

CHAPTER CC

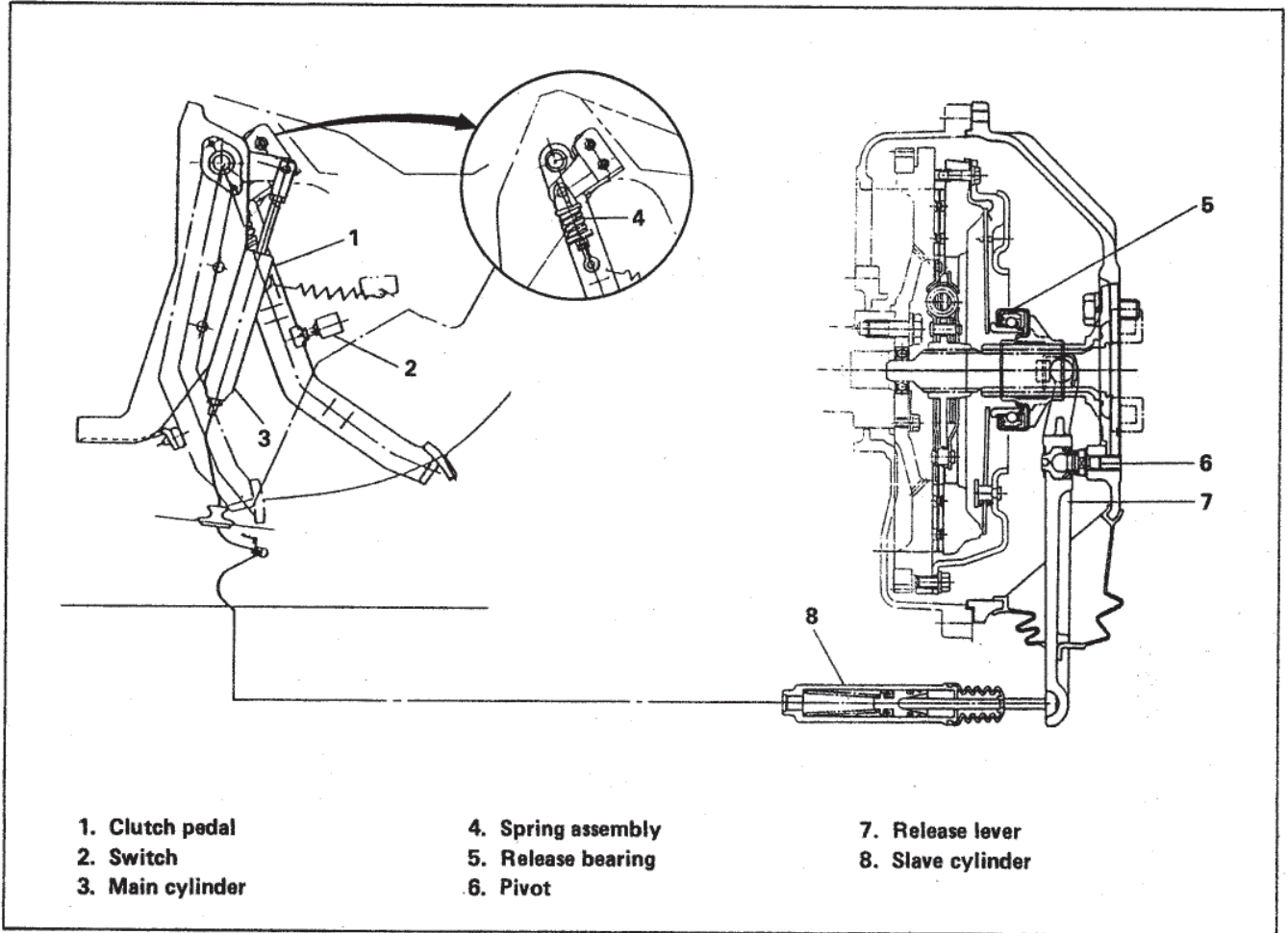
CLUTCH CONTROL

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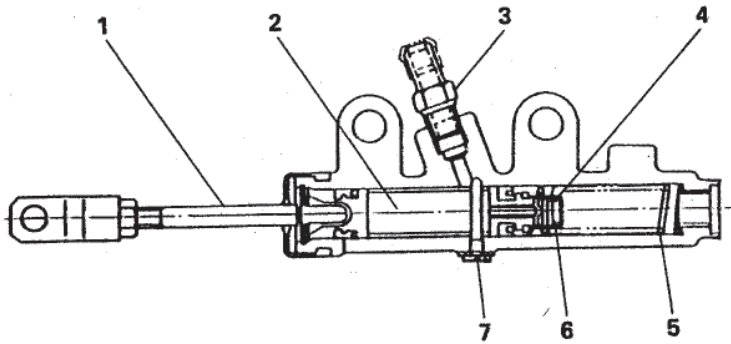
DATA AND SPECIFICATIONS

Main cylinder inside diameter	19.05 mm (3/4 in)
Slave cylinder inside diameter	22.22 mm (7/8 in)
Release bearing type	Single thrust ball

DESCRIPTION

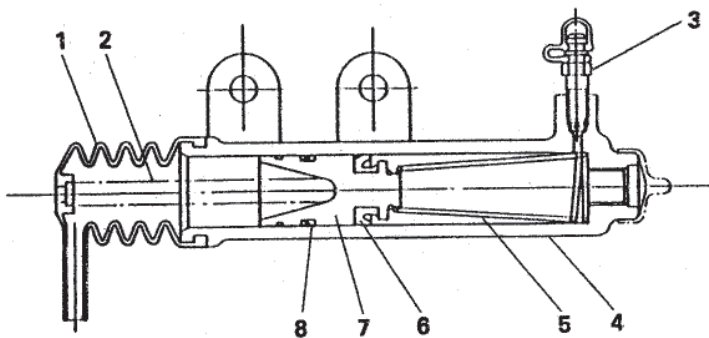


MAIN CYLINDER



- 1. Push rod
- 2. Piston
- 3. Pipe joint
- 4. Conical spring
- 5. Return spring
- 6. Check valve
- 7. Stopper bolt

SLAVE CYLINDER

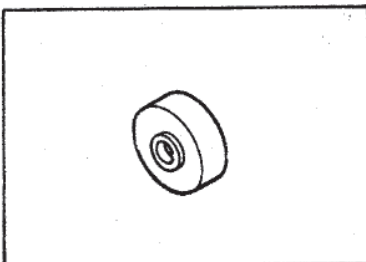


- 1. Boot
- 2. Push rod
- 3. Bleeder screw
- 4. Cylinder
- 5. Conical spring
- 6. Piston cup
- 7. Piston
- 8. Piston seal

SPECIAL TOOLS

Prior to starting a clutch control overhaul, it is necessary to have these special tools.

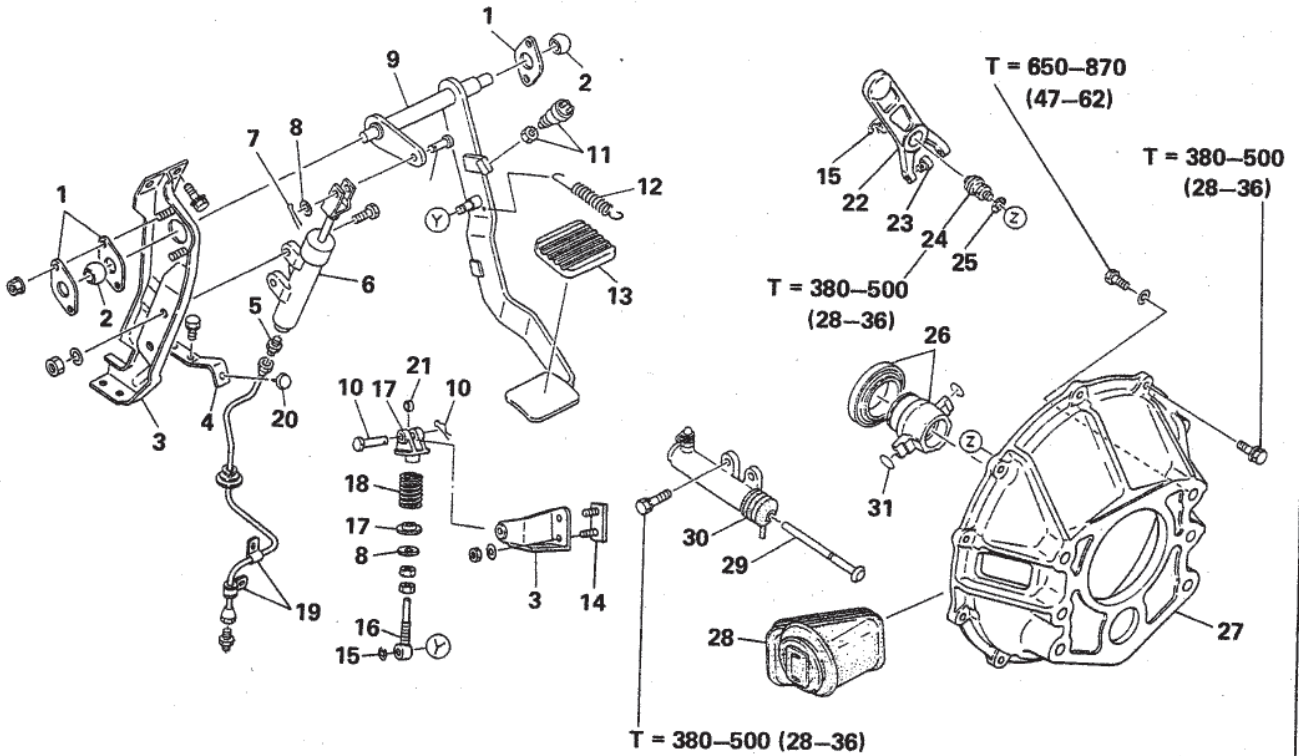
BASE



09655-1060

CLUTCH PEDAL AND RELEASE UNIT

BC31-507-00X01
MM13-301-00X05



T = Tightening torque kg-cm (lb-ft)

Tightening torque: kg-cm (lb-ft)

Flare nut

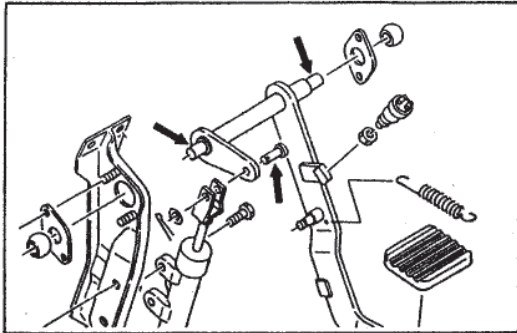
- 6.35 mm dia. pipe: 160-240 (12-17)
- 8 mm dia. pipe: 330-360 (24-26)
- 10 mm dia. pipe: 400-500 (29-36)

Joint with copper washer
450-550 (33-39)

Bolt and nut

- 8 mm dia.: 190-260 (14-18)
- 10 mm dia.: 380-500 (28-36)
- 12 mm dia.: 650-870 (47-62)

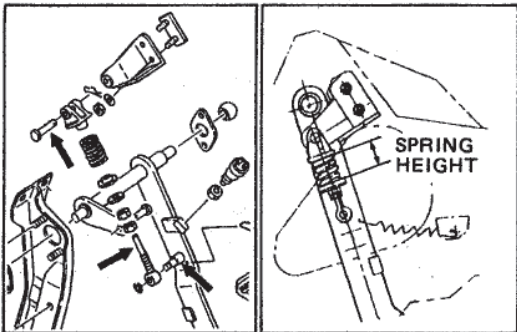
- | | | |
|-------------------------|-------------------------|-------------------------------|
| 1. Friction plate | 12. Tension spring | 23. Needle roller bearing |
| 2. Control tube bushing | 13. Pedal pad | 24. Pivot |
| 3. Clutch pedal bracket | 14. Setting plate | 25. Internal tooth lockwasher |
| 4. Pedal stopper | 15. Spring retainer | 26. Release bearing |
| 5. Connector | 16. Adjuster rod | 27. Clutch bearing |
| 6. Main cylinder | 17. Spring seat | 28. Boot |
| 7. Cotter pin | 18. Compression spring | 29. Push rod |
| 8. Plain washer | 19. Clip | 30. Slave cylinder |
| 9. Clutch pedal | 20. Clutch pedal buffer | 31. Antirattle spring |
| 10. Pin | 21. Bushing | |
| 11. Switch | 22. Release fork | |



IMPORTANT POINT (S) – ASSEMBLY

INSTALL THE CLUTCH PEDAL AND MAIN CYLINDER.

NOTE: Coat the bushing and clevis with lithium base grease.



INSTALL THE SPRING ASSEMBLY.

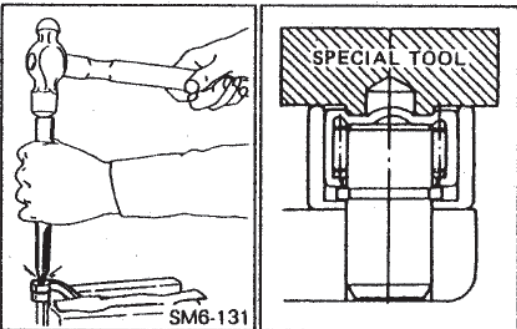
1. Assemble the spring and related parts.

NOTE: Coat the sliding surface with the chassis grease.

2. Install the spring assembly on the pedal pin and pedal bracket.
3. Adjust the spring height with the nut, when the pedal is released.

Assembly Standard: 31.7 mm (1.248 in)

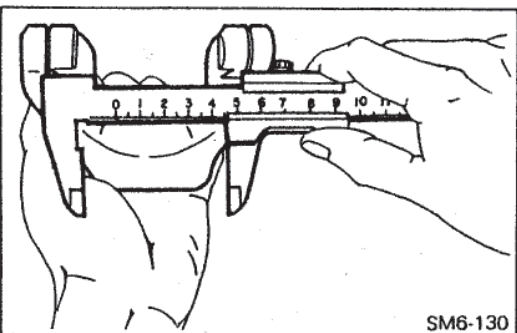
4. Secure the nut with the nut.



REPLACE THE RELEASE FORK BEARING.

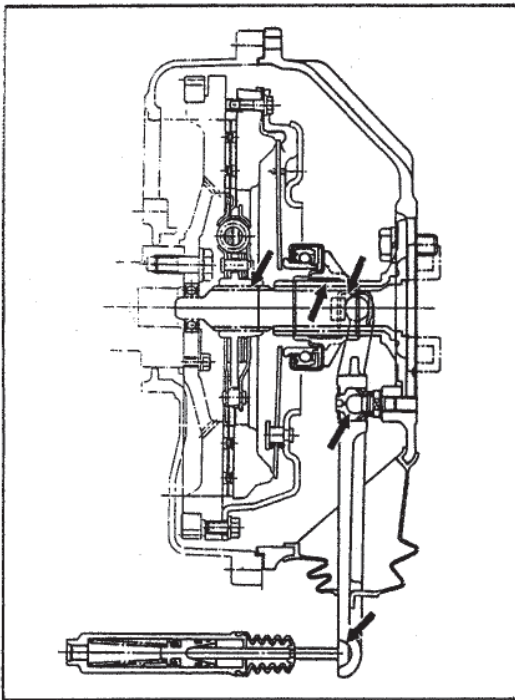
1. Remove the release fork bearings.
2. Using a special tool and a press, press in the bearing to the release fork.

Special Tool: Base (09655-1060)



3. Check the distance between both bearing.

Assembly Standard: More than 50 mm (1.968 in)


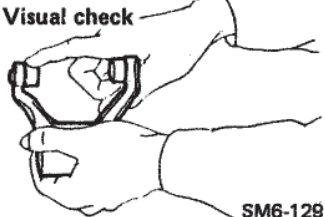


COAT CHASSIS GREASE OR HEAT RESISTANCE GREASE IN THE FOLLOWING POINTS.

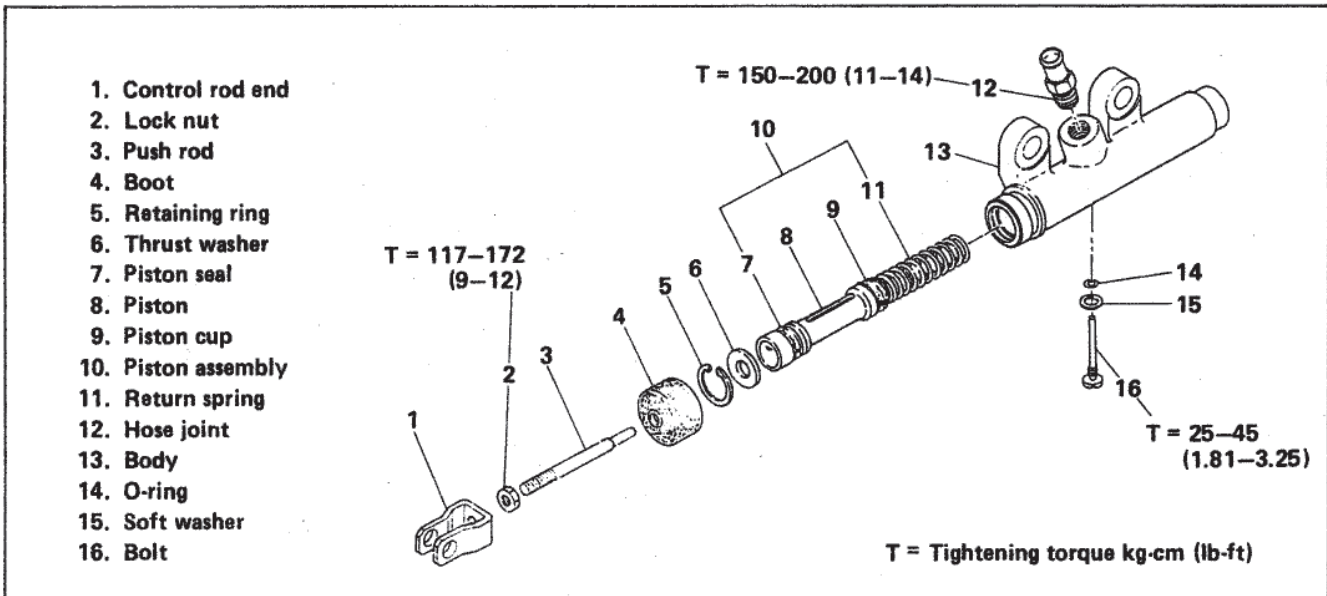
1. Chassis grease
 - a. Release fork and release bearing contact point.
 - b. Release bearing hub inner groove.
 - c. Release fork pivot bushing.
 - d. Release fork and push rod contact point.
2. Heat resistance grease
 - a. Transmission input shaft spline.

NOTE: Coat a small amount of grease to the spline.

INSPECTION AND REPAIR

Inspection Item	Standard	Limit	Remedy	Inspection Procedure
Release bearing improper rotation	—	—	Replace, if necessary.	Visual check 
Pivot, pivot bushing wear and damage.	—	—	Replace, if necessary.	Visual check
Release fork bearing improper rotation, wear and damage.	—	—	Replace, if necessary.	Visual check  SM6-129
Release fork and push rod contact point, wear and damage.	—	—	Replace, if necessary.	Visual check

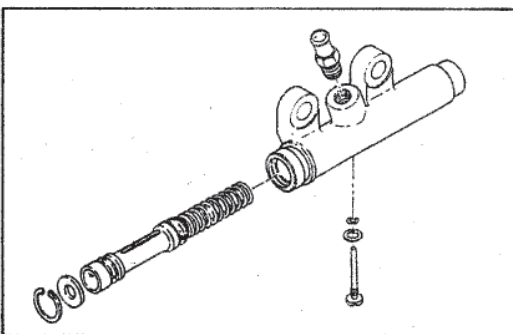
CLUTCH MAIN CYLINDER



IMPORTANT POINT (S) – DISMOUNTING

REMOVE THE MAIN CYLINDER.

- NOTE:
- Before remove the main cylinder, drain the clutch fluid from the hydraulic line.
 - Place a small drain pan under the main cylinder to catch the hydraulic fluid. Do not let clutch fluid remain on a painted floor. Wash it off immediately.



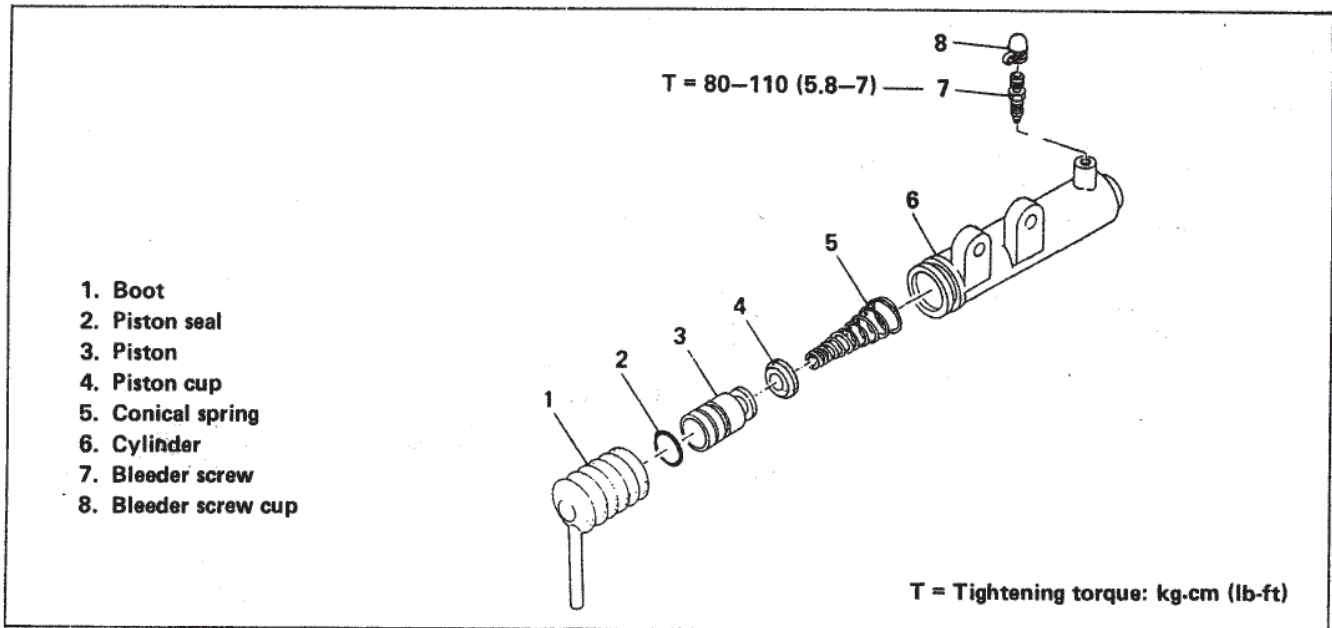
IMPORTANT POINT (S) – ASSEMBLY

INSTALL THE RETURN SPRING AND PISTON TO THE MAIN CYLINDER.

- NOTE: Lubricate the cylinder bore and piston with clean clutch fluid.

Inspection Item	Standard	Limit	Remedy	Inspection Procedure
Piston seal and cup wear, damage. Cylinder bore scoring, corrosion.			Replace the piston assembly and/or cylinder body, if necessary.	Visual check

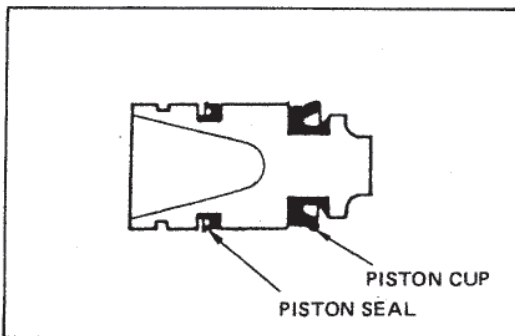
CLUTCH SLAVE CYLINDER



IMPORTANT POINT (S) – DISMOUNTING

REMOVE THE SLAVE CYLINDER.

NOTE: ○ Before remove the slave cylinder, drain the clutch fluid from the hydraulic line.



IMPORTANT POINT (S) – ASSEMBLY

1. REPLACE SLAVE CYLINDER PISTON CUP AND PISTON SEAL.

NOTE: ○ Lubricate the new piston with clean clutch fluid. Take care not to damage the piston cup and seal, when installing them on the piston.

2. INSTALL THE PISTON TO THE SLAVE CYLINDER.

NOTE: Lubricate the cylinder bore and piston with clean clutch fluid.

Inspection Item	Standard	Limit	Remedy	Inspection Procedure
Piston cup and seal wear, damage. Cylinder bore scoring, corrosion.			Replace the cup, seal, and/or cylinder body, if necessary.	Visual check

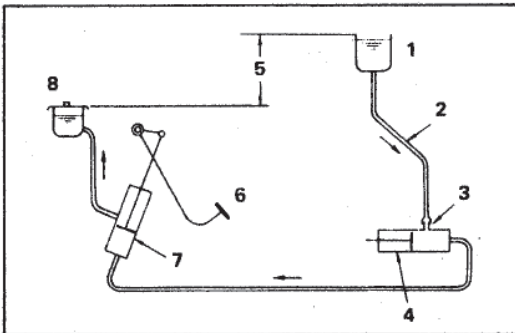
BLEEDING AND ADJUSTMENT

BLEED THE AIR FROM HYDRAULIC LINE.

- NOTE:**
- Do not mix the clutch fluid with different types or brands.
 - Be careful not to spill clutch fluid from the reservoir or from the air bleeder during air bleeding. Clutch fluid can damage the paint finish on the body or floor.
 - There are two methods of air bleeding, gravity air bleeding and pressure air bleeding. If a pressure air bleeding equipment is on hand, its use is recommended.

Gravity bleeding

1. Connect a funnel to a bleeder hose.
2. Connect the other end of the bleeder hose to the bleeder screw.
3. Hold the funnel about 1.5m (4.92 ft) higher than the reservoir tank.
4. Loosen the bleeder screw and pour the clutch fluid into the funnel.
5. Observe the flow of clutch fluid into the reservoir tank.
6. When the air bubbles cease, close the bleeder screw.
7. Check the fluid level. If necessary, add or remove clutch fluid in order to match the "MAXI" level.

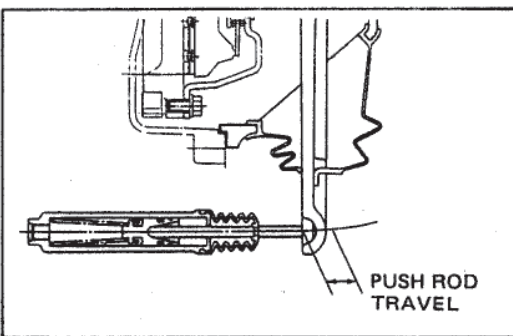


1. Funnel filled with clutch fluid
2. Vinyl tube (inside diameter: $\phi 6$)
3. Bleeder
4. Slave cylinder
5. About 1.5 m
6. Clutch pedal
7. Main cylinder
8. Reservoir tank

AFTER BLEEDING, MAKE SURE THE TRAVEL OF THE SLAVE CYLINDER PUSH ROD IS AS SPECIFIED.

Depress the clutch pedal fully and measure the push rod travel. If travel is less than standard, re-bleed the hydraulic system.

Standard: More than 21 mm (0.827 in)



CHECK THE PUSH ROD PLAY. IF NECESSARY, ADJUST THE PUSH ROD PLAY.

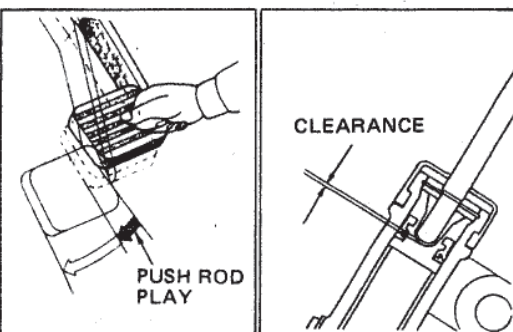
Standard:

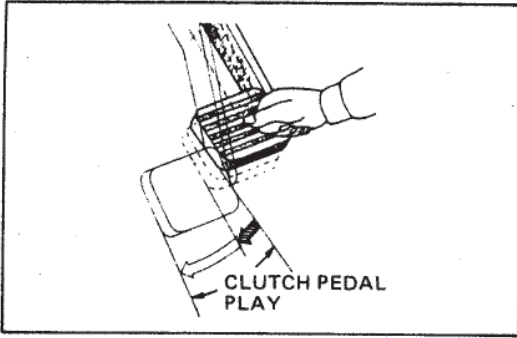
Clearance Between Push Rod and Piston

0.5 mm (0.0197 in)

Push Rod Play at Pedal Top

2-4 mm (0.079-0.157 in)

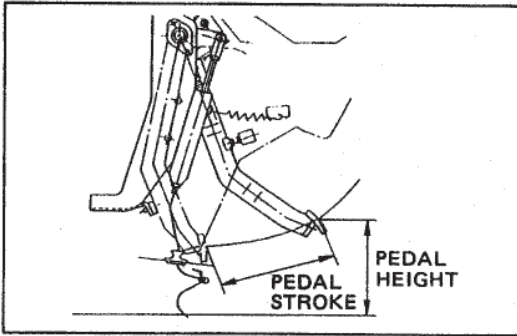


**CHECK THE CLUTCH PEDAL PLAY.**

Push in on the pedal until the beginning of clutch resistance is felt.

Assembly Standard: 15–30 mm (1.969–2.559 in)

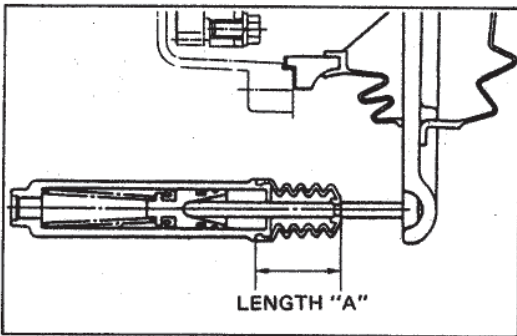
NOTE: The clutch pedal play is automatically maintained at normal operating conditions.

**CHECK THE CLUTCH PEDAL HEIGHT AND STROKE.**

Assembly Standard:

Pedal Height: 182–196 mm (7.166–7.716 in)

Pedal Stroke: 180–200 mm (7.087–7.874 in)



CHECK THE LENGTH "A". IF ITS LENGTH IS BELOW THE SERVICE LIMIT, IT IS TIME TO REPLACE THE CLUTCH FACING.

Service Limit: 23 mm (0.906 in)