

CLUTCH

CONTENTS

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GENERAL INFORMATION

CLUTCH CONTROL

The clutch control is either the cable type or the hydraulic type depending on the engine application. Each type of the clutch control has the following features.

Cable type

- The transaxle end of the clutch cable is supported by a rubber bushing, its body end supported by a rubber insulator and the lever end of the inner clutch cable is supported by a rubber damper to reduce vibration.

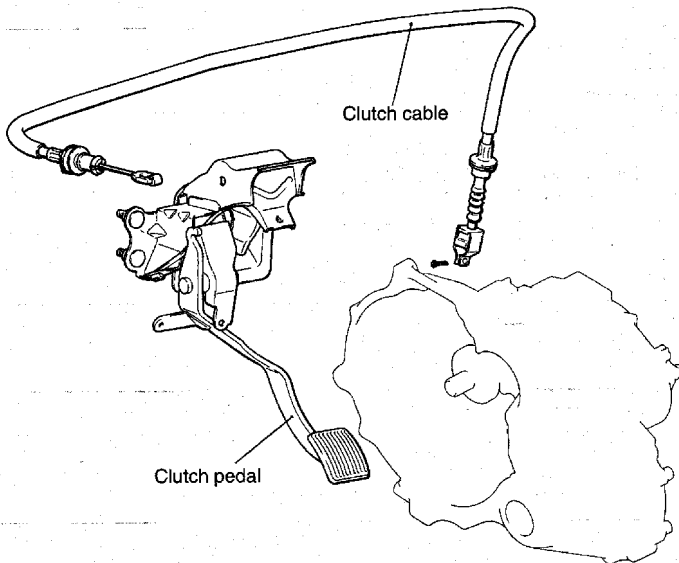
Hydraulic type

- A resin bushing is installed at the connection between the clutch master cylinder push rod and the clutch pedal to reduce noise produced in pedal operation.
- A rubber insulator is used in the clutch fluid line bracket supporting the connection between the clutch pipe and the clutch hose to reduce vibrations and noise.

| Items | | 1.5L Engine | 1.8L Engine |
|-------------------------|-----------------------------------------|-----------------------------------|-----------------------------------|
| Clutch operating method | | Cable type | Hydraulic type |
| Clutch disc | Type | Single dry disc type | Single dry disc type |
| | Facing diameter O.D. × I.D. mm (in.) | 200 × 130 (7.87 × 5.12) | 215 × 140 (8.46 × 5.51) |
| Clutch cover assembly | Type | Diaphragm spring strap drive type | Diaphragm spring strap drive type |
| Clutch release cylinder | I.D. mm (in.) | – | 20.64 (13/16) |
| Clutch master cylinder | I.D. mm (in.) | – | 15.87 (10/16) |

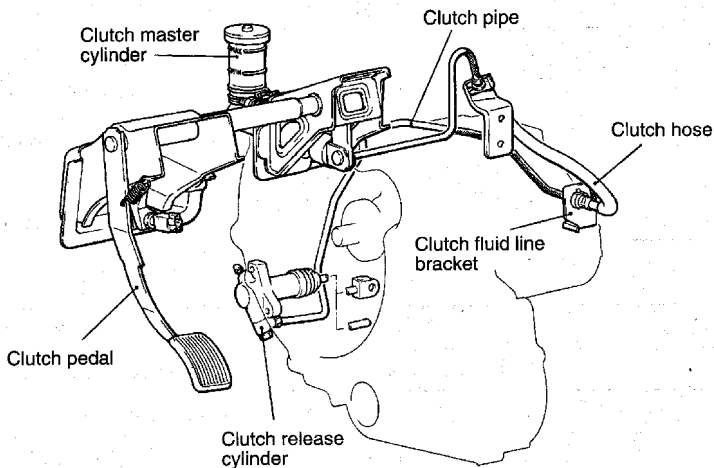
CONSTRUCTION DIAGRAM

Cable type



Z08S0027

Hydraulic type



Z08S0026

SERVICE SPECIFICATIONS

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| Items | Standard value | Limit |
|-------------------------------------------------------------------------------------------|---------------------|-----------------|
| Clutch pedal height mm (in.) | 162–165 (6.38–6.50) | – |
| Clutch pedal clevis pin play mm (in.) <1.8L engine> | 1–3 (.04–.12) | – |
| Clutch pedal free play mm (in.) | 1.5L engine | 17–22 (.67–.87) |
| | 1.8L engine | 6–13 (.24–.51) |
| Distance between the clutch pedal and the firewall when the clutch is disengaged mm (in.) | 70 (2.76) or more | – |
| Facing rivet sink mm (in.) | – | 0.3 (.012) |
| Diaphragm spring end height difference mm (in.) | – | 0.5 (.020) |

LUBRICANTS

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| Items | Specified lubricants |
|------------------------------------------------------------------------------------|-------------------------------------------------------------|
| Clutch release cylinder push rod | MITSUBISHI genuine grease Part No. 0101011 or equivalent |
| Release fork fulcrum | |
| Inner surface of clutch release cylinder and outer circumference of piston and cup | Conforming to DOT 3 or DOT 4 |
| Inner surface of clutch master cylinder and outer circumference of piston assembly | |

TROUBLESHOOTING

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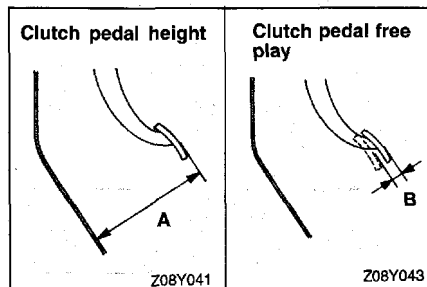
| Symptom | Probable cause | Remedy |
|----------------------------------------------------------------------|--------------------------------------------------|-------------------|
| Clutch slips | Clutch pedal play too small | Adjust |
| | Poorly lubricated clutch cable | Repair or replace |
| | Excessive wear of clutch disc facing | Replace |
| | Hardened clutch disc facing or oil on facing | |
| | Clutch release fork not operating smoothly | Repair or replace |
| | Settled or damaged diaphragm spring | Replace |
| | Clogged hydraulic system | Repair or replace |
| Gear shifting failure | Clutch pedal play too large | Adjust |
| | Poorly lubricated clutch cable | Repair or replace |
| | Large clutch disc distortion or runout | Replace |
| | Worn clutch cover assembly | |
| | Worn or corroded clutch disc splines | |
| | Separated clutch disc facing | |
| | Worn clutch release bearing | |
| | Damaged pressure plate or flywheel | |
| Leaky or clogged hydraulic system or air trapped in hydraulic system | Repair or replace | |
| Noisy clutch | Clutch pedal play too small | Adjust |
| | Incorrectly installed clutch cover assembly | Repair or replace |
| | Excessive wear of clutch disc facing | Replace |
| | Clutch release fork not operating smoothly | Repair or replace |
| | Worn clutch release bearing | Replace |
| | Settled or damaged torsion spring | |
| | Damaged pilot bushing | |
| | Poorly lubricated bearing sleeve sliding surface | Repair |
| Heavy clutch pedal | Poorly lubricated clutch pedal | Repair |
| | Poorly lubricated clutch cable | Repair or replace |
| | Poorly lubricated clutch disc splines | Repair |
| | Clutch release fork not operating smoothly | Repair or replace |
| | Poorly lubricated bearing sleeve sliding surface | Repair |

| Symptom | Probable cause | Remedy |
|-----------------|------------------------------------|--------------------|
| Clutch vibrates | Worn or damaged clutch disc facing | Replace |
| | Oil on clutch disc facing | |
| | Uneven diaphragm spring height | Repair or replace |
| | Settled or damaged torsion spring | Replace |
| | Damaged pressure plate or flywheel | |
| | Loose or damaged mounts | Tighten or replace |

SERVICE ADJUSTMENT PROCEDURES

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CLUTCH PEDAL INSPECTION AND ADJUSTMENT (CABLE TYPE)



1. Take off the carpet, etc. under the clutch pedal.
2. Measure the clutch pedal height and free play.

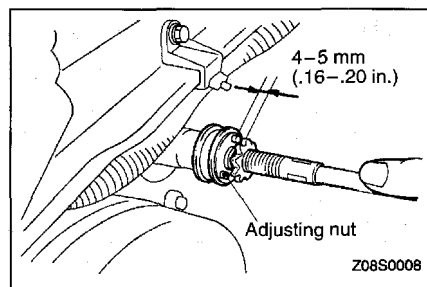
Standard value (A): 162-165 mm (6.38-6.50 in.)

Standard value (B): 17-22 mm (.67-.87 in.)

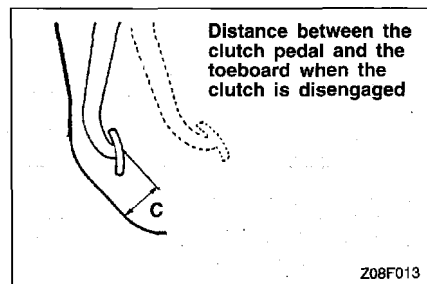
NOTE

The clutch pedal height is not adjustable.

If it deviates from the standard value, check the pedal support member for deformation etc. and replace the part if necessary.



3. If the clutch pedal play is outside the standard value, adjust by turning the adjusting nut so that the clearance between the adjusting nut and the insulator on the engine room side of the toeboard is at the standard dimension when the clutch cable is gently pulled.



4. After making the adjustment, depress the clutch pedal several times and check the clutch pedal to toeboard clearance is within the standard value range when the clutch is disengaged.

Standard value (C): 70 mm (2.76 in.) or more

5. If the clearance between the clutch pedal and the toeboard is less than the standard value when the clutch is disengaged, the clutch body is probably defective, so disassemble the clutch body.
6. Install the carpet, etc. to the original position.

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(HYDRAULIC TYPE)

1. Take off the carpet, etc. under the clutch pedal.
2. Measure the clutch pedal height.

Standard value (D): 162–165 mm (6.38–6.50 in.)

3. If the clutch pedal height deviates from the standard value, loosen the lock nut and turn the adjusting bolt (except vehicles with auto-cruise control), clutch switch (vehicles with auto-cruise control) or push rod until the pedal height is adjusted to the standard value.

4. Measure the clutch pedal clevis pin play.

Standard value (E): 1–3 mm (.04–.12 in.)

5. If the clutch pedal play is outside the standard value, adjust with the push rod.

Caution

Do not push in the master cylinder push rod at this time.

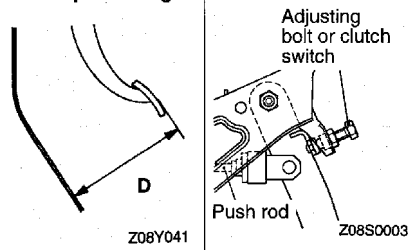
6. After completing the adjustments, confirm that the clutch pedal free play (measured at the face of the pedal pad) and the distance between the clutch pedal (the face of the pedal pad) and the toeboard when the clutch is disengaged are within the standard value ranges.

Standard value (F): 70 mm (2.8 in.) or more

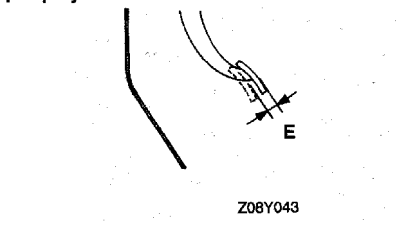
Standard value (G): 6–13 mm (.24–.51 in.)

7. If the clutch pedal free play and the distance between the clutch pedal and the toeboard when the clutch is disengaged do not agree with the standard values, it is probably the result of either air in the hydraulic system or a faulty master cylinder or clutch. Bleed the air, or disassemble and inspect the master cylinder or clutch.
8. Install the carpet, etc. to the original position.

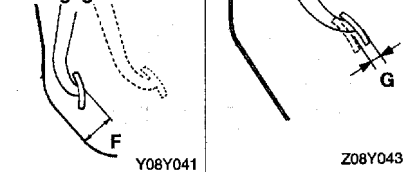
Clutch pedal height



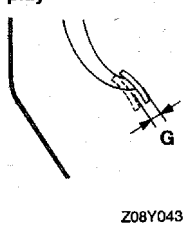
Clutch pedal clevis pin play



Distance between the clutch pedal and the toeboard when the clutch is disengaged



Clutch pedal free play

**BLEEDING**

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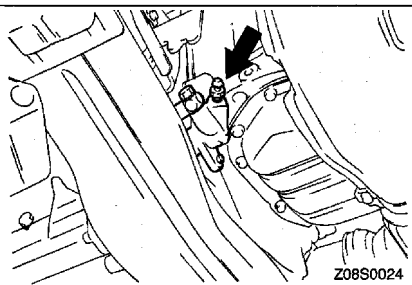
Whenever the clutch tube, the clutch hose, and/or the clutch master cylinder have been removed, or if the clutch pedal is spongy, bleed the system.

Caution

Use the specified fluid. Avoid using a mixture of the specified fluid and other fluid.

Specified fluid:

Conforming to DOT 3 or DOT 4

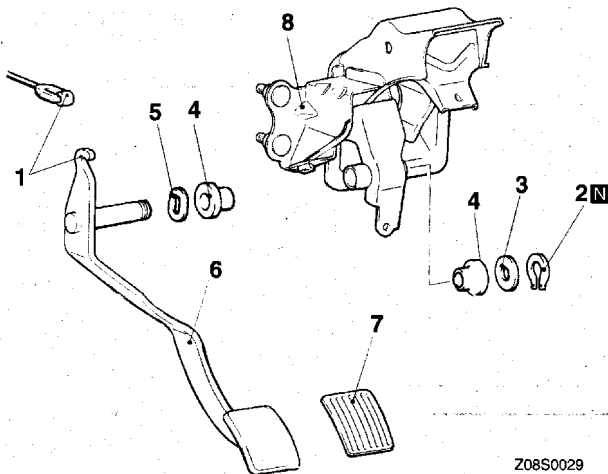
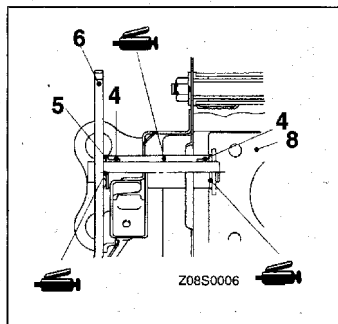


CLUTCH PEDAL (CABLE TYPE)

REMOVAL AND INSTALLATION

Post-installation Operation

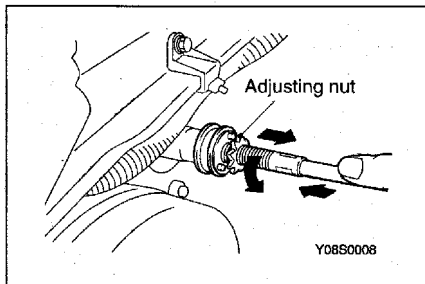
- Clutch Pedal Adjustment (Refer to P. 21-6.)



Removal steps

1. Connection for clutch cable
2. Snap ring
3. Plain washer
4. Bushing

5. Wave washer
6. Clutch pedal
7. Pedal pad
8. Pedal support member (Refer to GROUP 35 – Brake Pedal.)



REMOVAL SERVICE POINT

◀▶ CLUTCH CABLE DISCONNECTION

- (1) Pull out the cable and turn the adjusting nut counter-clockwise to increase the cable play.
- (2) Push the cable into the interior.
- (3) Disconnect the cable from the clutch lever.

INSPECTION

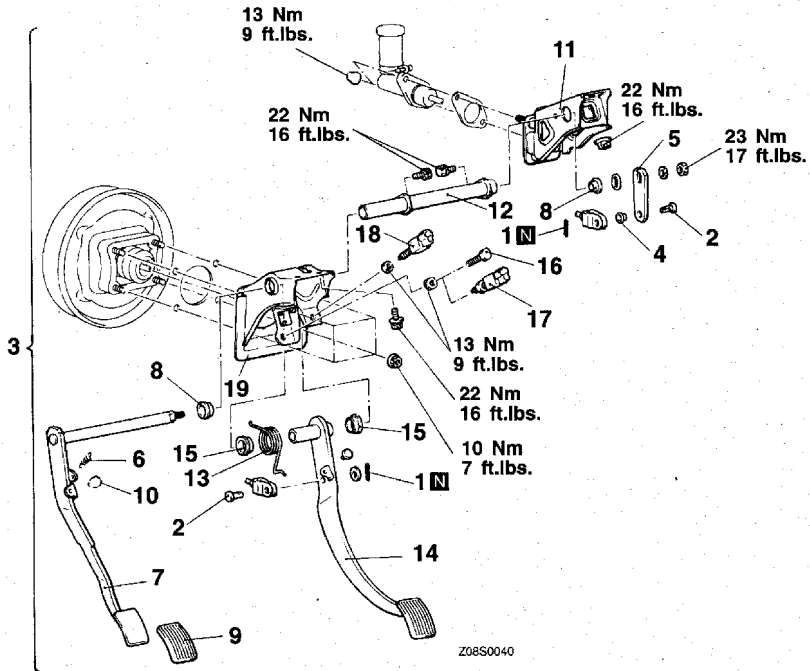
- Check the cable movement for roughness.
- Check the outer cable for damage.
- Check the bushings for wear.
- Check the clutch pedal for bend or torsion.
- Check the pedal pad for damage or wear.

CLUTCH PEDAL (HYDRAULIC TYPE)

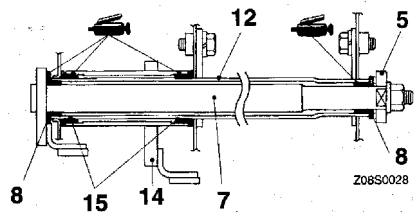
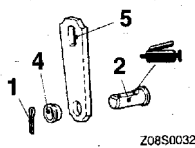
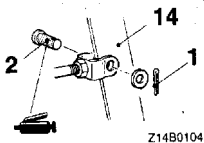
REMOVAL AND INSTALLATION

Post-installation Operation

- Clutch Pedal Adjustment (Refer to P. 21-7.)



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Removal steps

1. Cotter pin
2. Clevis pin
3. Pedal assembly
4. Bushing
5. Clutch lever
6. Return spring
7. Clutch pedal
8. Bushing
9. Pedal pad
10. Stopper

11. Master cylinder member assembly
12. Pedal rod
13. Return spring
14. Brake pedal
15. Bushing
16. Stopper bolt <Vehicles without auto-cruise control system>
17. Clutch switch <Vehicles with auto-cruise control system>
18. Stop light switch
19. Pedal support member

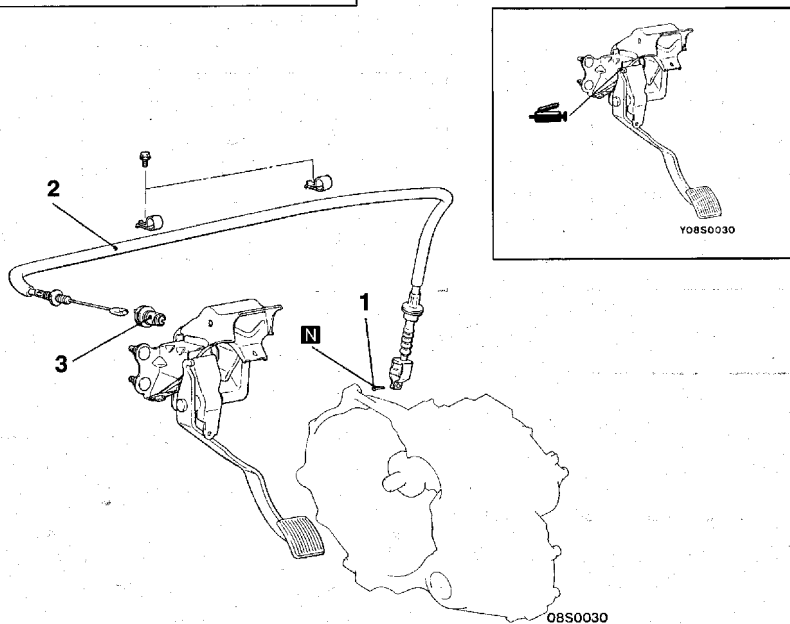
TSB Revision

INSPECTION

- Check the pedal shaft and bushing for wear.
- Check the clutch pedal for bend or torsion.
- Check the return spring for damage or deterioration.
- Check the pedal pad for damage or wear.

CLUTCH CONTROL (CABLE TYPE)**REMOVAL AND INSTALLATION****Post-Installation Operation**

- Clutch Pedal Adjustment (Refer to P. 21-6.)

**Removal steps**

1. Cotter pin
2. Clutch cable
3. Insulator

INSPECTION

- Check the cable movement for roughness.
- Check the outer cable for damage.

CLUTCH CONTROL (HYDRAULIC TYPE)

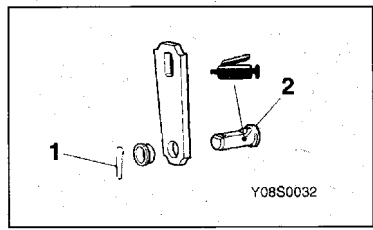
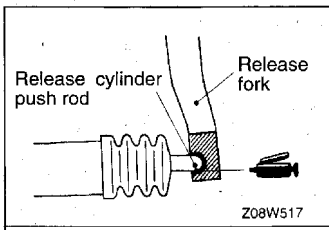
REMOVAL AND INSTALLATION

Pre-removal Operation

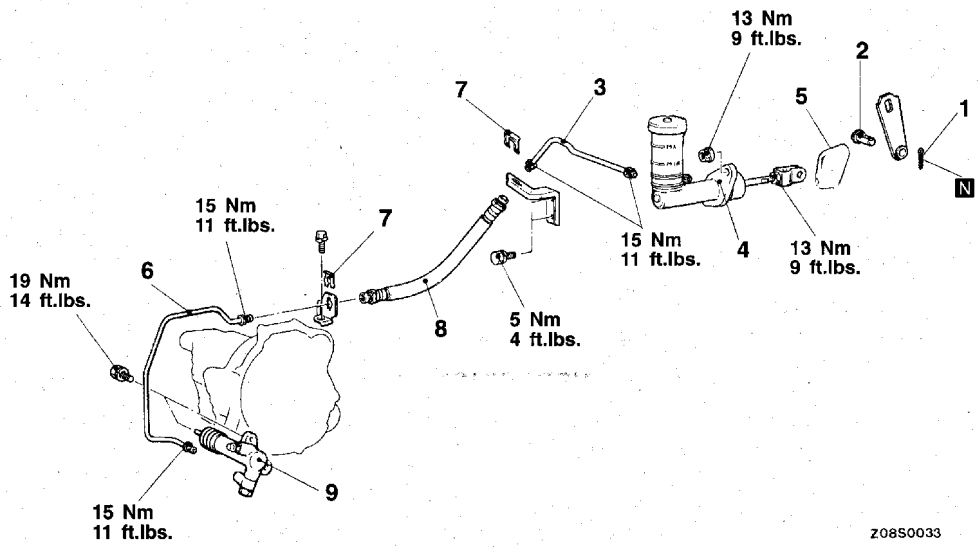
- Clutch Fluid Draining

Post-installation Operation

- Clutch Fluid Supplying
- Clutch Line Bleeding (Refer to P. 21-7.)
- Clutch Pedal Adjustment (Refer to P. 21-7.)



Grease:
MITSUBISHI genuine grease
Part No. 0101011 or equivalent



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Clutch master cylinder removal steps

1. Cotter pin
2. Clevis pin
3. Clutch pipe
4. Clutch master cylinder
5. Sealer



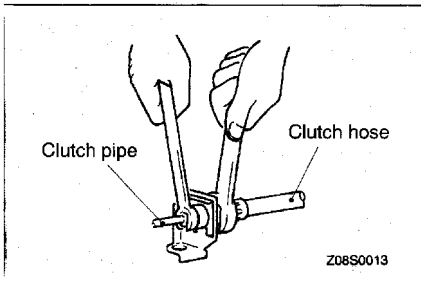
Clutch line removal steps

3. Clutch pipe
6. Clutch pipe
7. Hose clip
8. Clutch hose

Clutch release cylinder removal steps

6. Clutch pipe
9. Clutch release cylinder

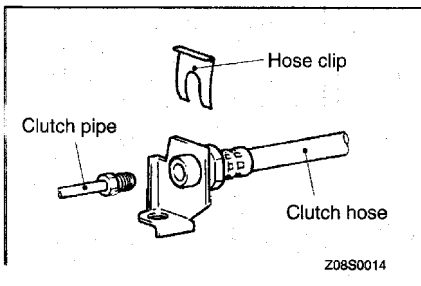




REMOVAL SERVICE POINT

◀A▶ CLUTCH PIPE / CLUTCH HOSE DISCONNECTION

- (1) Secure the nut on the clutch hose and loosen the flare nut on the clutch pipe.



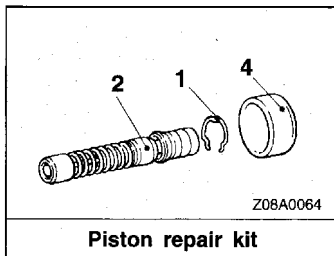
- (2) Remove the hose clip from the clutch hose to remove clutch hose from bracket.

INSPECTION

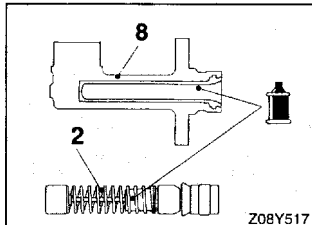
- Check the clutch hose or tube for cracks or clogging.

CLUTCH MASTER CYLINDER

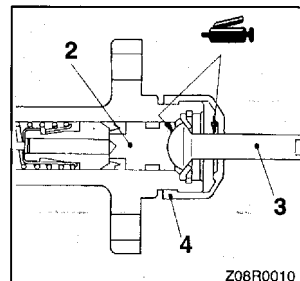
DISASSEMBLY AND REASSEMBLY



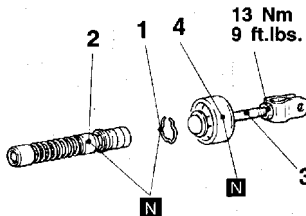
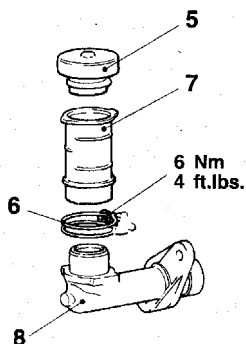
Piston repair kit



Clutch fluid:
Conforming to DOT 3 or
DOT 4



Grease: Rubber grease



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Disassembly steps



1. Piston stopper ring
2. Piston assembly
3. Push rod assembly
4. Boot
5. Reservoir cap

6. Fluid reservoir band
7. Fluid reservoir
8. Clutch master cylinder body

Caution

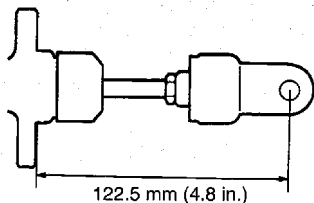
Do not disassemble piston assembly.

INSTALLATION SERVICE POINT

▶◀ PUSH ROD ASSEMBLY INSTALLATION

NOTE

Installing the push rod assembly in the dimension shown in the illustration will facilitate the adjustment of the clutch pedal.



INSPECTION

- Check the inside cylinder body for rust or scars.
- Check the piston cup for wear or deformation.
- Check the piston for rust or scars.
- Check the clutch tube connection part for clogging.