

CLUTCH

CONTENTS

CLUTCH 21A

CLUTCH OVERHAUL 21B



CLUTCH

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GENERAL INFORMATION

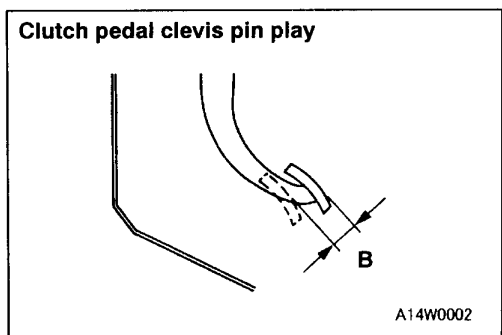
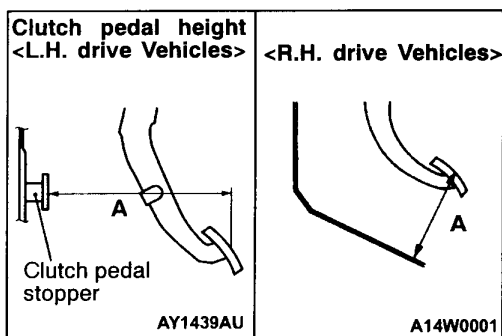
The clutch is a dry single-disc, diaphragm type; hydraulic pressure is used for the clutch control.

SERVICE SPECIFICATIONS

Items	Standard value
Clutch pedal height mm	202.1 – 206.1 <L.H. drive vehicles> 173.5 – 177.5 <R.H. drive vehicles>
Clutch pedal clevis pin play mm	1 – 3
Clutch pedal free play mm	4 – 13
Distance between the clutch pedal and the toeboard when the clutch is disengaged mm	114.3 or more <L.H. drive vehicles> 100 or more <R.H. drive vehicles>

LUBRICANTS

Items	Specified lubricants	Quantity
Clutch fluid	Brake fluid DOT3 or DOT4	As required
Push rod assembly	Rubber grease	
Boot		
Release cylinder push rod	MITSUBISHI genuine grease Part No. 0101011	



ON-VEHICLE SERVICE

CLUTCH PEDAL INSPECTION AND ADJUSTMENT

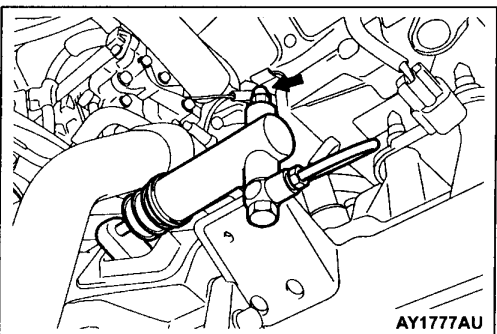
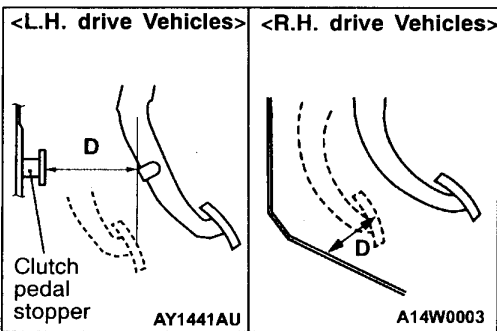
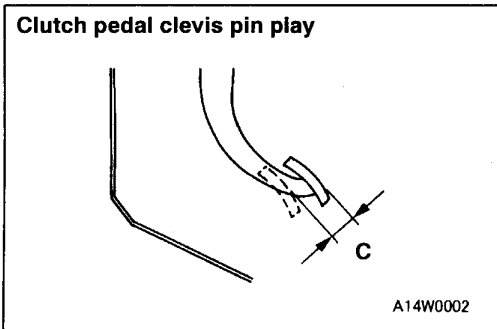
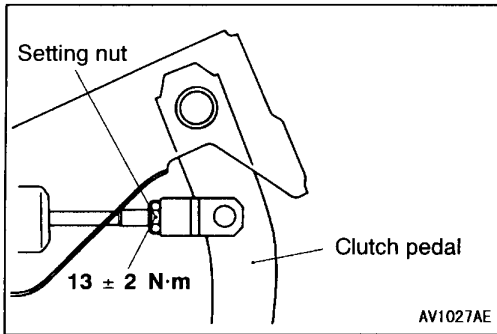
1. Turn up the carpet, etc. under the clutch pedal.
2. Measure the clutch pedal height and the clutch pedal clevis pin play.

Standard value (A):

202.1 – 206.1 mm <L.H. drive vehicles>

173.5 – 177.5 mm <R.H. drive vehicles>

Standard value (B): 1 – 3 mm



3. If the height of the clutch pedal is outside the standard value, loosen the setting nut to adjust the pedal height to the standard value.

Caution

Do not push in the master cylinder push rod at this time, otherwise the clutch will not operate properly.

4. 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 clutch pedal stopper or toeboard when the clutch is disengaged are within the standard value ranges.

Standard value (C): 4 – 13 mm

Standard value (D):

114.3 mm or more <L.H. drive vehicles>

100 mm or more <R.H. drive vehicles>

5. If the clutch pedal free play and the distance between the clutch pedal and the clutch pedal stopper or 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, clutch cylinder or clutch. Bleed the air, or disassemble and inspect the master cylinder, clutch cylinder or clutch.
6. Turn back the carpet, etc.

BLEEDING

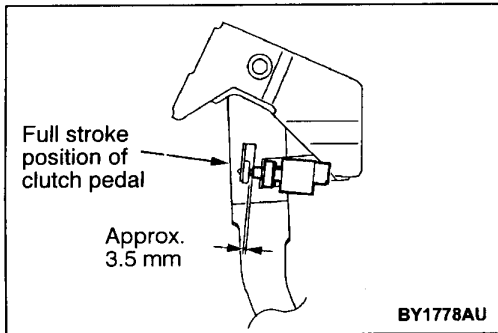
Specified fluid: Brake fluid DOT 3 or DOT 4

Caution

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

CLUTCH PEDAL POSITION SWITCH ADJUSTMENT

1. Adjust the clutch pedal. (Refer to P. 21A-3).
2. Disconnect the connector from clutch pedal position switch.
3. Loosen the clutch pedal position switch by rotating approx. quarter turn to counterclockwise.
4. Fix the clutch pedal in full stroke.



5. Fix the clutch pedal position switch by rotating approx. quarter turn to clockwise in the position as shown in the illustration.
6. Connect the connector to the clutch pedal position switch.
7. Check that the engine starts when the clutch is released.

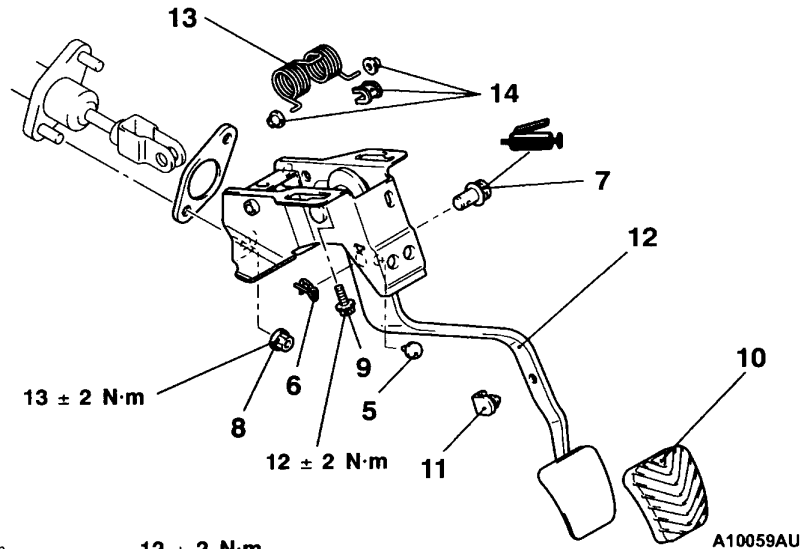
CLUTCH PEDAL

REMOVAL AND INSTALLATION

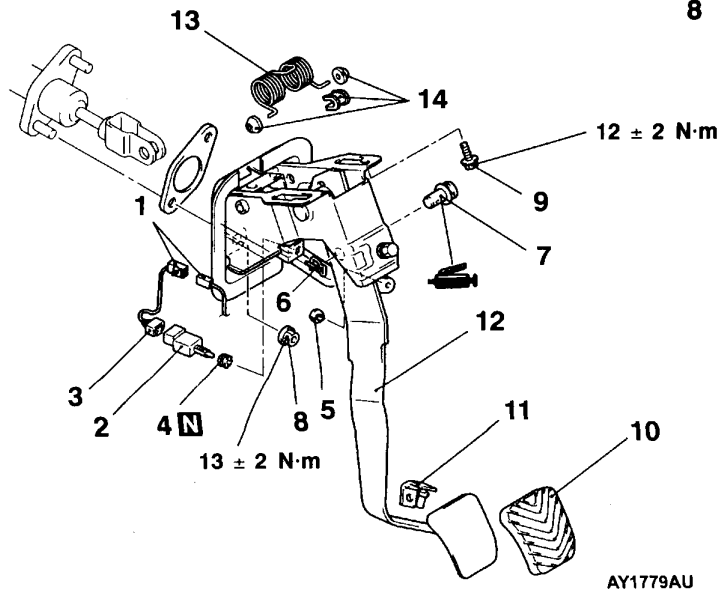
Post-installation Operation

- Clutch Pedal Adjustment (Refer to P.21A-2.)
- Clutch Pedal Position Switch Adjustment (Refer to P.21A-4.)

<L.H. drive vehicles>

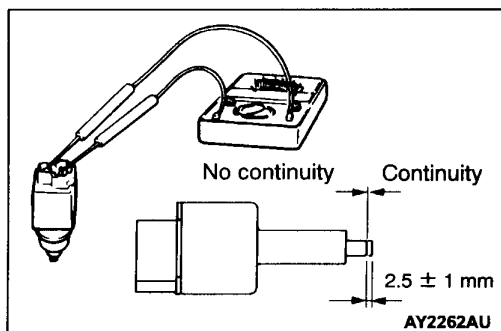


<R.H. drive vehicles>



Removal steps

- Column cover, under cover, lower frame (Refer to GROUP 52A.)
- 1. Connector connection
- 2. Clutch pedal position switch
- 3. Clutch pedal position switch sub-harness
- 4. Clip
- 5. Stopper
- 6. Snap pin
- 7. Clevis pin
- 8. Clutch master cylinder mounting nut
- 9. Master cylinder member mounting bolt
- 10. Pedal pad
- 11. Pedal stopper
- 12. Clutch pedal assembly
- 13. Turn over spring
- 14. Bushing

**INSPECTION****CLUTCH PEDAL POSITION SWITCH CONTINUITY CHECK**

1. Connect the circuit tester (Ω range) to the connector of clutch pedal position switch.
2. When the shaft is pushed more than the dimension as shown in the illustration if there is not continuity, and removing if there is continuity, the switch is good condition.

CLUTCH CONTROL

REMOVAL AND INSTALLATION

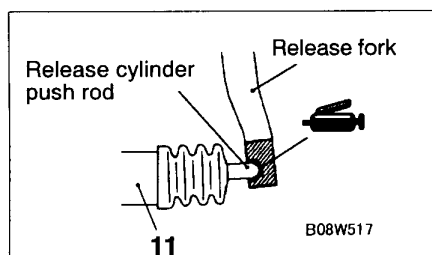
Pre-removal Operation

Clutch Fluid Draining

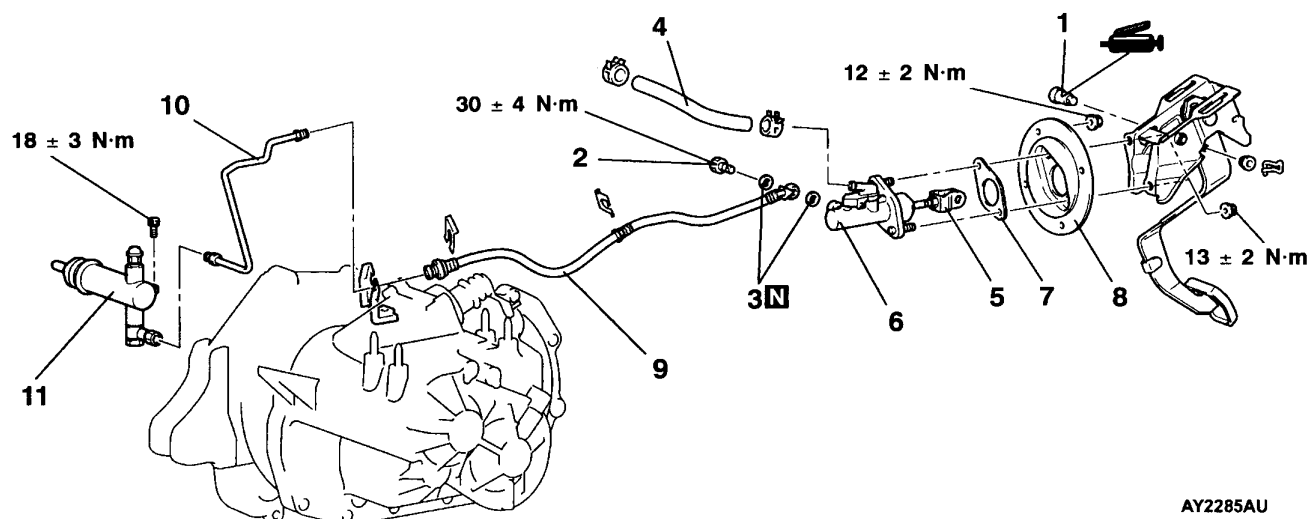
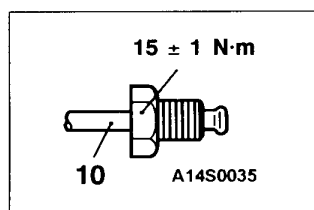
Post-installation Operation

- Clutch Fluid Supplying
- Clutch Pedal Adjustment (Refer to P.21A-3.)
- Clutch Pedal Position Switch Adjustment (Refer to P.21A-4.)
- Clutch Line Bleeding (Refer to P.21A-4.)

<L.H. drive vehicles>



Specified grease:
MITSUBISHI genuine grease
Part No. 0101011



AY2285AU

Clutch master cylinder removal steps

1. Clevis pin assembly
2. Eye bolt
3. Gasket
4. Reservoir hose
5. Clevis pin and pushrod assembly connecting part
6. Clutch master cylinder
7. Sealer
8. Retainer assembly

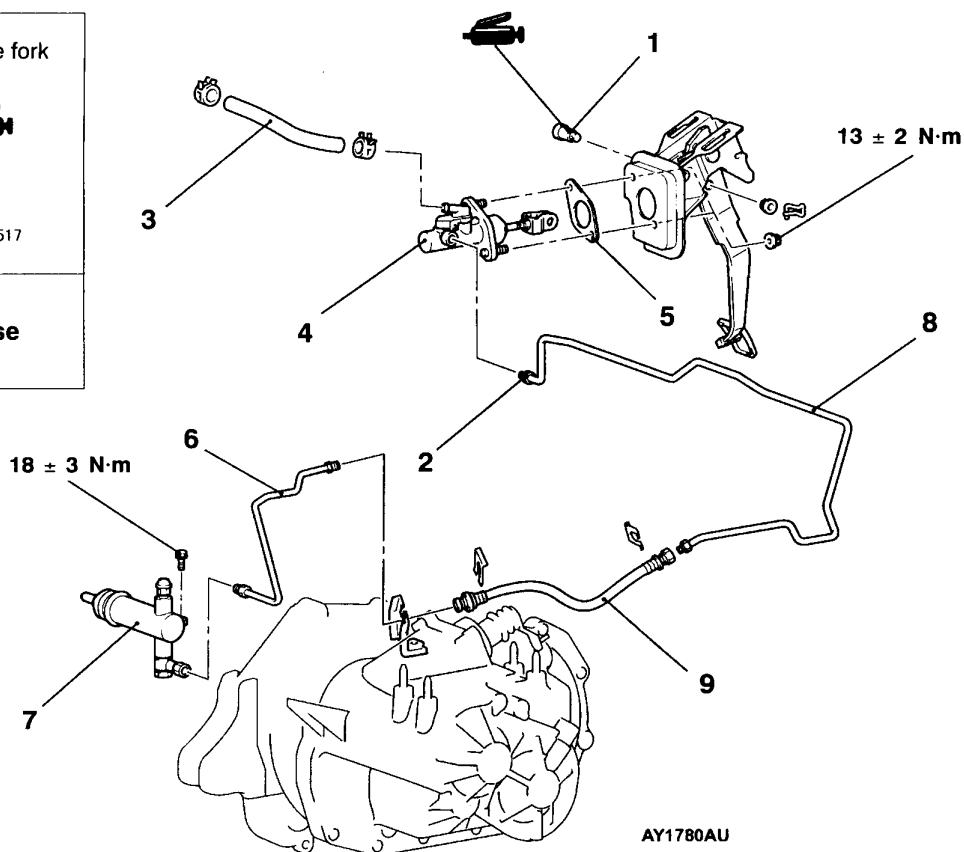
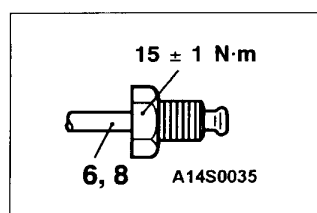
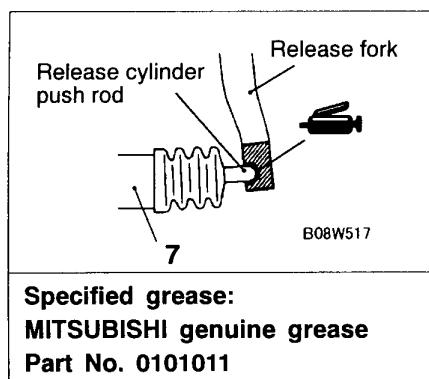
Clutch release cylinder removal steps

10. Clutch pipe
11. Clutch release cylinder

Clutch line removal steps

9. Clutch hose
10. Clutch pipe

<R.H. drive vehicles>

**Clutch master cylinder removal steps**

1. Clevis pin assembly
2. Clutch pipe connection
3. Reservoir hose
4. Clutch master cylinder
5. Sealer

Clutch release cylinder removal steps

6. Clutch pipe
7. Clutch release cylinder

Clutch line removal steps

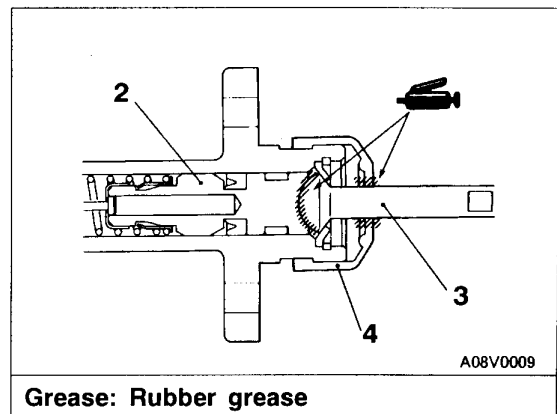
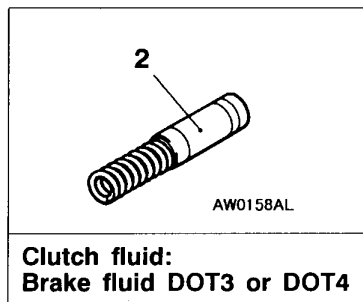
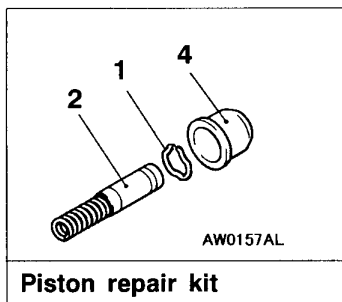
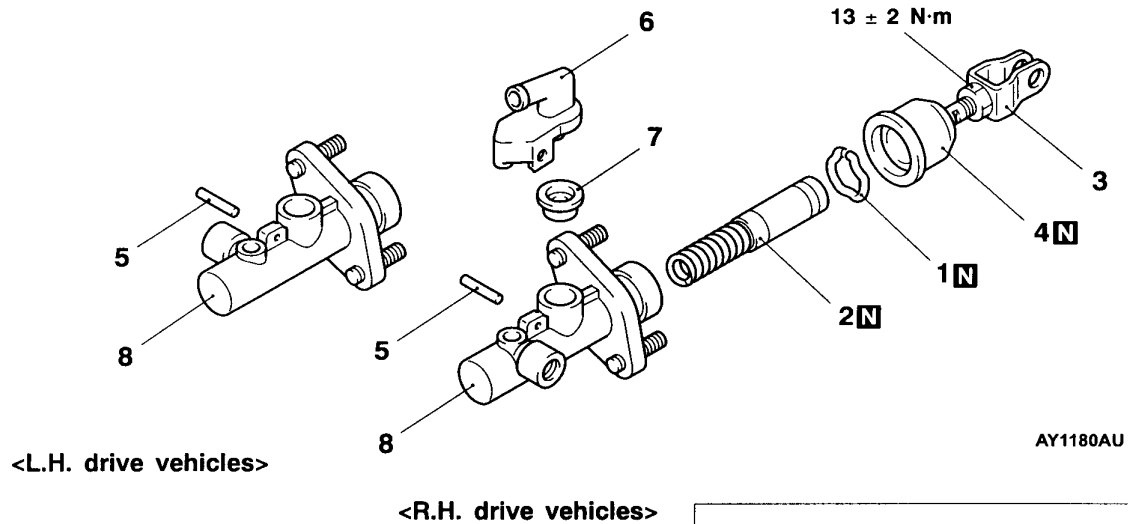
8. Clutch pipe
9. Clutch hose

DISASSEMBLY AND REASSEMBLY

CLUTCH MASTER CYLINDER

Caution

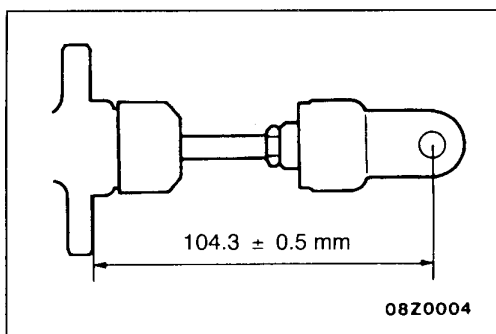
Do not disassemble piston assembly.



Disassembly steps

1. Piston stopper ring
2. Piston assembly
- ▶◀ 3. Push rod assembly
4. Boot

5. Spring pin
6. Reservoir tank
7. Seal
8. Master cylinder body



INSTALLATION SERVICE POINT

▶◀ PUSH ROD ASSEMBLY INSTALLATION

Set the length of the push rod assembly to the shown dimension to make the adjustment of clutch pedal easier.

CLUTCH OVERHAUL

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GENERAL DESCRIPTION

The pull-type clutch has been adopted to improve the cut-off at high rotations and reduce the clutch pedal pressing force.

SPECIFICATIONS

Clutch disc	Type	Dry single-disc type
	Facing dimension mm	240 × 160
Clutch cover	Type	Diaphragm spring, pull-type
	Set load N	9,320
Clutch control method		Hydraulic method

SERVICE SPECIFICATIONS

Items	Limit value mm
Clutch disc facing rivet sink	0.3
Clearance between release cylinder inner diameter and piston outer diameter	0.15

TIGHTENING TORQUE

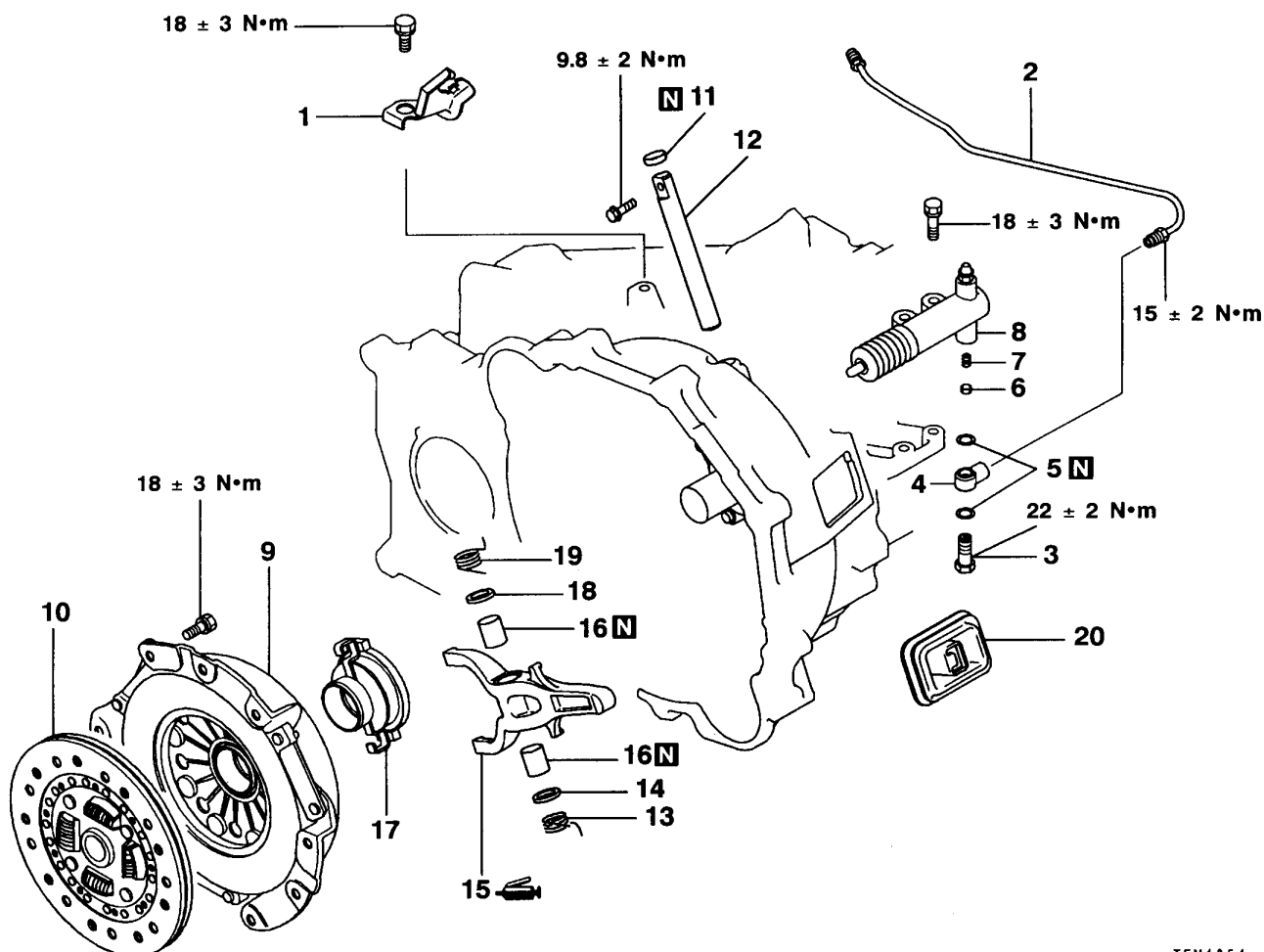
Items	Torque N•m
Clutch tube flare nut	15 ± 2
Clutch fluid line bracket mounting bolt	18 ± 3
Clutch release cylinder air breather	11 ± 1
Clutch release cylinder mounting bolt	18 ± 3
Clutch release fork shaft mounting bolt	9.8 ± 2
Clutch release cylinder union bolt	22 ± 2

LUBRICANTS

Items	Specified lubricants
Release fork and release cylinder push rod contact section	MITSUBISHI genuine grease Part No.0101011 or equivalent
Release fork and release fork shaft sliding section	
Release fork and release bearing contact section	
Piston and piston cup circumference	MITSUBISHI genuine brake fluid "DIA-QUEEN BRAKE FLUID SUPER 4" or equivalent
Release cylinder inner circumference	

CLUTCH

REMOVAL AND INSTALLATION

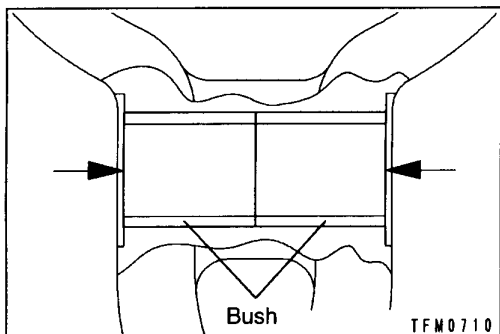


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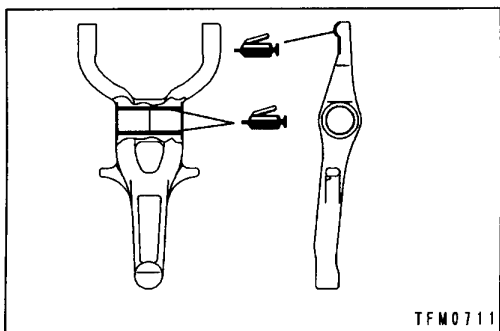
Removal steps

1. Clutch fluid line bracket
2. Clutch tube
3. Union bolt
4. Union
5. Gasket
- ▶E◀ 6. Valve plate
- ▶E◀ 7. Valve plate spring
- ▶D◀ 8. Clutch release cylinder
9. Clutch cover
10. Clutch disc

- ▶C◀ 11. Sealing cap
12. Release fork shaft
13. Support spring (L)
14. Packing
- ▶B◀ 15. Release fork
- ▶A◀ 16. Bush
17. Clutch release bearing
18. Packing
19. Support spring (R)
20. Release fork boot

**REASSEMBLY SERVICE POINTS****►A◄ BUSH INSTALLATION**

Press the bush into the position of the release valve shown in the illustration.

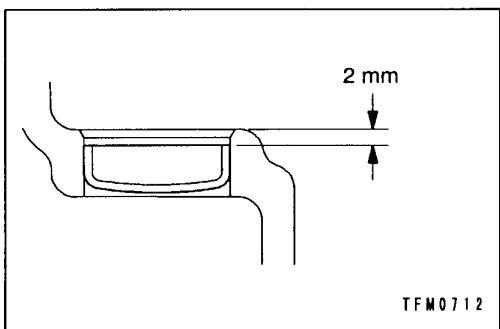
**►B◄ RELEASE FORK INSTALLATION**

Apply grease on the release fork at the position shown in the illustration.

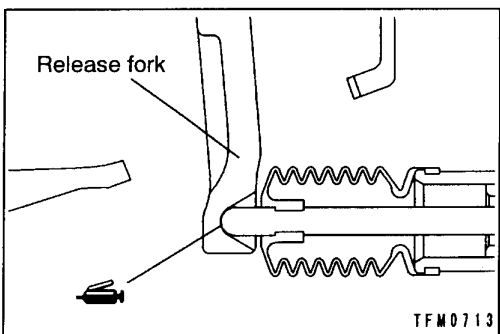
Grease

Specified grease:

mitsubishi genuine grease Part No.0101011 or equivalent

**►C◄ SEALING CAP INSTALLATION**

Press the sealing cap into the position shown in the illustration while taking care so that it is not tilted.

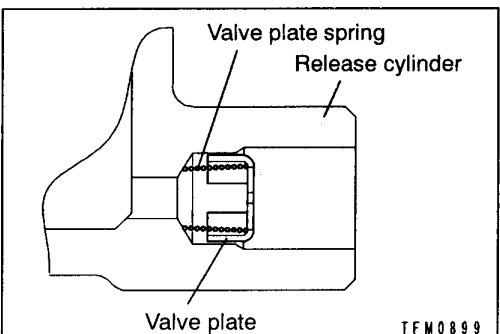
**►D◄ CLUTCH RELEASE CYLINDER INSTALLATION**

Fill grease in the release fork to the position shown in the illustration.

Grease

Specified grease:

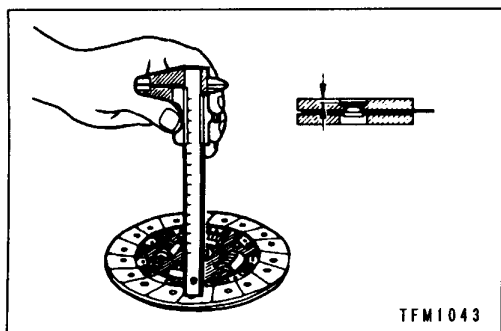
mitsubishi genuine grease Part No.0101011 or equivalent

**►E◄ VALVE PLATE SPRING/VALVE PLATE INSTALLATION**

Set the spring's large diameter side to the valve plate side, and install the valve plate spring and valve plate.

INSPECTION**CLUTCH COVER**

- (1) Check the pressure plate surface for wear, cracks or discoloration.
- (2) Check the strap plate rivet for looseness. If loose, replace the clutch cover.

**CLUTCH DISC****Caution**

Do not wash the clutch disc with cleaning oil.

- (1) Check the facing for decomposition caused by rivet looseness, single-side contact or seizure, and check for the presence of grease. If any fault is found, replace the clutch disc.
- (2) Measure the rivet sinking level, and replace the clutch disc if the limit is exceeded.

Limit value: 0.3 mm

- (3) Check the torsion spring for play and breakage. If faulty, replace the clutch disc.
- (4) Set the clutch disc onto the input shaft, and check the sliding state and for play in the rotation direction. If the sliding state is poor, wash the disc, reassemble and then check the state again. If there is extreme play, replace the clutch disc or input shaft or both parts.

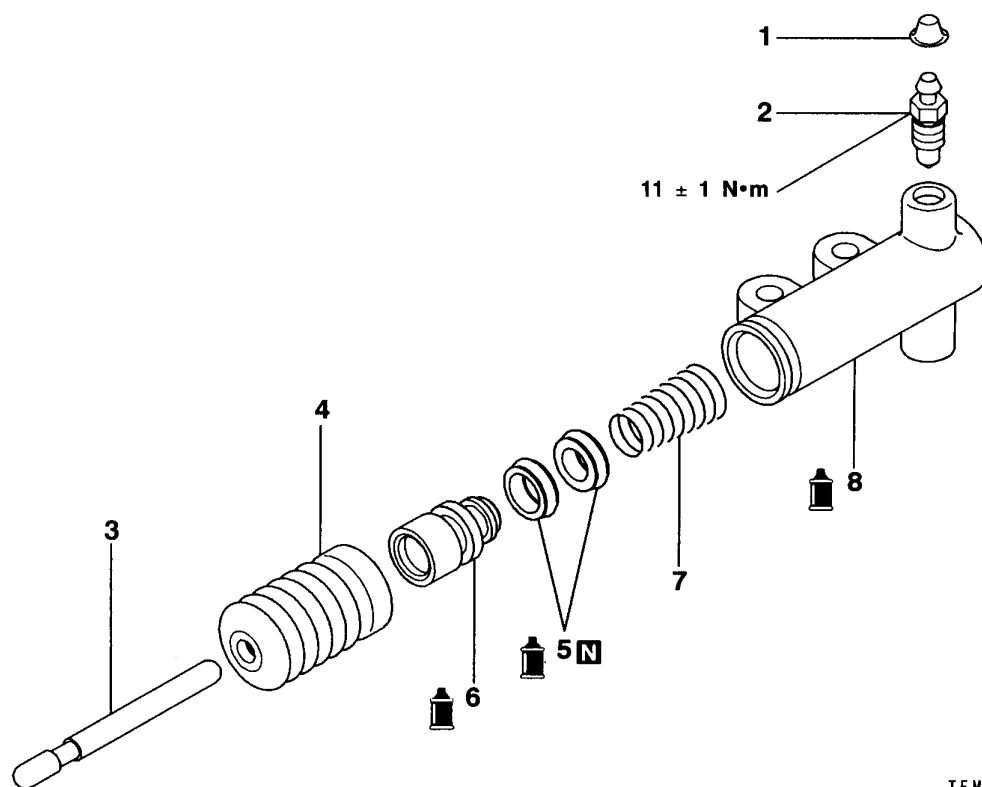
CLUTCH RELEASE BEARING**Caution**

Grease is filled in the release bearing, so do not wash with washing oil.

- (1) Check the bearing for seizure, damage, abnormal noise or improper rotation.
- (2) Check that the pull ring of the release bearing is not worn.
- (3) If the surface where the bearing contacts the release fork is abnormally worn, replace the bearing.

RELEASE FORK AND RELEASE FORK SHAFT

- (1) If the surface where the release fork contacts the bearing is abnormally worn, replace the release fork.
- (2) Check the release fork shaft for bending and wear. If any abnormality is found, replace the release fork shaft.

CLUTCH RELEASE CYLINDER**DISASSEMBLY AND REASSEMBLY**

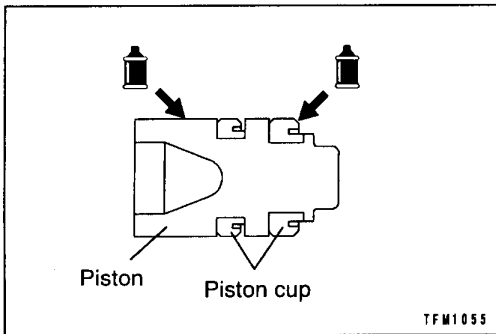
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Disassembly step

1. Cap
2. Air breather
3. Push rod
4. Boot



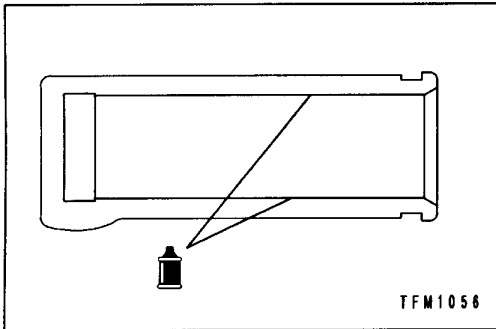
5. Piston cup
6. Piston
7. Conical spring
8. Release cylinder

**REASSEMBLY SERVICE POINT****▶◀ PISTON/PISTON CUP INSTALLATION**

After applying brake fluid on the inner surface of the release cylinder and circumference of the piston and piston cup, insert the piston and piston cup into the release cylinder.

Brake fluid**Specified fluid:**

MITSUBISHI genuine brake fluid “DIA-QUEEN BRAKE FLUID SUPER 4” or equivalent

**INSEPCION****RELEASE CYLINDER**

- (1) Check the inner surface of the release cylinder for rust and damage.
- (2) Using a cylinder gauge, measure the inner diameter of the release cylinder at approx. three positions (deepest section, middle, opening). If the clearance with the outer diameter of the piston exceeds the limit value, replace the release cylinder assembly.

Limit value: 0.15 mm