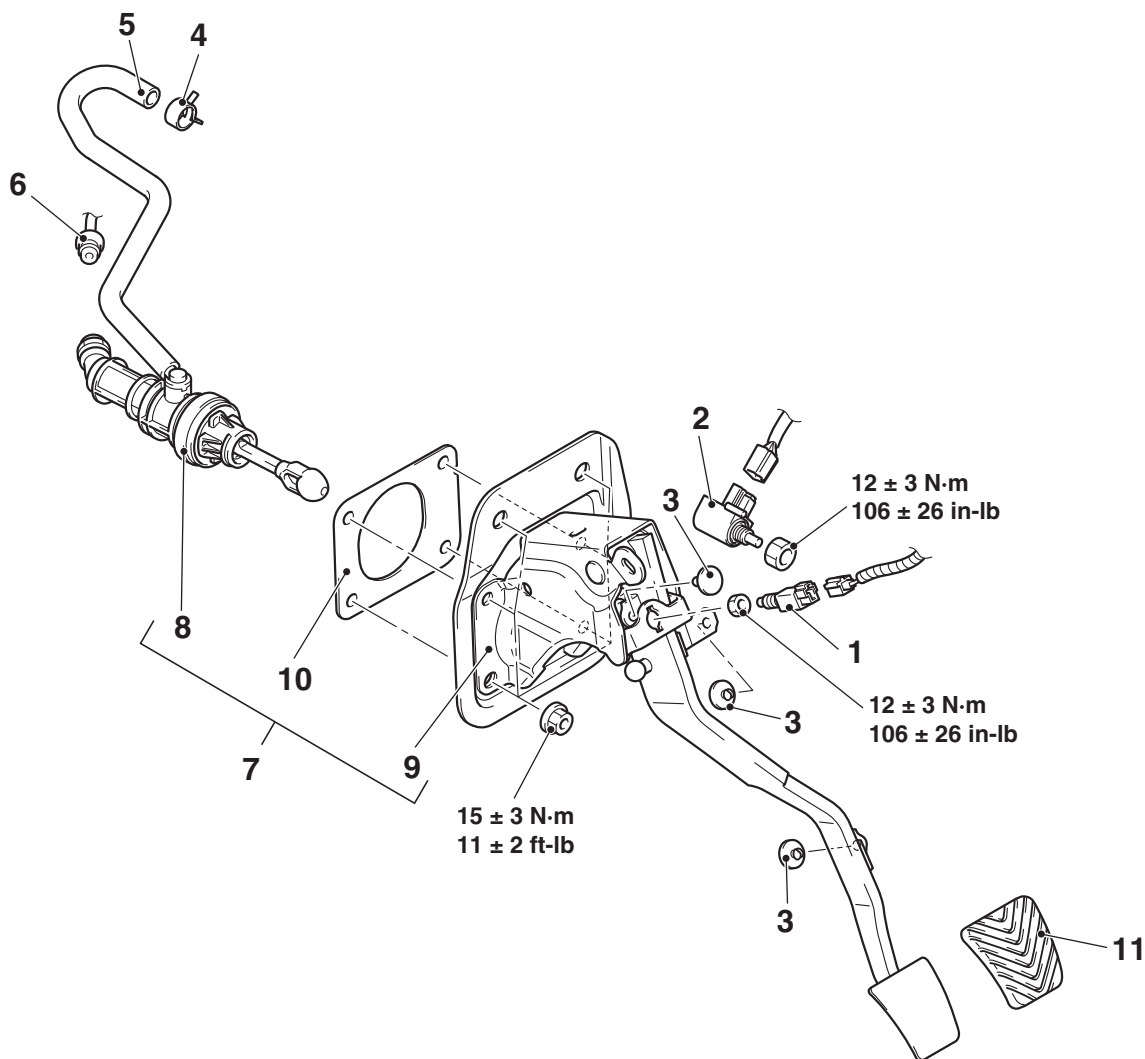
Do not apply grease or lubricant to the switch and the switch installation section to avoid malfunction of the switch. In addition, do not use gloves which have grease on them.

Pre-removal Operation

- Instrument panel under cover (Refer to GROUP 52A, Instrument Panel P.52A-3).
- Knee air bag module (Refer to GROUP 52B, Knee Air Bag Module P.52B-434).
- ETACS-ECU (Refer to GROUP 54A, P.54A-769).
- Air cleaner cover (Refer to GROUP 15, Air Cleaner P.15-10).

Post-installation Operation

- Instrument panel under cover (Refer to GROUP 52A, Instrument Panel P.52A-3).
- Knee air bag module (Refer to GROUP 52B, Knee Air Bag Module P.52B-434).
- ETACS-ECU (Refer to GROUP 54A, P.54A-769).
- Air cleaner cover (Refer to GROUP 15, Air Cleaner P.15-10).
- Clutch Line Bleeding (Refer to P.21A-3).
- Clutch Pedal Check (Refer to P.21A-2).



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- Removal steps**
- >>C<< 1. Clutch switch
- >>B<< 2. Clutch interlock switch
3. Stopper

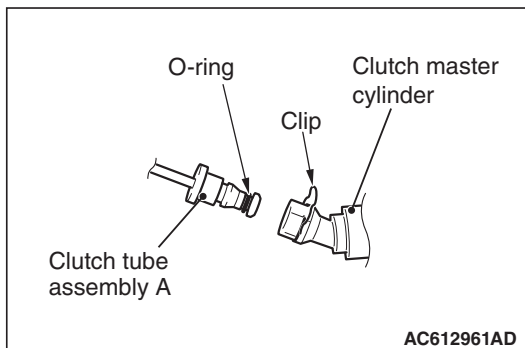
- Removal steps (Continued)**
4. Hose clip
5. Reservoir hose and brake fluid reservoir connection

Removal steps (Continued)

- <<A>> >>A<< 6. Clutch tube assembly A connection
- <> 7. Clutch master cylinder and clutch pedal assembly
- <<C>> 8. Clutch master cylinder
9. Clutch pedal assembly
10. Sealer
11. Pedal pad

REMOVAL SERVICE POINT**<<A>> CLUTCH TUBE ASSEMBLY A DISCONNECTION****⚠ CAUTION**

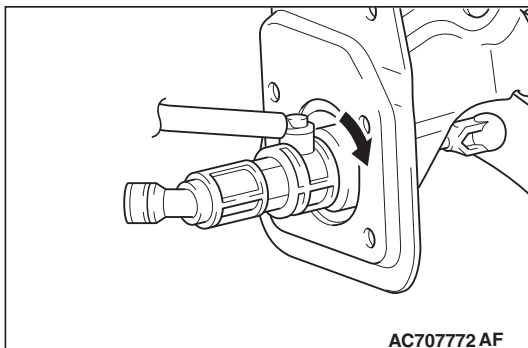
- Do not remove the O-rings and the clips from the clutch tube assembly A and the clutch master cylinder.
- If the O-rings or the clips of the clutch tube assembly A and the clutch master cylinder are damaged, replace each assembly.

**<> CLUTCH MASTER CYLINDER AND CLUTCH PEDAL ASSEMBLY REMOVAL**

Remove the clutch master cylinder and clutch pedal assembly from inside the vehicle.

<<C>> CLUTCH MASTER CYLINDER REMOVAL

Pull out the clutch master cylinder by turning the cylinder 45° to the direction of the arrow shown in the figure.



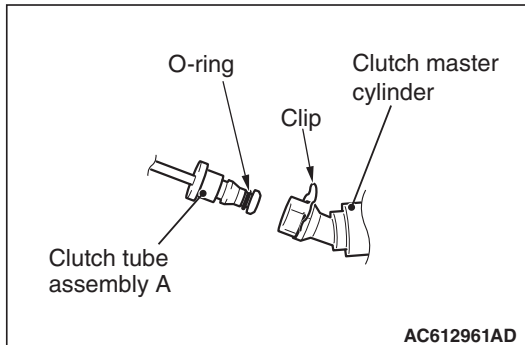
INSTALLATION SERVICE POINT

>>A<< CLUTCH TUBE ASSEMBLY A CONNECTION

CAUTION

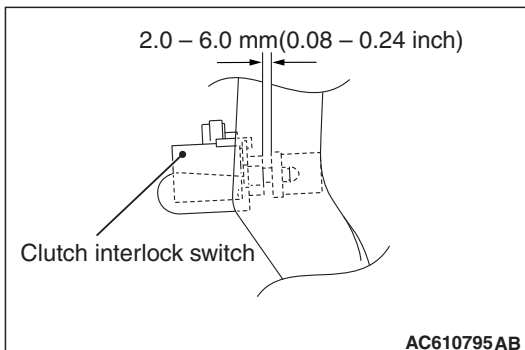
- Check that the O-rings and the clips are not damaged before installing the clutch tube assembly A and the clutch master cylinder.
- If the O-rings of the clutch tube assembly A and the clutch master cylinder and their installation positions are contaminated, clean with the clutch fluid before installation.

After installing the clip to the clutch master cylinder, install the clutch tube assembly A to the clutch master cylinder.



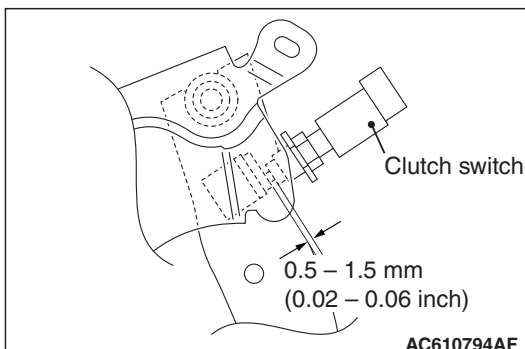
>>B<< CLUTCH INTERLOCK SWITCH INSTALLATION

Install the clutch interlock switch at the specified dimension when the clutch pedal is depressed.



>>C<< CLUTCH SWITCH INSTALLATION

Install the clutch switch at the specified dimension when the clutch pedal is released.

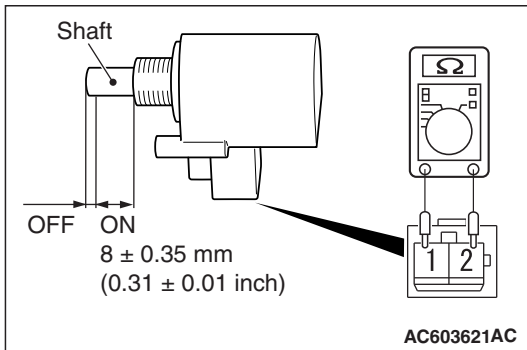


INSPECTION

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CLUTCH INTERLOCK SWITCH CONTINUITY CHECK

If continuity exists (2Ω or less) when the shaft is pressed to the value shown in the figure or more, and continuity does not exist when the shaft is released, the clutch interlock switch is in good condition.

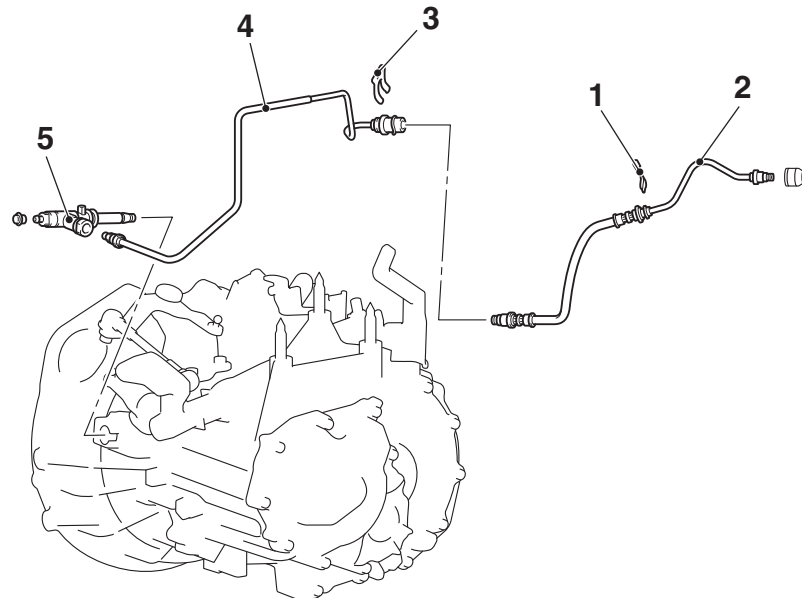


CLUTCH CONTROL

REMOVAL AND INSTALLATION

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<p>Pre-removal Operation</p> <ul style="list-style-type: none"> Clutch Fluid Draining 	<p>Post-installation Operation</p> <ul style="list-style-type: none"> Clutch Fluid Supplying Clutch Line Bleeding (Refer to P.21A-3). Clutch Pedal Adjustment (Refer to P.21A-2).
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Clutch line removal steps

- Hose clip A
- Clutch tube assembly A
- Hose clip A
- Clutch tube assembly B

Concentric slave cylinder removal steps

- Transaxle assembly (Refer to GROUP 22A, Transaxle assembly P.22A-12).
- Concentric slave cylinder adapter

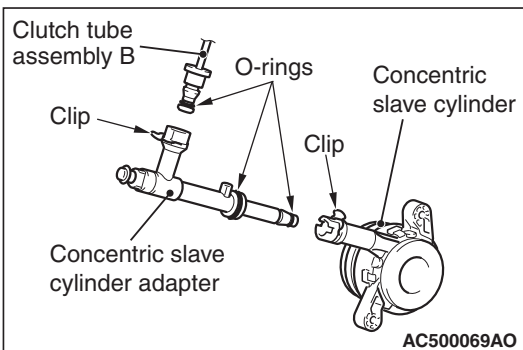
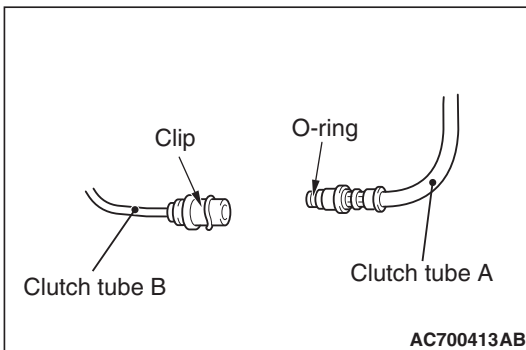
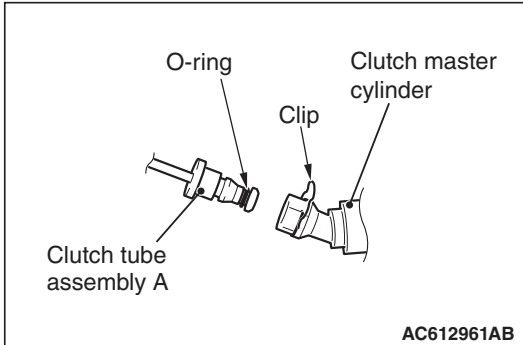
<<A>> >>A<<

REMOVAL SERVICE POINT

<<A>> CLUTCH TUBE ASSEMBLY DISCONNECTION/CONCENTRIC SLAVE CYLINDER ADAPTER REMOVAL

⚠ CAUTION

- Do not remove the O-rings and the clips from the clutch tube assembly, the clutch master cylinder, the concentric slave cylinder adapter and the concentric slave cylinder.
- If the O-rings or the clips of the clutch tube assembly, the clutch master cylinder, the concentric slave cylinder adapter and the concentric slave cylinder are damaged, replace each assembly.



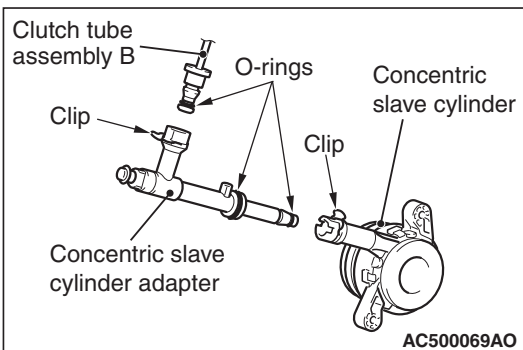
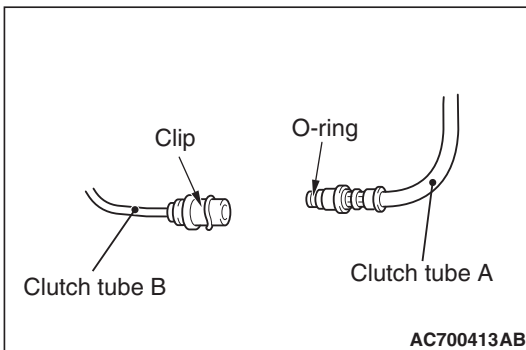
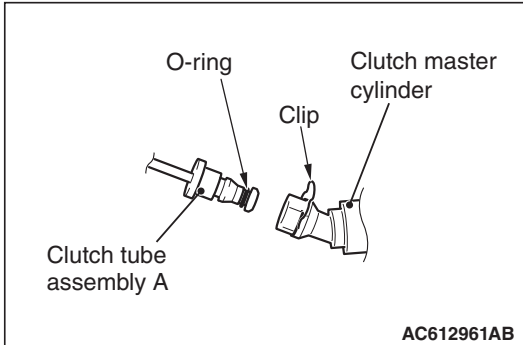
INSTALLATION SERVICE POINT

>>A<< CONCENTRIC SLAVE CYLINDER
ADAPTER/CLUTCH TUBE ASSEMBLY CONNEC-
TION

⚠ CAUTION

- When connecting each part, check that the O-ring and clip are not damaged.
- If any connection area or O-ring is dirty, clean with the clutch fluid.

Assemble the clip to the clutch master cylinder, clutch tube assembly B, and concentric slave cylinder. Then, connect the clutch tube assembly A and concentric slave cylinder adapter.



INSPECTION

- Check the clutch hose or tube for cracks or clogging.

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