CLUTCH

CONTENTS

N06AA-

CAUTION
When servicing clutch assemblies or components, do NOT create dust by sanding, grinding or by cleaning clutch parts with a dry brush or with compressed air. (A water dampened cloth should be used.) The clutch disc contains "Asbestos Fibers" which can become airborne if dust is created during service operations. Breathing dust containing "Asbestos Fibers" may cause serious bodily harm.

SPECIFICATIONS

GENERAL SPECIFICATIONS

N06CA--

Items	2.6L Engine	3.0L Engine
Clutch operating method	Hydraulic type	Hydraulic type
Inside diameter of clutch master cylinder mm (in.)	15.87 (.6248)	15.87 (.6248)
Clutch disc		
Type	*Single dry disc type*	*Single dry disc type*
Facing Size (outside × inside) mm (in.)	225 × 150 (8.9 × 5.9)	240 × 160 (9.4 × 6.3)
Number of torsion springs	4 (single type)	4 (Dual type)
Clutch cover assembly		
Type	Diaphragm spring strap drive type	Diaphram spring strap drive type
Setting load N (lbs.)	4600 (1014)	5500 (1213)
Mounting bolt circle diameter mm (in.)	264 (10.4)	276 (10.9)
Clutch release bearing		
Type	Self-centering type	Self-centering type
Free travel mm (in.)	0 (0) constant contact type	0 (0) constant contact type
Clutch release cylinder		
Cylinder bore diameter mm (in.)	19.05 (.75)	19.05 (.75)

SERVICE SPECIFICATIONS

N06CB--

Items	Specifications
Standard values	
Clutch pedal height mm (in.)	186–191 (7.3–7.5)
Clutch pedal clevis pin play mm (in.)	1–3 (.04–.12)
Clutch pedal free play mm (in.)	8–16 (.31–.63)
Clearance between clutch pedal and floorboard when pedal is depressed mm (in.)	35 (1.38) or more
Limit	
Clutch disc rivet sink mm (in.)	0.3 (.012)

TORQUE SPECIFICATIONS

N06CC–

Items	Nm	ft.lbs.
Clutch to flywheel	15–22	11–15
Release cylinder to transmission case	31–42	22–30
Fulcrum	31–42	22–30
Clutch pedal to pedal bracket	25–35	18–25
Eye bolt	20–25	15–18
Clutch tube flare nut	13–17	10–12
Clutch master cylinder to firewall	7–9	5–7
Clutch pedal bracket	18–25	13–18
Bleeder plug	9–13	7–9
Reservoir band	5–7	4–5

LUBRICANTS

N06CD–

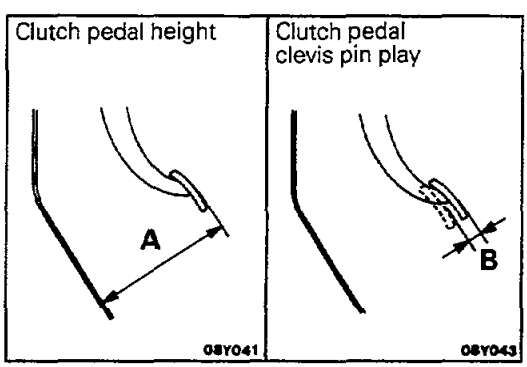
Items	Specified lubricants	Quantity
Clutch fluid	Brake Fluid SAE J1703 (DOT3)	As required
<2.6 L Engine>		
Clutch disc spline	MITSUBISHI Genuine Grease Part No. 0101011 or equivalent	As required
Clutch release fork shaft bearing	MITSUBISHI Genuine Grease Part No. 0101011 or equivalent	As required
Clutch release bearing inner surface	MITSUBISHI Genuine Grease Part No. 0101011 or equivalent	As required
Clutch release cylinder push rod and clutch release fork	MITSUBISHI Genuine Grease Part No. 0101011 or equivalent	As required
Release cylinder inner surface	Brake Fluid SAE J1703 (DOT3)	As required
<3.0 L Engine>		
Clutch release bearing	MOLYKOTE BR-2 PLUS	As required
Clutch release bearing and rocker arm contact surfaces	MOLYKOTE BR-2 PLUS	As required
Release fork and fulcrum head contact surfaces	MOLYKOTE BR-2 PLUS	As required

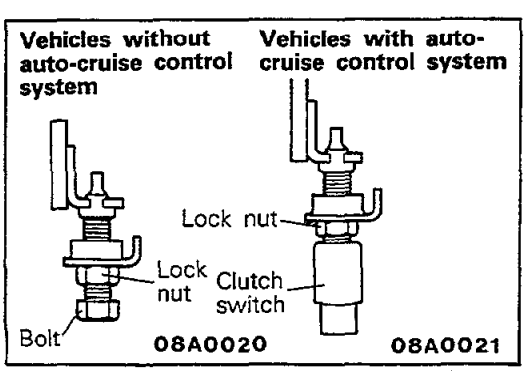
TROUBLESHOOTING

N06EAAFa

Symptom		Probable cause	Remedy
Clutch slipping • Vehicle will not respond to engine speed during acceleration. • Improper vehicle speed • Lack of power during uphill driving		Improper pedal free play	Adjust
		Excessive wear of clutch disc facing	Replace
		Hardened clutch disc facing, or oil on surface	Replace
		Damaged pressure plate or flywheel	Replace (Refer to GROUP 9. for flywheel)
		Weak or broken pressure spring	Replace
Clutch drags or does not release		Excessive clutch pedal free play	Adjust
		Interference between pedal and floor panel	Correct
		Pilot bearing worn or broken	Replace (Refer to GROUP 9.)
		Clutch disc warped	Replace
		Pressure plate, disc or throwout bearing damaged	Replace
		Hydraulic system fluid leakage or air mixed in	Repair or replace
Difficult gear shifting (gear noise during shifting)		Excessive pedal free play	Adjust
		Hydraulic system fluid leakage or air mixed in	Repair or Replace
		Unusual wear or corrosion of clutch disc spline	Replace
		Excessive vibration (distortion) of clutch disc	Replace
Clutch noisy	When clutch is not used	Improper play of clutch pedal	Adjust
		Excessive wear of clutch disc facing	Replace
	A noise is heard after clutch is disengaged	Unusual wear and/or damage of release bearing	Replace
	A noise is heard when clutch is disengaged	Improper grease on the sliding surface of bearing sleeve	Repair
		Improperly installed clutch assembly or bearing	Repair
	A noise is heard when vehicle is suddenly rolled of with clutch partially engaged	Damaged pilot bearing	Replace (Refer to GROUP 9.)

Symptom	Probable cause	Remedy
Clutch chatters	Facing hardened	Replace
	Facing stained with oil or grease	Repair or replace
	Weak or broken disc damper springs	Replace
	Improper facing contact or disc runout	Replace
	Pressure plate or flywheel warped	Replace (Refer to GROUP 9. for flywheel)
	Loose engine mounting	Repair or replace (Refer to GROUP 9.)
Hard pedal effort	Improper lubrication of clutch pedal shaft	Repair
	Improper lubrication of clutch disc spline	Repair
	Improper lubrication of clutch release lever shaft	Repair
	Improper lubrication of front bearing retainer	Repair (Refer to GROUP 21.)
Clutch operation erratic or rough	Facing stained with grease or oil	Repair or replace
	Facing worn or rivet loose	Replace
	Torsion spring deteriorated or broken	Replace
	Improper lubricant on clutch pedal pivot	Lubricate





SERVICE ADJUSTMENT PROCEDURES

CLUTCH PEDAL INSPECTION AND ADJUSTMENT

N06FAAM

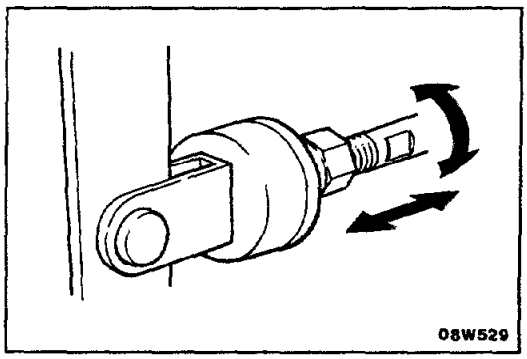
1. Measure the clutch pedal height (from the face of the pedal pad to the floorboard) and the clutch pedal clevis pin play (measured at the face of the pedal pad).

   Standard value (A) : 186–191 mm (7.3–7.5 in.)
   Standard value (B) : 1–3 mm (.04–.12 in.)

2. If either the clutch pedal height or the clutch pedal clevis pin play are not within the standard value range, adjust as follows:
   (1) For vehicles without auto-cruise control system, turn the stopper bolt to adjust the clutch pedal height to agree with the standard value and then secure the bolt with the lock nut.

   For vehicles with auto-cruise control system, disconnect the clutch switch connector and turn the switch for standard clutch pedal height. Then lock with the lock nut.

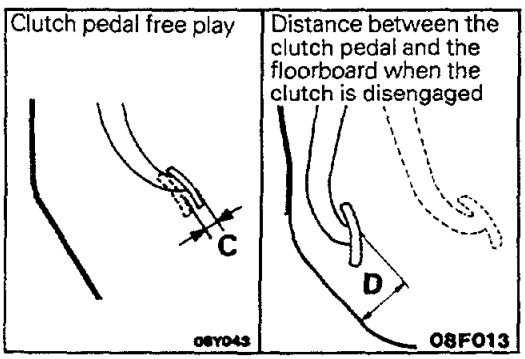
TSB Revision



NOTE
When the pedal height is lower than the standard value, loosen the bolt or clutch switch, and then turn the push rod to make the adjustment. After making the adjustment, tighten the bolt or clutch switch to reach the pedal stopper, and then lock with the lock nut.

(2) Turn the push rod to adjust the clutch pedal clevis pin play to agree with the standard value and then secure the push rod with the lock nut.

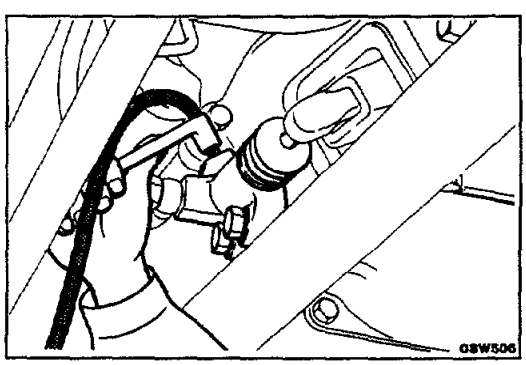
Caution
When adjusting the clutch pedal clevis pin play, be careful not to push the push rod toward the master cylinder.



3. 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 floorboard when the clutch is disengaged are within the standard value ranges.

Standard value (C) : 8–16 mm (.31–.63 in.)
Standard value (D) : 35 mm (1.38 in.) or more

4. If the clutch pedal free play and the distance between the clutch pedal and the floorboard 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.



BLEEDING N06FBABa

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.

Specified clutch fluid : Brake Fluid SAE J1703 (DOT3)

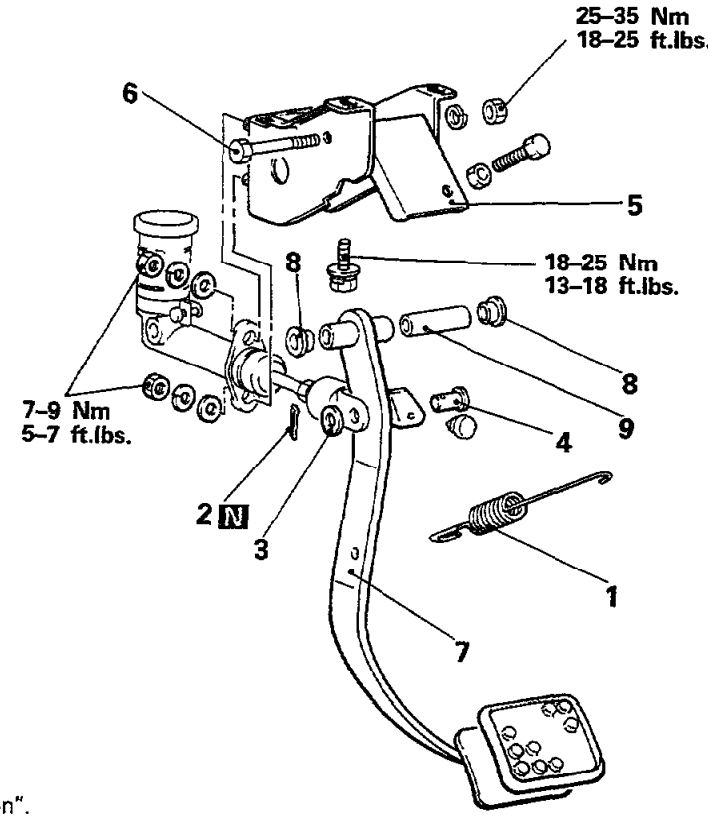
Caution
Use the specified brake fluid. Avoid using a mixture of the specified fluid and other fluid.

CLUTCH PEDAL <2.6L ENGINE>

REMOVAL AND INSTALLATION

N06PA--0

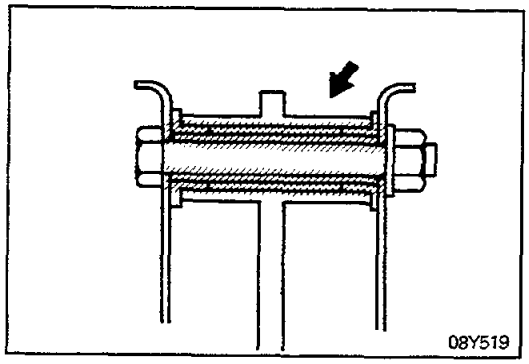
Post-installation Operation
- Adjustment of Clutch Pedal (Refer to P.6-5.)

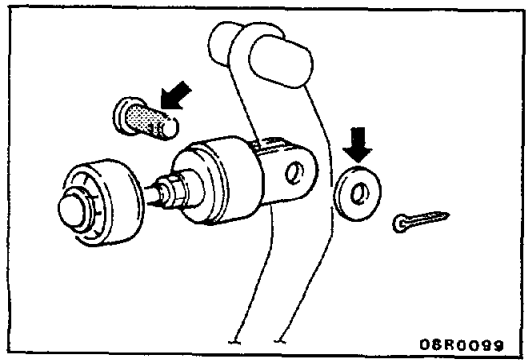


Removal steps

1. Return spring
2. Cotter pin
3. ◆◆ Washer
4. ◆◆ Clevis pin
5. Clutch pedal bracket
6. ◆◆ Pedal shaft
7. Clutch pedal
8. ◆◆ Bushing
9. ◆◆ Spacer

NOTE
(1) Reverse the removal procedures to reinstall.
(2) ◆◆ : Refer to " Service Points of Installation".
(3) N : Non-reusable parts





INSPECTION

N06PCAC

- Check the pedal shaft bushing for wear.
- Check the pedal arm for bend or torsion.
- Check the return spring for deterioration.

SERVICE POINTS OF INSTALLATION

N06PDAR

9. APPLICATION OF GREASE TO SPACER/8. BUSHING/6. PEDAL SHAFT

Apply multipurpose grease to the pedal shaft, spacer and bushings.

4. APPLICATION OF GREASE TO CLEVIS PIN/3. WASHER

Apply the multipurpose grease to the clevis pin and washer.

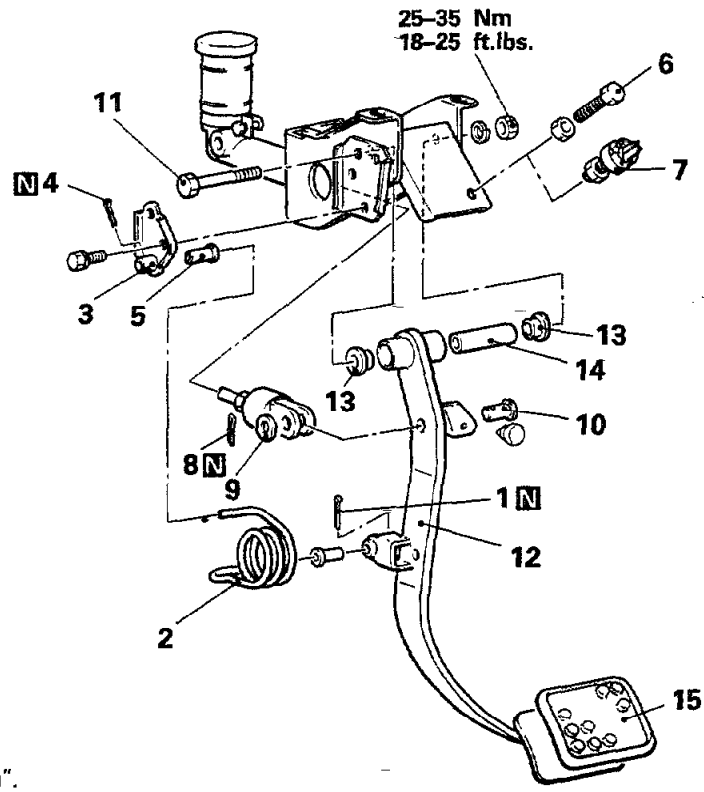
TSB Revision

CLUTCH PEDAL <3.0L ENGINE>

REMOVAL AND INSTALLATION

N06PA-1

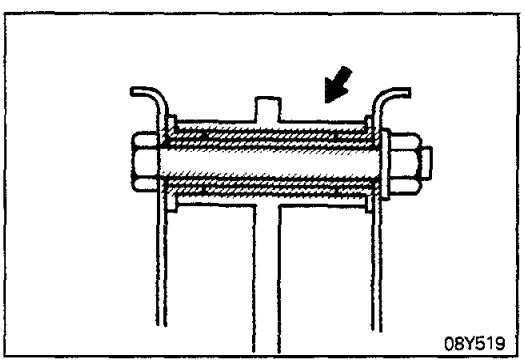
Post-installation Operation
- Adjustment of Clutch Pedal (Refer to P.6-5.)



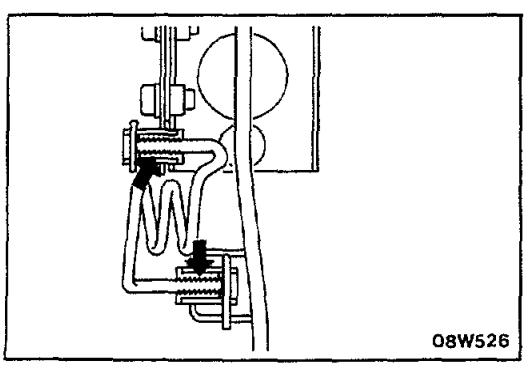
08W528

Removal steps
1. Cotter pin
2. Return spring
3. Bracket
4. Cotter pin
5. Bushing
6. Stopper bolt
7. Clutch switch
8. Cotter pin
9. Washer
10. Clevis pin
11. Clutch pedal mounting bolt
12. Clutch pedal
13. Bushings
14. Spacer
15. Pedal pad

NOTE
(1) Reverse the removal procedures to reinstall.
(2) ◆◆ : Refer to "Service Points of Installation".
(3) N : Non-reusable parts



08Y519



08W526

INSPECTION

N06PCAH

Refer to P.6-7.

SERVICE POINTS OF INSTALLATION

N06PDAQ

14. APPLICATION OF GREASE TO SPACER/13. BUSHING/11. CLUTCH PEDAL MOUNTING BOLT

Apply multipurpose grease to the pedal shaft, spacer and bushings.

10. APPLICATION OF GREASE TO CLEVIS PIN/9. WASHER

Refer to P. 6-7.

5. APPLICATION OF GREASE TO BUSHING/2. RETURN SPRING

Apply multipurpose grease to the return spring and bushing.

TSB Revision

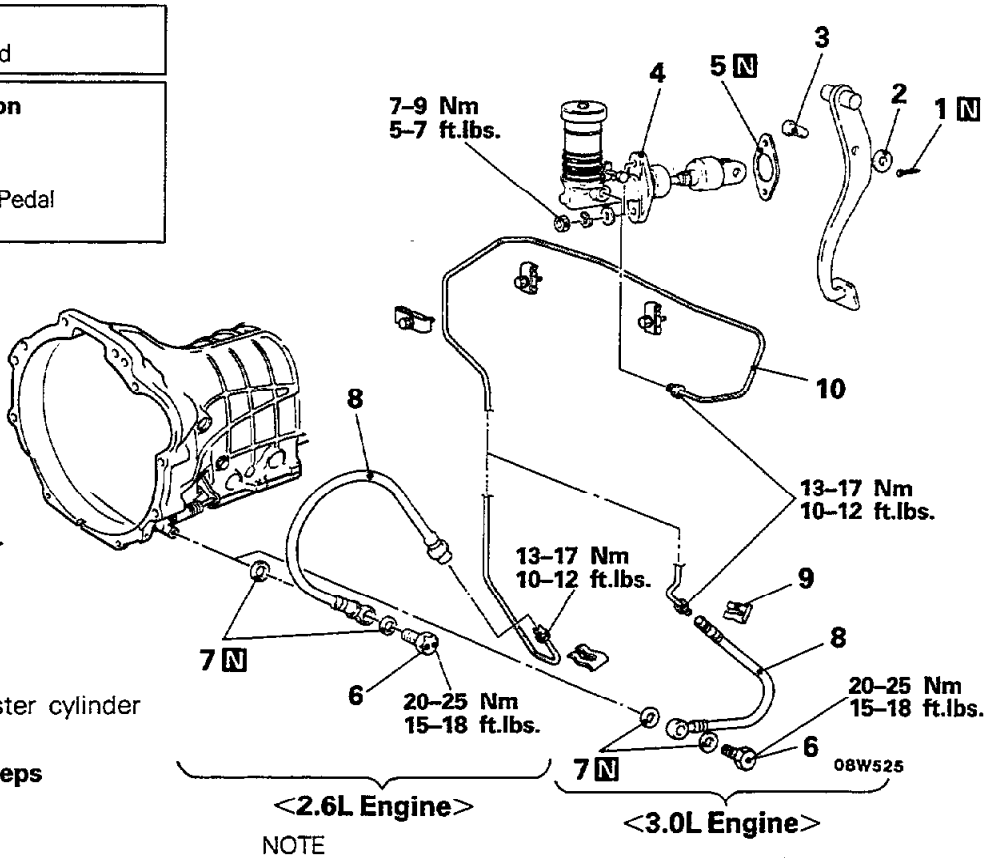
CLUTCH MASTER CYLINDER AND TUBE

REMOVAL AND INSTALLATION

N06MA-

Pre-removal Operation
- Draining of Clutch Fluid

Post-installation Operation
- Supplying Clutch Fluid
- Bleeding (Refer to P.6-6.)
- Adjustment of Clutch Pedal (Refer to P.6-5.)



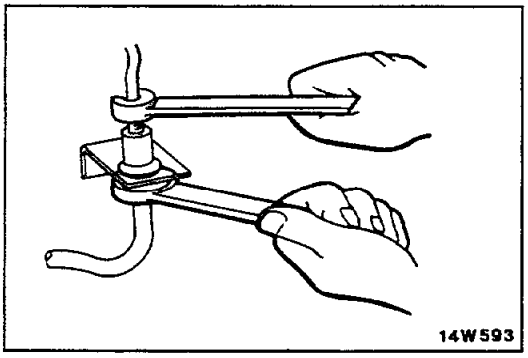
Clutch master cylinder removal steps

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

Clutch line removal steps

6. Eye bolt
7. Gasket
8. Clutch hose
9. Hose clip
10. Clutch tube

NOTE
(1) Reverse the removal procedures to reinstall.
(2) ◀▶ : Refer to "Service Points of Removal".
(3) ▶◀ : Refer to "Service Points of Installation".
(4) N : Non-reusable parts.



SERVICE POINTS OF REMOVAL

N06MBAE

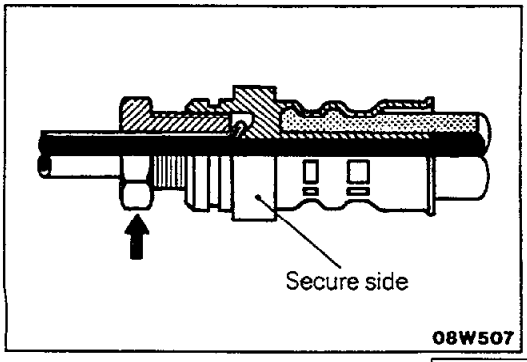
8. REMOVAL OF CLUTCH HOSE

Holding the nut at the clutch hose side, loosen the flare nut of the clutch tube.

INSPECTION

N06MCAA

- Check the master cylinder or clutch hose for fluid leakage.
- Check the clutch hose or tube for cracks or clogging.

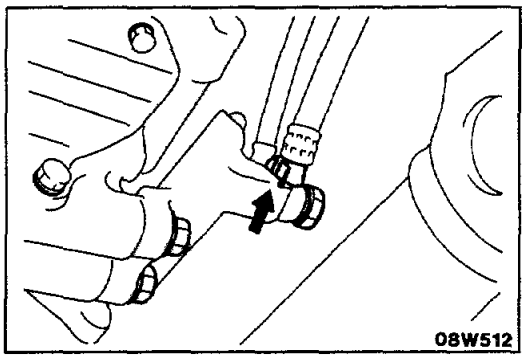


SERVICE POINTS OF INSTALLATION

N06MDAI

10. INSTALLATION OF CLUTCH TUBE/8. CLUTCH HOSE

(1) Temporarily tighten the clutch tube flare nut by hand, and then tighten it to the specified torque, being careful that the clutch hose does not become twisted.



(2) Connect the clutch hose to the release cylinder at the stepped portion shown in the illustration.
(3) After tightening the clutch tube flare nut and eye bolt, check to be sure there is no leakage of the clutch fluid.

3. APPLICATION OF GREASE TO CLEVIS PIN/2. WASHER

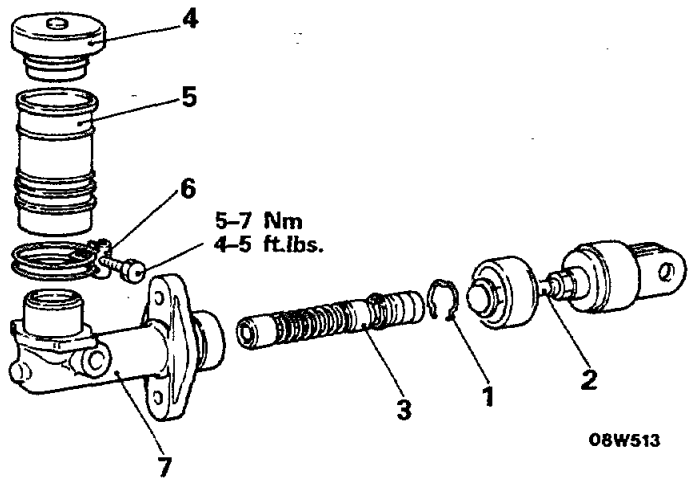
Refer to P. 6-7.

DISASSEMBLY AND REASSEMBLY

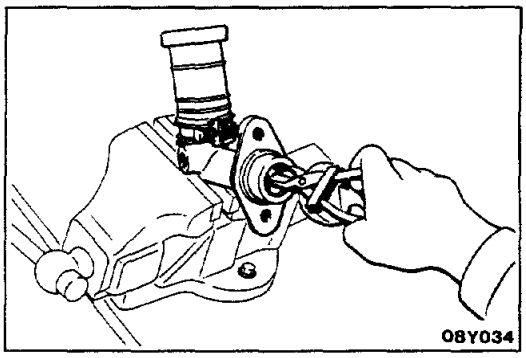
N06NA--

Disassembly steps

◆◆ 1. Piston stop ring
2. Damper and push rod
◆◆ ▶◀ 3. Piston assembly
4. Reservoir cap
5. Reservoir
▶◀ 6. Reservoir band
7. Master cylinder body



NOTE
(1) Reverse the disassembly procedures to reassemble.
(2) ◆◆ : Refer to "Service Points of Disassembly".
(3) ▶◀ : Refer to "Service Points of Reassembly".



SERVICE POINTS OF DISASSEMBLY

N06NBAA

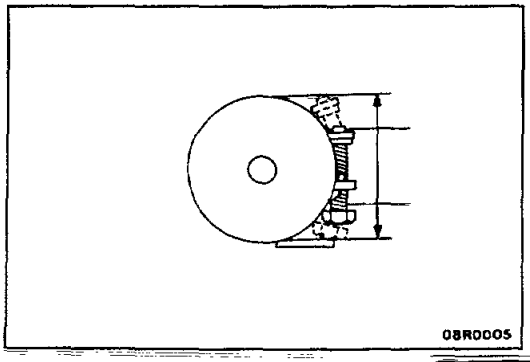
1. REMOVAL OF PISTON STOP RING

Remove the piston stop ring.

3. REMOVAL OF PISTON ASSEMBLY

Pull out the piston assembly.

Caution
1. Do not damage the master cylinder body and piston assembly.
2. Do not disassemble piston assembly.



INSPECTION

N06NCAB

- Check the inside cylinder body for rust or scars.
- Check the piston cup for wear or deformation.
- Check the piston for rust or scars.

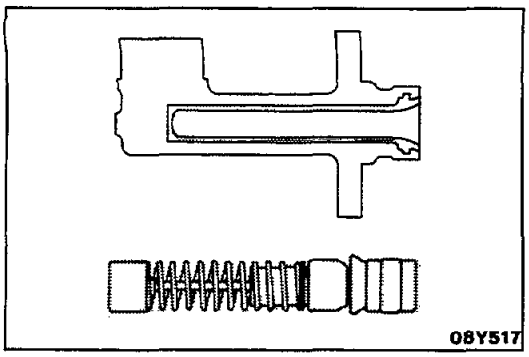
SERVICE POINTS OF REASSEMBLY

N06NDAGa

6. INSTALLATION OF RESERVOIR BAND

After installing the reservoir, tighten the reservoir band in the range shown in the figure.

TSB Revision



3. APPLICATION OF CLUTCH FLUID TO PISTON ASSEMBLY

Apply specified clutch fluid to the inner surface of the cylinder and to the entire periphery of the piston assembly.

Specified clutch fluid : Brake Fluid SAE J1703 (DOT3)

CLUTCH RELEASE CYLINDER

REMOVAL AND INSTALLATION

N06HA--

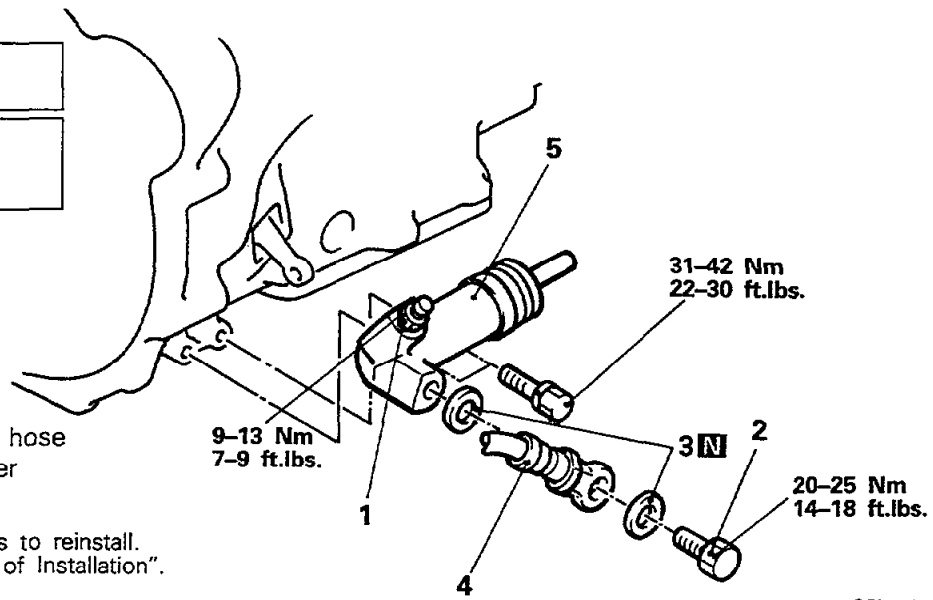
Pre-removal Operation
- Draining of Clutch Fluid

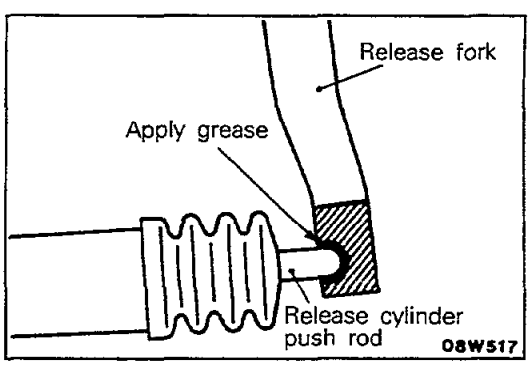
Post-installation Operation
- Supplying Clutch Fluid
- Bleeding (Refer to P.6-6.)

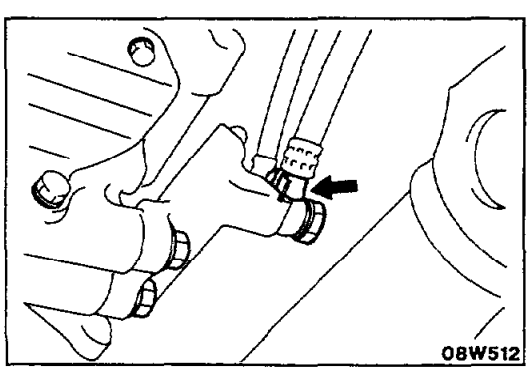
Removal steps

1. Bleeder screw
2. Eye bolt
3. Gasket
- ◆◆ 4. Connection of clutch hose
- ◆◆ 5. Clutch release cylinder

NOTE
(1) Reverse the removal procedures to reinstall.
(2) ◆◆ : Refer to "Service Points of Installation".
(3) N : Non-reusable parts







INSPECTION

N06HCAA

- Check the clutch release cylinder for fluid leakage.
- Check the clutch release cylinder boots for damage.

SERVICE POINTS OF INSTALLATION

N06HDAD

5. APPLICATION OF GREASE TO CLUTCH RELEASE CYLINDER

Apply a coating of the specified grease to the contact parts of the release fork and release cylinder push rod.

Specified grease : MITSUBISHI Genuine Grease Part No. 0101011 or equivalent

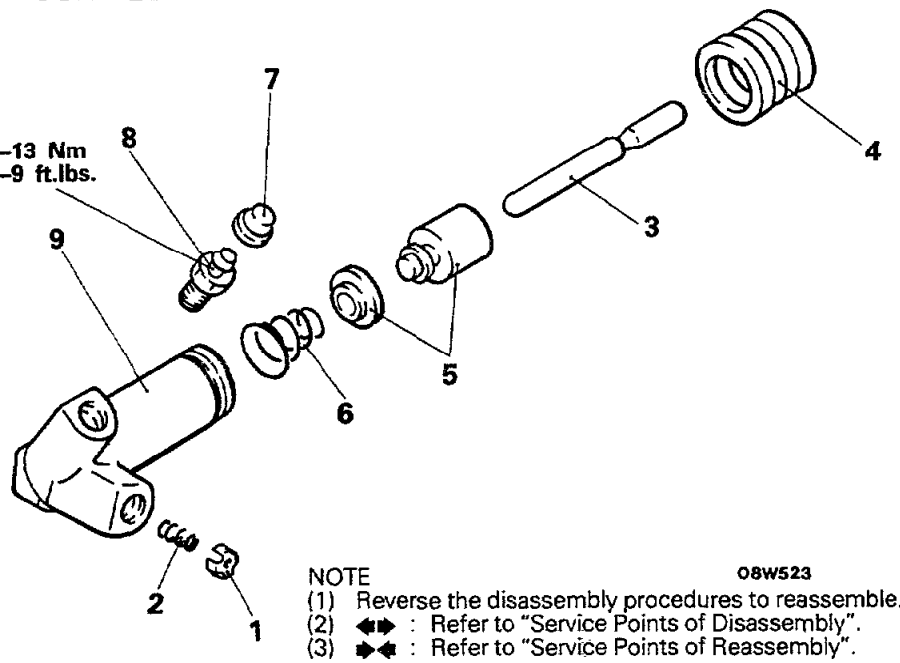
4. CONNECTION OF CLUTCH HOSE

(1) Connect the clutch hose to the release cylinder at the stepped portion shown in the illustration.
(2) After tightening the eye bolt, check to be sure there is no leakage of the clutch fluid.

TSB Revision

DISASSEMBLY AND REASSEMBLY

N06LA-

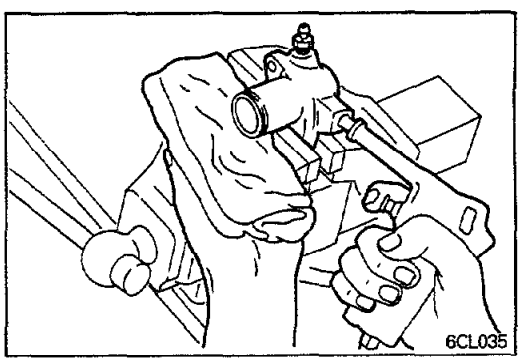


Disassembly steps

1. Valve plate
2. Spring
3. Push rod
4. Boots
- ◀■ ■▶ 5. Piston and cup
6. Conical spring
7. Cap
8. Bleeder plug
9. Release cylinder

O8W523

NOTE
(1) Reverse the disassembly procedures to reassemble.
(2) ◀■ ■▶ : Refer to "Service Points of Disassembly".
(3) ■▶ ◀■ : Refer to "Service Points of Reassembly".



SERVICE POINTS OF DISASSEMBLY

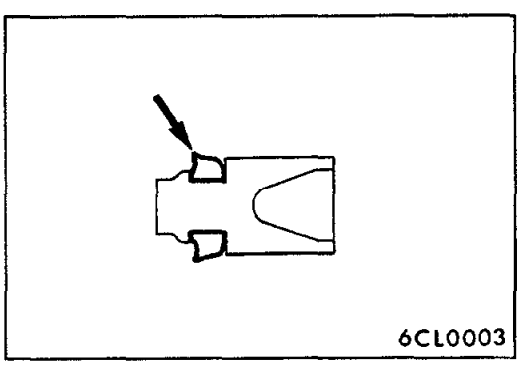
N06LBAA

5. REMOVAL OF PISTON AND CUP

Remove the piston from the release cylinder using compressed air.

Caution

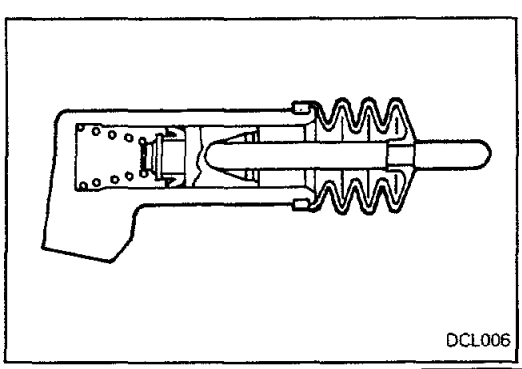
1. **Cover with rags to prevent the piston from popping out.**
2. **Apply compressed air slowly to prevent brake fluid from splashing.**



INSPECTION

N06LCAD

(1) Check the inner surface of the release cylinder for scratches or irregular wear.
(2) Replace if the piston cup outer circumference is scratched or shows signs of fatigue, or if there is excessive wear of the lip where indicated in the figure.



SERVICE POINTS OF REASSEMBLY

N06LDAG

5. APPLICATION OF FLUID TO PISTON AND CUP

After applying a coating of the specified brake fluid to the inner surface of the release cylinder body and to the entire circumference of the piston and cup, insert the piston and cup into the release cylinder.

Specified clutch fluid : Brake Fluid SAE J1703 (DOT 3)

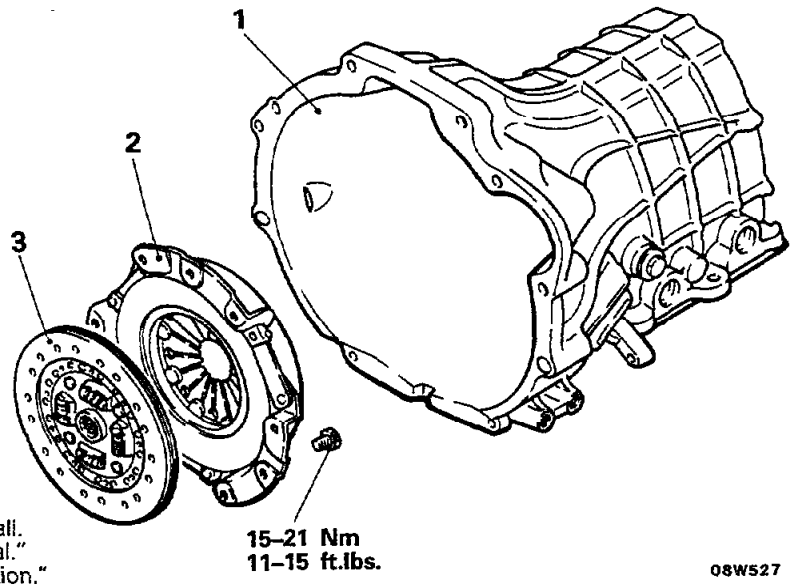
CLUTCH DISC

REMOVAL AND INSTALLATION

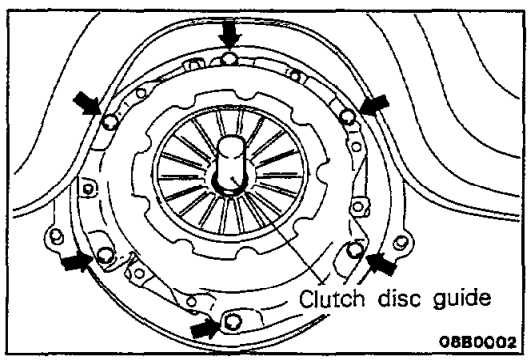
N06GA–

Post-installation Operation
- Adjustment of Clutch Pedal (Refer to P.6-5.)

Removal steps
- ◀■ ■▶ 1. Transmission and transfer assembly
- ◀■ ■▶ 2. Clutch cover assembly
- ■▶ 3. Clutch disc



NOTE
(1) Reverse the removal procedures to reinstall.
(2) ◀■ : Refer to "Service Points of Removal."
(3) ■▶ : Refer to "Service Points of Installation."



SERVICE POINTS OF REMOVAL

N06GBAG

1. REMOVAL OF TRANSMISSION AND TRANSFER ASSEMBLY
Refer to GROUP 21 – Transmission and Transfer Assembly.

2. REMOVAL OF CLUTCH COVER ASSEMBLY
(1) Insert clutch disc guide, or main drive gear of transmission in center spline to prevent dropping of clutch disc.
(2) Diagonally loosen bolts retaining clutch cover to flywheel.
Back off bolts, one or two turns at a time, in succession, to avoid bending cover flange.

Caution
DO NOT clean clutch disc or release bearing with cleaning solvent.

CLEANING AND INSPECTION

N06GCAE

- Clean clutch dust from clutch housing with vacuum brush or shop towel. Do not use compressed air. Inspect for oil leakage through engine rear main bearing oil seal and transmission front oil seal. If leakage is noted, it should be corrected at this time.
- Friction face of pressure plate should be have a uniform appearance throughout entire disc contact area. If there is evidence of heavy contact on one portion of wear circle and a very light contact 180 degrees from that portion, pressure plate may be improperly mounted or sprung.
- Friction face of flywheel should also be free from excessive discoloration, burned areas, small cracks, deep grooves, or ridges.
- Wipe friction surface of pressure plate with a cleaning solvent.
- Using a straight edge, check pressure plate for flatness. The pressure plate friction area should be flat within 0.5 mm (.020 in.) and free from discoloration, burned area, cracks, grooves or ridges.

TSB Revision

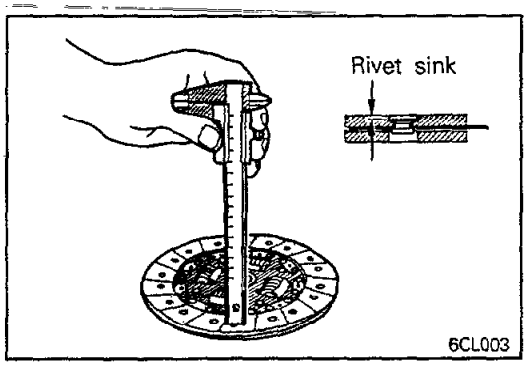
- Visually inspect the cover outer mounting flange for flatness. It should be free of nicks, burrs, dents or other damage.
- The three dowels on the flywheel should be tight and undamaged.
  The cover stamping should be a snug fit on the dowels.
- If the clutch assembly does not meet these requirements, it should be replaced.

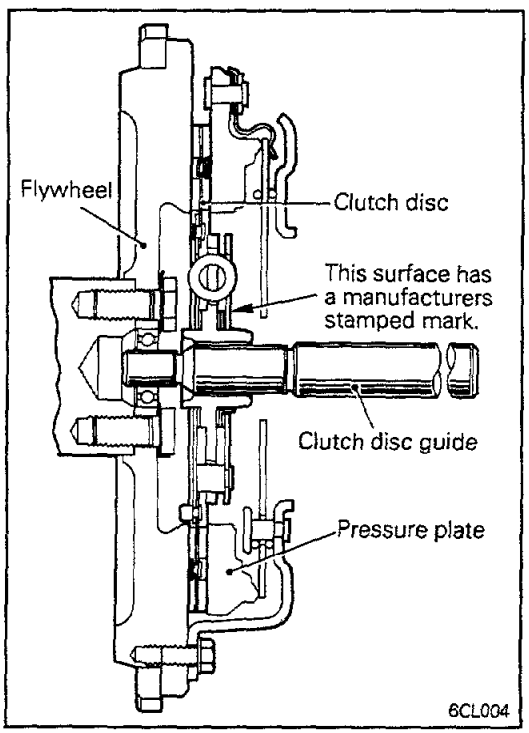
CLUTCH DISC

(1) The disc assembly should be handled without touching facings. Replace disc if facings show evidence of grease or oil soakage.
(2) Use the caliper gauge to measure the dimension from the facing surface to the rivet head.

Limit : 0.3 mm (.012 in.)

(3) If the measured value is below the limit, replace the clutch disc.
(4) The hub splines and splines on transmission input shaft should be a snug fit without signs of excessive wear.
(5) Metallic portions of disc assembly should be dry and clean and show no evidence of having been hot. Each of the arched springs between facings should be unbroken and all rivets should be tight.





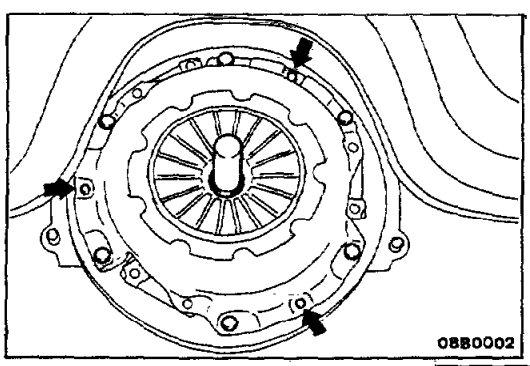
SERVICE POINTS OF INSTALLATION N06GDAJ

3. INSTALLATION OF CLUTCH DISC/2. CLUTCH COVER ASSEMBLY

(1) If there are oils or greases on clutch facing and pressure plate, throughly wipe away with a dry cloth.
(2) Lightly specified grease clutch disc spline.

Specified grease : MITSUBISHI Genuine Grease Part No. 0101011 or equivalent

(3) Using clutch disc guide, or main drive gear of transmission, install clutch disc and clutch cover assembly on flywheel.
(4) When installing clutch disc, be sure that surface having manufacturers stamped mark is on pressure plate side.



(5) When installing the clutch cover assembly, align the clutch cover assembly's dowel pin hole and the flywheel's dowel pin, and then gradually tighten the bolts alternately.

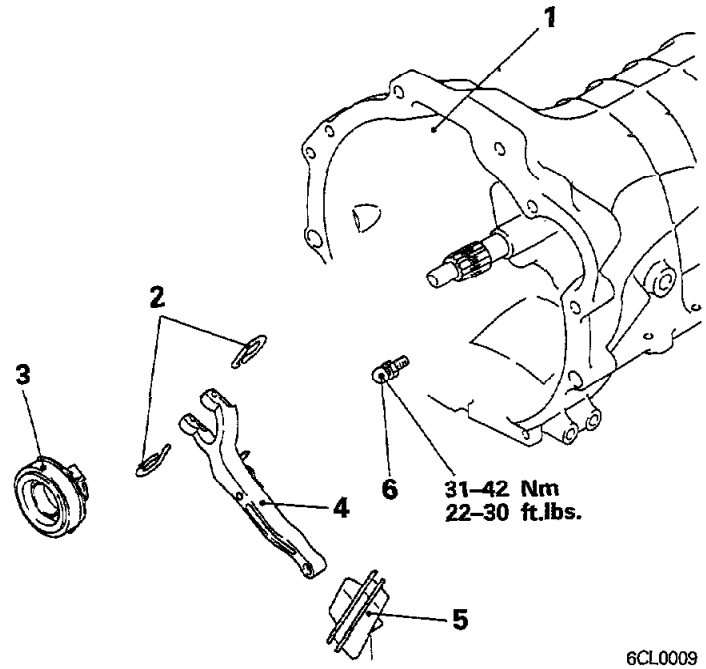
1. INSTALLATION OF TRANSMISSION AND TRANSFER ASSEMBLY

Refer to GROUP 21–Transmission and Transfer Assembly.

CLUTCH RELEASE FORK <2.6L ENGINE>

N06RA–1

REMOVAL AND INSTALLATION

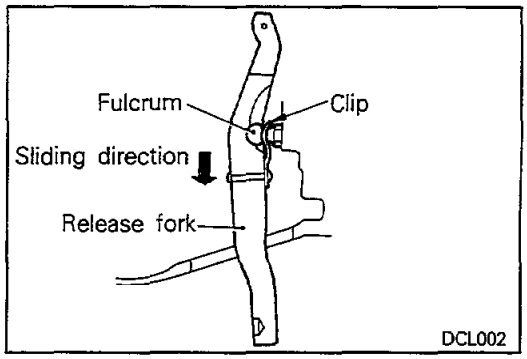


Removal steps

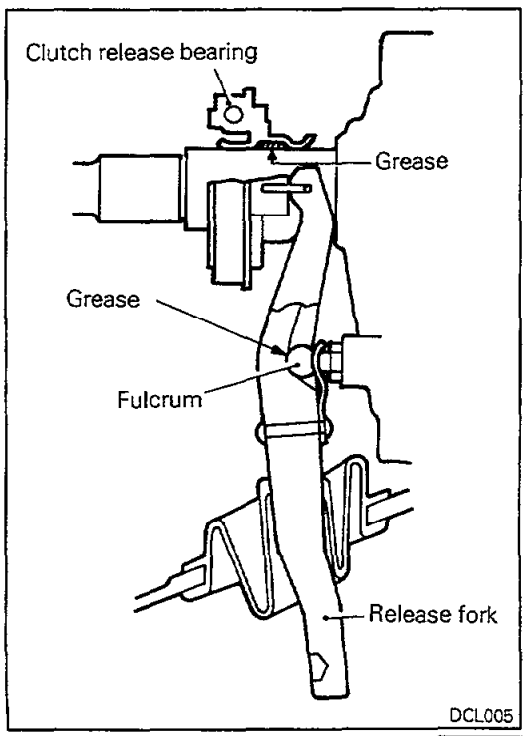
- ◀▶ ▶◀ 1. Transmission and transfer assembly
- 2. Return clip
- ▶◀ 3. Clutch release bearing
- ◀▶ ▶◀ 4. Clutch release fork
- 5. Clutch release fork boot
- 6. Fulcrum

NOTE
(1) Reverse the removal procedures to reinstall.
(2) ◀▶ : Refer to "Service Points of Removal.".
(3) ▶◀ : Refer to "Service Points of Installation."

6CL0009



DCL002



DCL005

SERVICE POINTS OF REMOVAL

N06RBAA

1. REMOVAL OF TRANSMISSION AND TRANSFER ASSEMBLY

Refer to GROUP 21 – Transmission and Transfer Assembly.

4. REMOVAL OF CLUTCH RELEASE FORK

Slide release fork in direction of arrow to disengage fulcrum from clip.

Caution
Attempting to remove release fork by sliding it in other direction will result in damage to clip.

SERVICE POINTS OF INSTALLATION

N06RDAA

4. APPLICATION OF GREASE TO RELEASE FORK

Pack the release fork fulcrum hole with specified grease.

Specified grease : MITSUBISHI Genuine Grease Part No. 0101011

3. APPLICATION OF GREASE TO CLUTCH RELEASE BEARING

Pack specified grease in groove on clutch release bearing I.D.

Specified grease : MITSUBISHI Genuine Grease Part No. 0101011 or equivalent

1. INSTALLATION OF TRANSMISSION AND TRANSFER ASSEMBLY

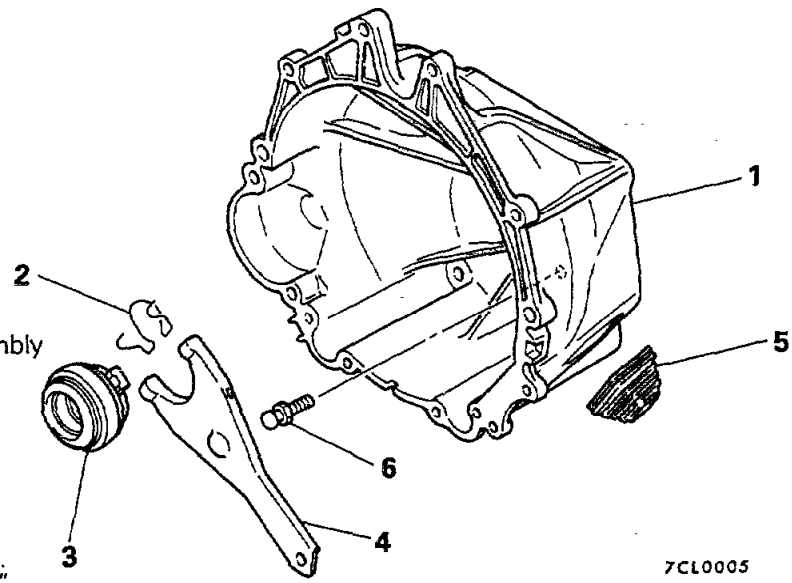
Refer to GROUP 21–Transmission and Transfer Assembly.

TSB Revision

CLUTCH RELEASE FORK <3.0L ENGINE>

N06RA-2

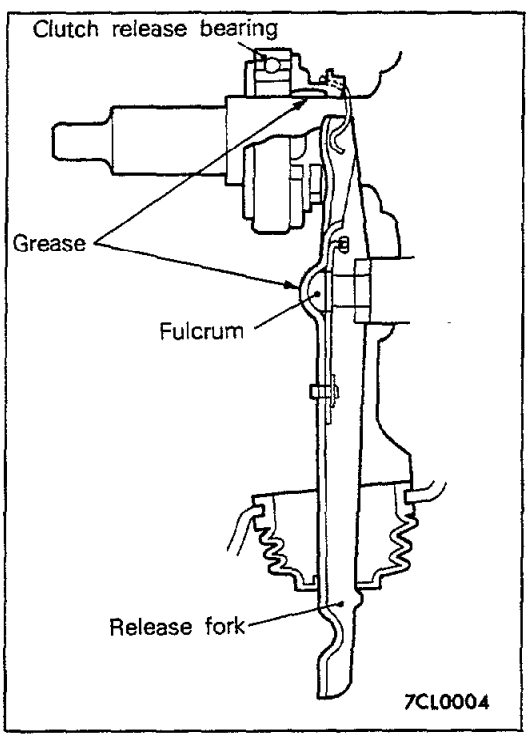
REMOVAL AND INSTALLATION



Removal steps

◀▶ ▶◀ 1. Transmission and transfer assembly
2. Return spring
▶◀ 3. Clutch release bearing
▶◀ 4. Clutch release fork
5. Clutch release fork boot
6. Fulcrum

NOTE
(1) Reverse the removal procedures to reinstall.
(2) ◀▶ : Refer to "Service Points of Removal".
(3) ▶◀ : Refer to "Service points of Installation.



SERVICE POINTS OF REMOVAL

N06RBAB

1. REMOVAL OF TRANSMISSION AND TRANSFER ASSEMBLY

Refer to GROUP 21 – Transmission and Transfer Assembly.

SERVICE POINTS OF INSTALLATION

N06RDAB

4. APPLICATION OF GREASE TO RELEASE FORK

Pack the release fork fulcrum hole with specified grease.

Specified grease : MOLYKOTE BR-2 PLUS

3. APPLICATION OF GREASE TO CLUTCH RELEASE BEARING

Pack specified grease in groove on clutch release bearing I.D.

Specified grease : MOLYKOTE BR-2 PLUS

1. INSTALLATION OF TRANSMISSION AND TRANSFER ASSEMBLY

Refer to GROUP 21–Transmission and Transfer Assembly.