

MANUAL TRANSMISSION

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E22AA--

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GENERAL INFORMATION

Cable type shift control is employed.

2WD vehicles for Europe and general export are equipped with column mounted shift levers. Floor shifts are installed in vehicles for Australia.

4WD vehicles are provided floor shifts for both transmission and transfer.

SPECIFICATIONS

GENERAL SPECIFICATIONS

Vehicles for Europe, Australia and Hong kong

Items	P12V	P15V	P02V, P03V P13V, P03W	P04W, P14V P05V, P05W	P23V, P23W	P24V, P24W P25V, P25W, P45V
Transmission						
Model	KM135, R5M21	KM135, R5M21	KM135, R5M21	KM135, R5M21	KM147, V5M21	KM147, V5M21
Type	Sliding mesh, 5 speed	Constant mesh, 5 speed	Sliding mesh, 5 speed	Constant mesh, 5 speed	Sliding mesh, 5 speed	Constant mesh, 5 speed
Gear ratio						
1st	4.330	4.330	3.967	3.967	3.967	3.967
2nd	2.355	2.355	2.136	2.136	2.136	2.136
3rd	1.509	1.509	1.360	1.360	1.360	1.360
4th	1.000	1.000	1.000	1.000	1.000	1.000
5th	0.827	0.827	0.856	0.856	0.856	0.856
Reverse	4.142	4.142	3.578	3.578	3.578	3.578
Transfer						
Type	—	—	—	—	Part-time 2-speed direct- coupled type	Part-time 2-speed direct- coupled type
Gear ratio						
H	—	—	—	—	1.000	1.000
L	—	—	—	—	1.944* ¹ , 1.925* ²	1.944* ¹ , 1.925* ²

Vehicles for General Export

Items	P01V, P01W		P02V, P12V, P12W	P02W	P15V	P03V, P03W P13V, P13W	P05V, P05W P06V, P15W	P23W
	Vehicles built up to June 1988	Vehicles built from July 1988						
Transmission								
Model	KM117	KM131, R4M21	KM131, R4M21	KM135, R5M21	KM135, R5M21	KM135, R5M21	KM135, R5M21	KM147, V5M21
Type	Sliding mesh, 4 speed	Sliding mesh, 4 speed	Sliding mesh, 4 speed	Sliding mesh, 5 speed	Constant mesh, 5 speed	Sliding mesh, 5 speed	Constant mesh, 5 speed	Sliding mesh, 5 speed
Gear ratio								
1st	4.019	4.021	4.330	4.330	4.330	3.967	3.967	3.967
2nd	2.500	2.558	2.355	2.355	2.355	2.136	2.136	2.136
3rd	1.645	1.637	1.509	1.509	1.509	1.360	1.360	1.360
4th	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5th	—	—	—	0.827	0.827	0.856	0.856	0.856
Reverse	4.407	4.142	4.142	4.142	4.142	3.578	3.578	3.578
Transfer								
Type	—	—	—	—	—	—	—	Part-time 2-speed direct-coupled type
Gear ratio								
H	—	—	—	—	—	—	—	1.000
L	—	—	—	—	—	—	—	1.944* ¹ , 1.925* ²

NOTE

*¹: Applies to vehicles for Europe built up to November 1988 and to vehicles for General Export and for Australia built up to June 1988.

*²: Applies to vehicles for Europe built from December 1988, to vehicles for General Export and for Australia built from July 1988 and Hong kong.

SERVICE SPECIFICATIONS

E22CB--

Items	Specifications
Standard value	
Distance between change lever center and steering wheel top mm (in.)	80-90 (3.15-3.54)

TORQUE SPECIFICATIONS

E22CC--

Items	Nm	kgm	ft.lbs.
Filler plug	30-35	3.0-3.5	22-25
Transmission drain plug	60	6.0	43
Transfer drain plug	30-35	3.0-3.5	22-25
Steering column installing bolt			
Standard bolt	14-20	1.4-2.0	10-14
Special bolt	9-14	0.9-1.4	7-10
Propeller shaft installing bolt	50-60	5.0-6.0	36-43
Exhaust pipe clamp bolt	20-30	2.0-3.0	14-22
Starter motor installing bolt	27-34	2.7-3.4	20-25
Transmission mounting bolt (2WD)	70-95	7.0-9.5	51-69
Transmission mounting bolt (4WD)	35-55	3.5-5.5	25-40
Transfer mounting left side bolt (4WD)	19-28	1.9-2.8	14-20
Transfer mounting right side bolt (4WD)	35-55	3.5-5.5	25-40
Transfer mounting crossmember to engine rear insulator (4WD)	70-95	7.0-9.5	51-69
Stopper plate to body (4WD)	35-55	3.5-5.5	25-40
Release cylinder installing bolt	30-42	3.0-4.2	22-30
Oil chamber installing bolt	15-22	1.5-2.2	11-16
Engine and transmission bolt			
10 mm (0.4 in) outside diameter bolts	43-55	4.3-5.5	31-40
8 mm (0.3 in) outside diameter bolts	20-27	2.0-2.7	14-20

LUBRICANTS

E22CD--

Items	Specified lubricant	Quantity Lit. (U.S.qts., Imp.qts.)
Manual transmission	Hypoid gear oil SAE 80W ^{*1} or 75-85W or 75W-90 ^{*2} conforming to API GL-4	KM117 1.5 (1.6, 1.3) KM131, R4M21 1.8 (1.8, 1.6) KM135, R5M21 2.0 (2.1, 1.8) KM147, V5M21 2.0 (2.1, 1.8)
Transfer case	Hypoid gear oil SAE 80W ^{*1} or 75-85W or 75W-90 ^{*2} conforming to API GL-4	2.2 (2.3, 1.9)
Column shift (Sliding parts of change lever guide, change lever support cover, change lever, bush, selector lever, shift lever)	Multipurpose grease, SAE J310, NLGI No. 2	As required
Floor shift (Sliding parts of bush)	Multipurpose grease, SAE J310, NLGI No. 2	As required

NOTE

(1) ^{*1} indicates vehicles for Australia and General Export.

(2) ^{*2} indicates vehicles for Europe.


TROUBLESHOOTING

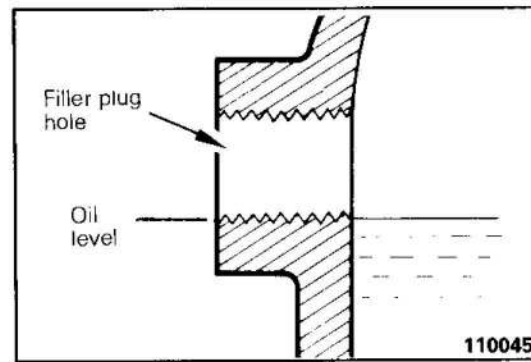
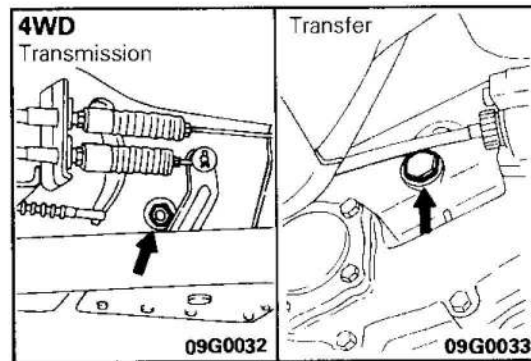
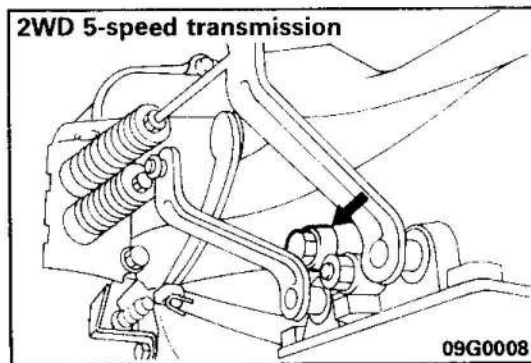
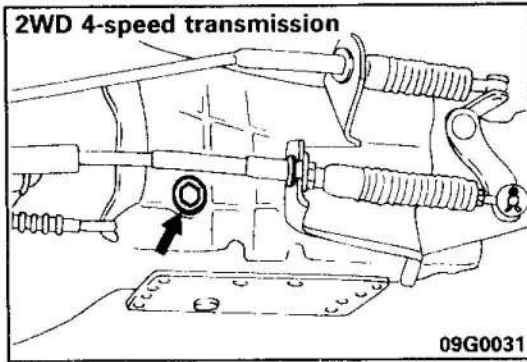
E22EAAA

Symptom	Probable cause	Remedy	Reference page
Gear will not shift or is hard to shift	Bent shift lever	Repair or replace	22-10, 22-14, 22-17
	Control cable malfunction	Replace	22-8, 22-12, 22-15
	Excessively worn return spring	Replace	22-14, 22-17
	Clutch dose not release correctly	Adjust or replace	—
Jumps out of gear or has too much play	Control cable malfunction	Replace	22-8, 22-12, 22-15
	Worn bush	Replace	22-8, 22-14, 22-17
	Bent lever	Replace	22-10, 22-14, 22-17
Lever is hard to operate	Shift lever assembly requires greasing	Apply grease	22-11, 22-14, 22-18
	Control cable requires greasing	Replace	22-8, 22-12, 22-15
Emits abnormal sound when operating	Worn bush	Replace	22-8, 22-14, 22-17

SPECIAL TOOL

E22DA—

Tool (Number and name)	Use
MB990826 Torx wrench	Removal of special steering column installation screw (Vehicles for Europe)
	



SERVICE ADJUSTMENT PROCEDURES

E22FDAB

OIL LEVEL CHECK

1. Remove filler plug and check oil level.

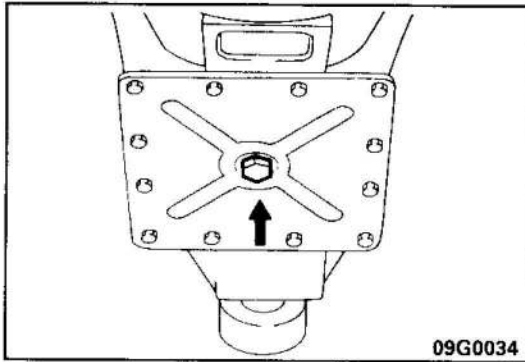
2. Oil level should be at the lower portion of the filler plug hole.

NOTE

For 4WD vehicles, check oil levels of both transmission and transfer.

3. Tighten filler plug to specified torque.

Tightening torque: 30–35 Nm (3.0–3.5 kgm, 22–25 ft.lbs.)

**CHANGING OIL <2WD>**

1. Remove transmission drain plug.
2. Drain oil.
3. Tighten drain plug to specified torque.

Tightening torque: 60 Nm (6.0 kgm, 43 ft. lbs.)

4. Remove filler plug and fill with specified oil till the level comes to the lower portion of filler plug hole.

Specified transmission oil:

Hypoid gear oil SAE 80W*¹ or 75W-85W or 75W-90*² conforming to API GL-4

Quantity:

KM117 1.5 lit.(1.6 U.S.qts., 1.3 Imp.qts.)

KM131, R4M21 1.8 lit.(1.8 U.S.qts., 1.6 Imp.qts.)

KM135, R5M21 2.0 lit.(2.1 U.S.qts., 1.8 Imp.qts.)

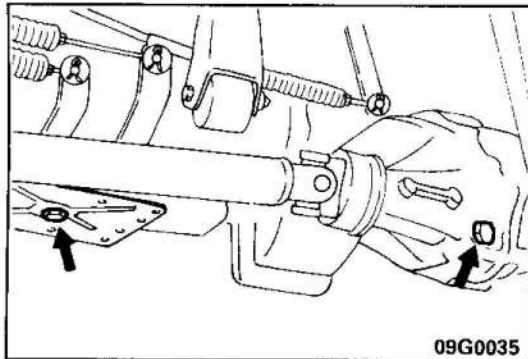
NOTE

(1) *¹ indicates vehicles for Australia and General Export.

(2) *² indicates vehicles for Europe.

5. Tighten filler plug to specified torque.

Tightening torque: 30-35 Nm (3.0-3.5 kgm, 22-25 ft.lbs.)

**CHANGING OIL <4WD>**

1. Remove transmission and transfer drain plug.
2. Drain oil.
3. Tighten transmission and transfer drain plug to specified torque.

Tightening torque:

Transmission drain plug 60 Nm (6.0 kgm, 43 ft.lbs.)

Transfer drain plug

30-35 Nm (3.0-3.5 kgm, 22-25 ft.lbs.)

4. Remove transmission and transfer filler plug, and fill with specified oil till the lever comes to the lower portion of filler plug hole.

Specified transmission oil:

Hypoid gear oil SAE 80W*¹ or 75W-85W or 75W-90*² conforming to API GL-4

Quantity:

Transmission 2.0 lit (2.1 U.S.qts., 1.8 Imp.qts.)

Transfer case 2.2 lit (2.3 U.S.qts., 1.9 Imp.qts.)

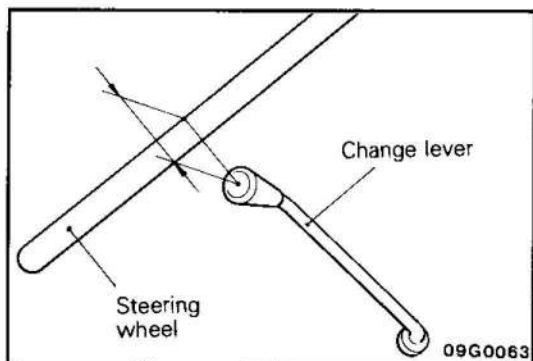
NOTE

(1) *¹ indicates vehicles for Australia and General Export.

(2) *² indicates vehicles for Europe.

5. Tighten filler plug to specified torque.

Tightening torque: 30-35 Nm (3.0-3.5 kgm, 22-25 ft.lbs.)

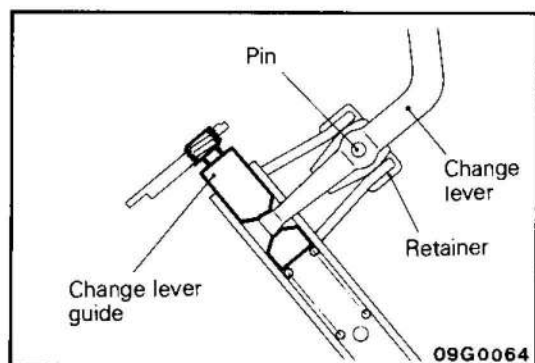


CHECK AND ADJUSTMENT OF CHANGE LEVER POSITION (COLUMN SHIFT)

E22FEAA

1. In neutral, check that the distance between the change lever center and the top surface of the steering wheel is within the standard value.

Standard value: 80–90 mm (3.15–3.54 in.)



2. If not within the standard value, adjust by the following procedures.

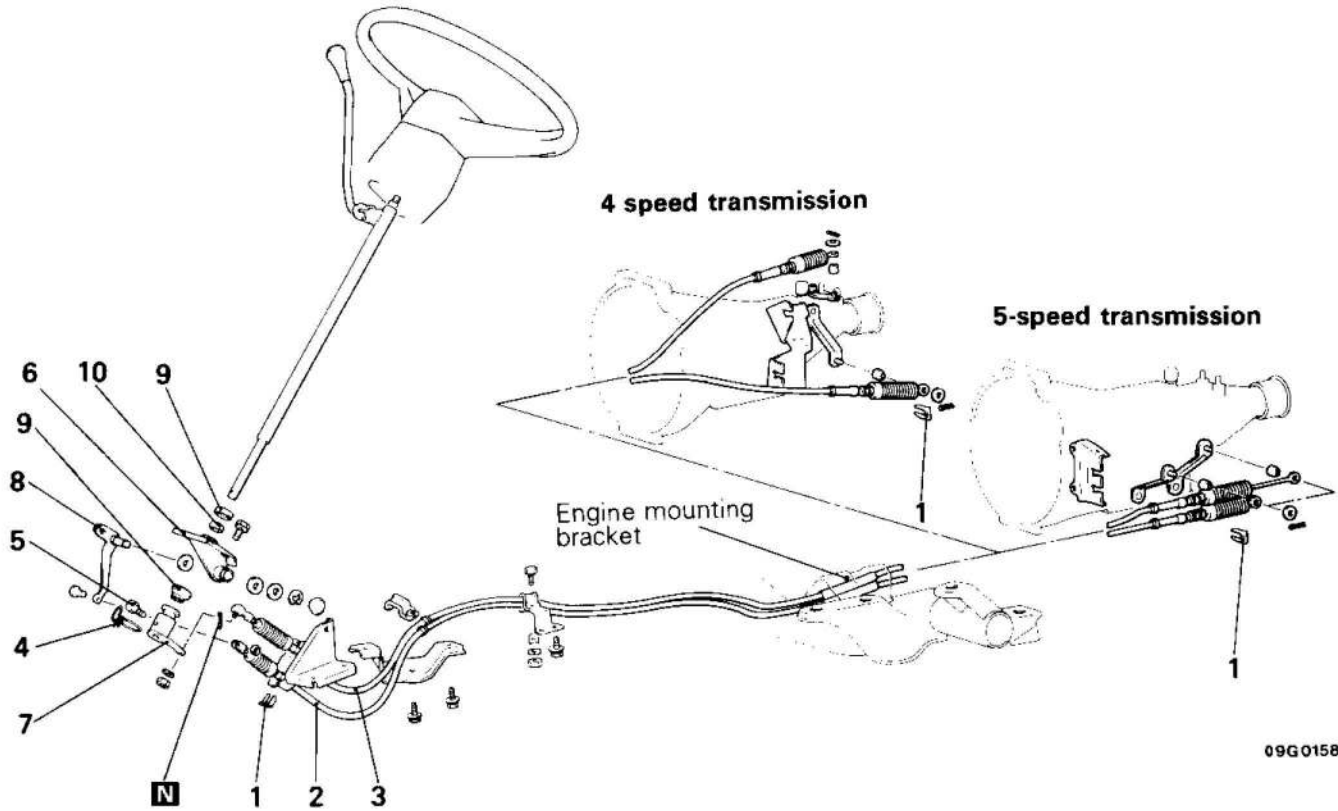
- (1) Remove retainer.
- (2) Remove pin.
- (3) Remove change lever.
- (4) Turn change lever guide and adjust change lever position.

TRANSMISSION CONTROL (2WD COLUMN SHIFT TYPE)

REMOVAL AND INSTALLATION (Control cable, selector lever bracket)

E22HA-0

Post-installation Operation
 • Check shift lever operating condition.



09G0158

Removal steps

- ◆◆ 1. Clip
- ◆◆◆◆ 2. Shift control cable
- ◆◆◆◆ 3. Selector control cable
- ◆◆◆◆ 4. Wire
- ◆◆◆ 5. Bolt
- ◆◆◆◆ 6. Selector lever bracket
- ◆◆◆◆ 7. Shift lever
- ◆◆◆◆ 8. Selector lever
- ◆◆◆◆ 9. Dust cover
- ◆◆◆◆ 10. Bushing

NOTE

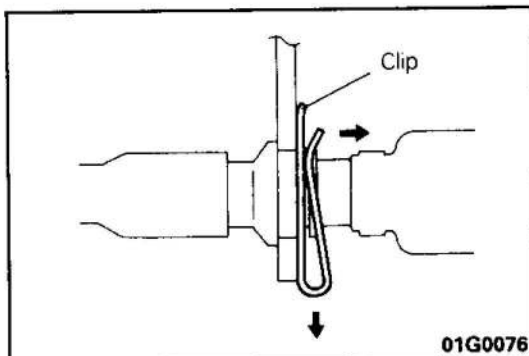
- (1) Reverse the removal procedures to reinstall.
- (2) ◆◆ : Refer to "Service Points of Removal".
- (3) ◆◆◆ : Refer to "Service Points of Installation".
- (4) **N** : Non-reusable parts

SERVICE POINTS OF REMOVAL

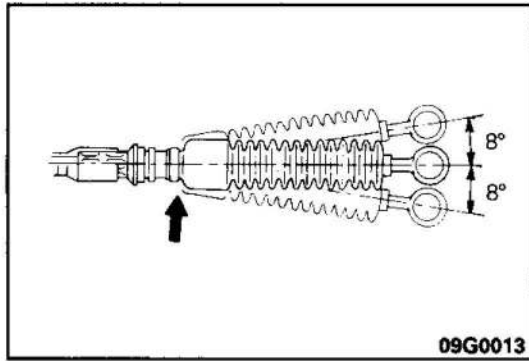
EE22HBAA

1. REMOVAL OF CLIP

Expand the end and remove clip.



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2. REMOVAL OF SHIFT CONTROL CABLE/3. SELECTOR CONTROL CABLE

Be careful not to bend the point indicated by the arrow more than 8°.

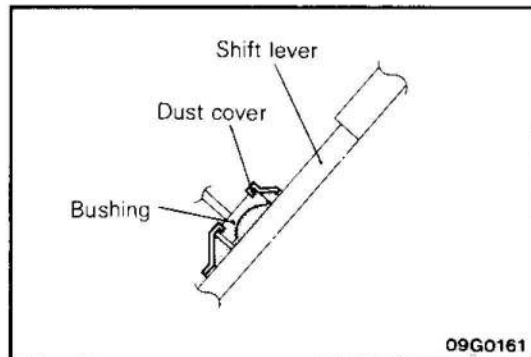
NOTE

For easier control cable installation, make the identification marks at the control cable and transmission lever connection.

INSPECTION

E22HCAE

- Defective or malfunctioning shift cable and selector cable operation.
- Defective boot.

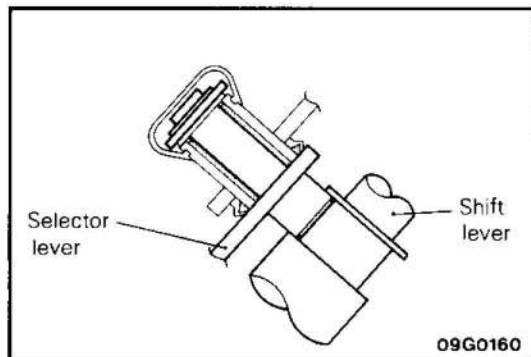


SERVICE POINTS OF INSTALLATION

E22HDAE

10. APPLICATION OF GREASE TO BUSHING/ 9 .DUST COVER

Apply the multipurpose grease to the sliding part of bushing.

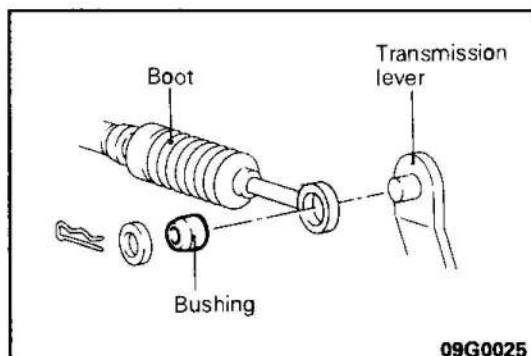


8. APPLICATION OF GREASE TO SELECTOR LEVER / 7 .SHIFT LEVER

Apply the multipurpose grease to the sliding parts of selector lever and shift lever.

5. INSTALLATION OF BOLT

Match shift lever screw hole and control rod hole and tighten bolt.



3. INSTALLATION OF SELECTOR CONTROL CABLE/2. SHIFT CONTROL CABLE

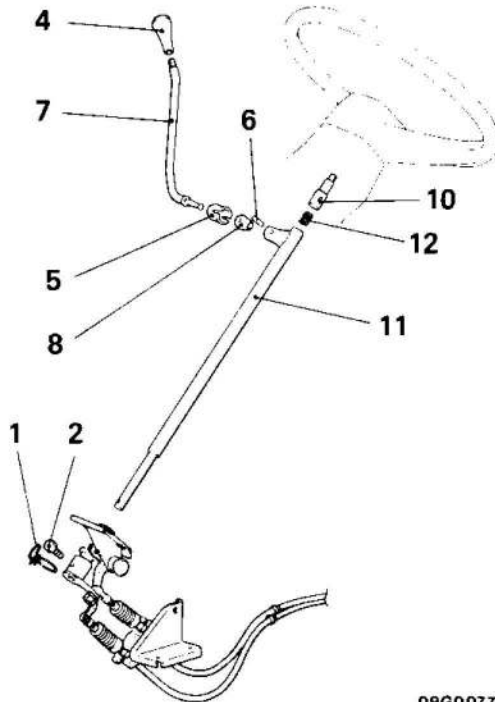
- (1) Assemble bush in the direction shown in the figure.
- (2) Be careful not to twist the boot when assembling.

REMOVAL AND INSTALLATION (Change lever, control rod)

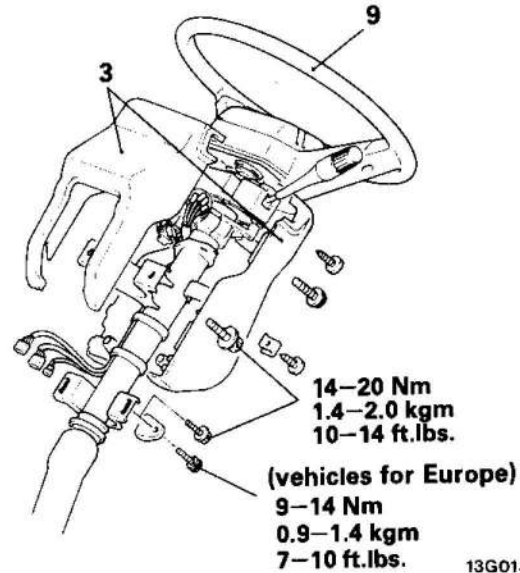
E22HA--1

Post-installation Operation

- Check shift lever operating condition.



09G0077



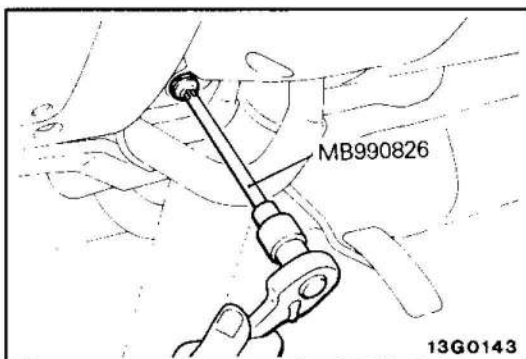
13G0153

Removal steps

1. Wire
2. Bolt
- ◆◆ Check and adjustment of change lever position
3. Column cover
4. Knob
5. Retainer
6. Pin
- ◆◆ 7. Change lever
- ◆◆ 8. Change lever supporter cover
- ◆◆ 9. Steering column assembly
- ◆◆◆ 10. Change lever guide
- ◆◆ 11. Control rod
12. Spring

NOTE

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



13G0143

SERVICE POINTS OF REMOVAL

E22HBAE

9. REMOVAL OF STEERING COLUMN ASSEMBLY

Screw in change lever guide. Remove lower and upper steering column bracket installing bolts and lay the steering wheel down.

NOTE

One of the four steering column installing bolts in vehicles for Europe is a special screw. Remove the special screw with the special tool.

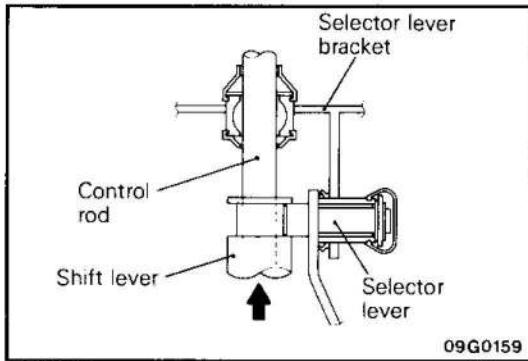
10. REMOVAL OF CHANGE LEVER GUIDE

Push control rod down. Turn change lever guide and remove.

INSPECTION

E22HCAG

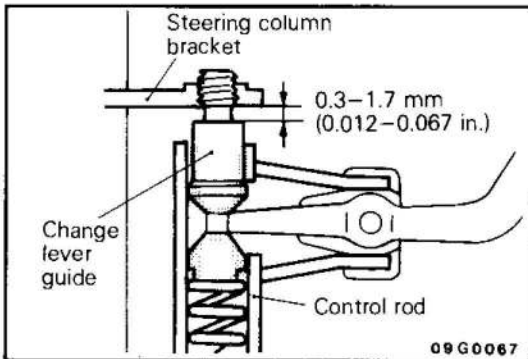
- Check for loose pin.
- Check for bent or defective control rod.



SERVICE POINTS OF INSTALLATION

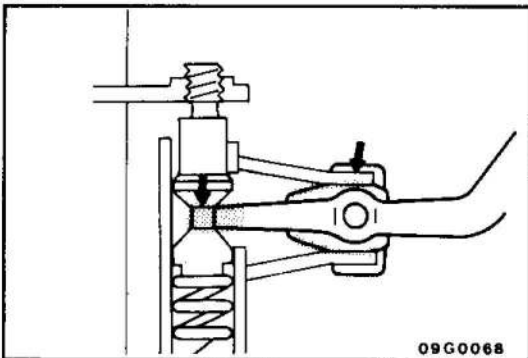
11. INSTALLATION OF CONTROL ROD

- (1) Insert control rod into selector lever bracket.
- (2) Push control rod up once and match projection on selector lever to shift lever groove. Insert control rod into shift lever hole in that state.



10. INSTALLATION OF CHANGE LEVER GUIDE

- (1) Screw change lever guide into steering column bracket so that the gap between the two is as the measurement in the figure.
- (2) Apply multipurpose grease to the sliding part of change lever guide.



8. INSTALLATION OF CHANGE LEVER SUPPORTER COVER/7.CHANGE LEVER

- (1) Apply multipurpose grease to sliding parts indicated in the figure.
- (2) Insert change lever into change lever guide hole while pulling up control rod.

2. INSTALLATION OF BOLT

Match shift lever screw hole and control rod hole and tighten bolt.

● **CHECK AND ADJUSTMENT OF CHANGE LEVER POSITION**

Refer P.22-7 for check procedures.

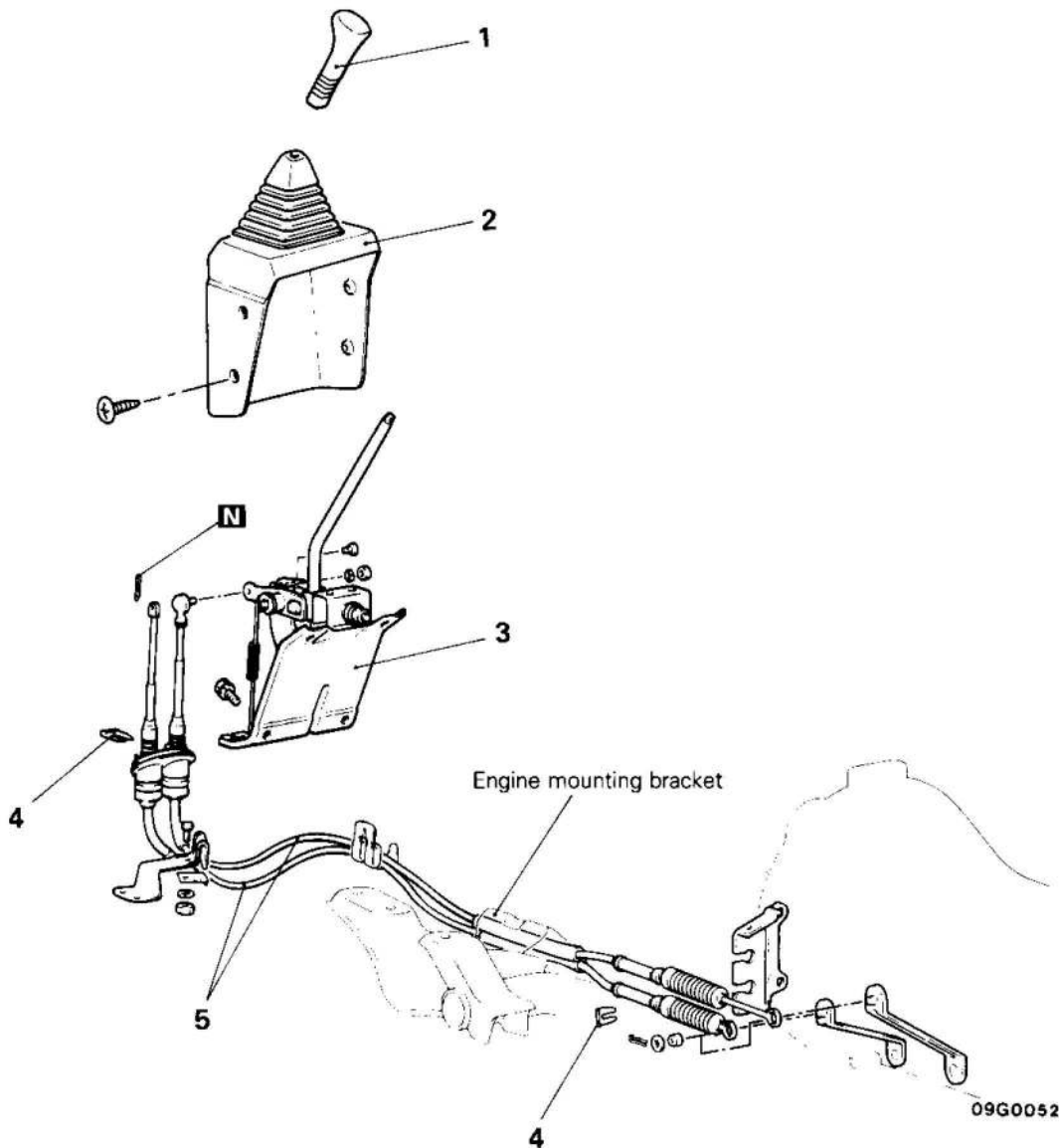
TRANSMISSION CONTROL (2WD FLOOR SHIFT TYPE)

E22HA--2

REMOVAL AND INSTALLATION

Post-installation Operation

- Check operating condition of shift lever.

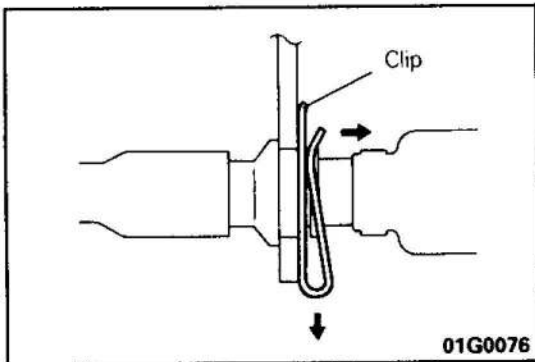


Removal steps

1. Shift lever knob
2. Floor console
3. Shift lever assembly
4. Clip
5. Control cable

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

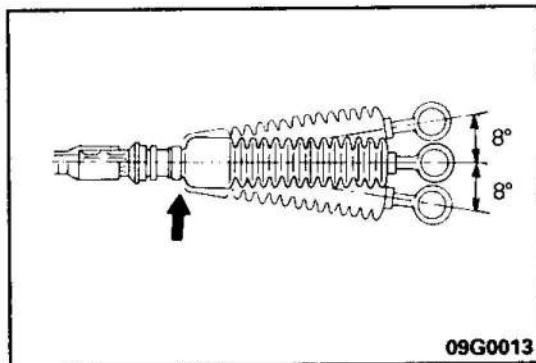


SERVICE POINTS OF REMOVAL

E22HBAC

4. REMOVAL OF CLIP

Expand end and remove clip.



5. REMOVAL OF CONTROL CABLE

Be careful not to bend the part indicated by the arrow more than 8°.

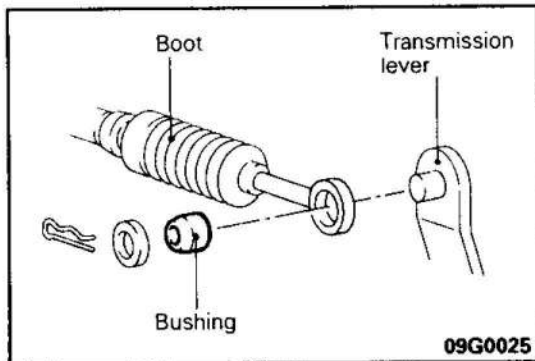
NOTE

Make the identification marks at the control cable and transmission lever connection for easier control cable installation.

INSPECTION

E22HCAF0

- Check for defective and incorrect control cable operation.
- Check for defective boot.



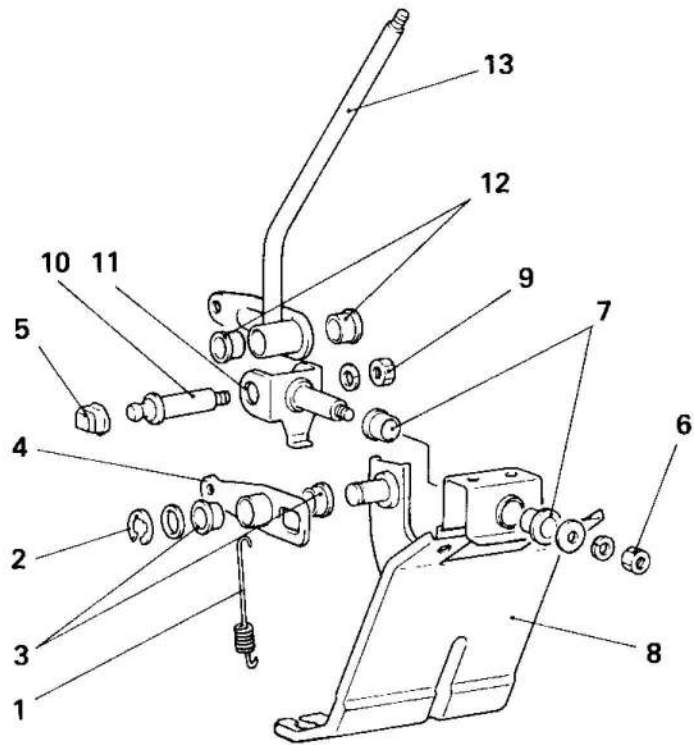
SERVICE POINTS OF INSTALLATION

E22HDAF0

5. INSTALLATION OF CONTROL CABLE

- (1) Assemble bush in the direction indicated in the figure.
- (2) Be careful not to twist boot when assembling.

DISASSEMBLY AND REASSEMBLY



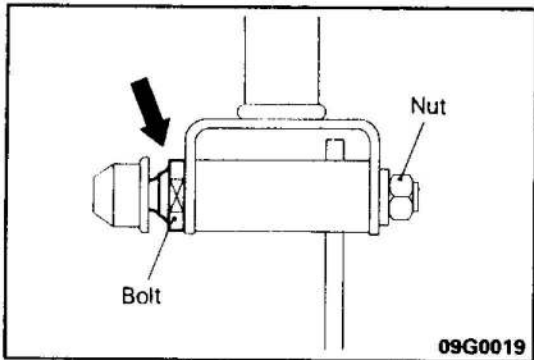
09G0016

Disassembly steps

- 1. Spring
- 2. Snap ring
- ◆◆ 3. Bushing
- ◆◆ 4. Selector lever
- ◆◆ 5. Bushing
- 6. Nut
- ◆◆ 7. Bushing
- 8. Bracket
- ◆◆ 9. Nut
- ◆◆ 10. Bolt
- ◆◆ 11. Change lever support
- ◆◆ 12. Bushing
- 13. Change lever assembly

NOTE

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



09G0019

SERVICE POINTS OF DISASSEMBLY

E22HFAA0

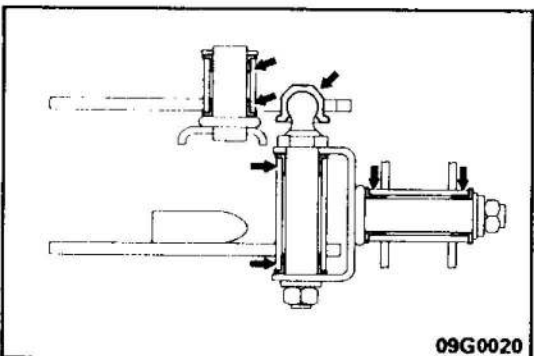
9. REMOVAL OF NUT/10.BOLT

When removing nut secure bolt by its notch.

INSPECTION

E22HGAA0

- Check bushes for wear or defects.
- Check spring for excessive wear.



09G0020

SERVICE POINTS OF REASSEMBLY

E22HMAA0

12. /7./5./3.APPLICATION OF GREASE TO BUSHING

Apply the specified grease to the sliding part of bushing.

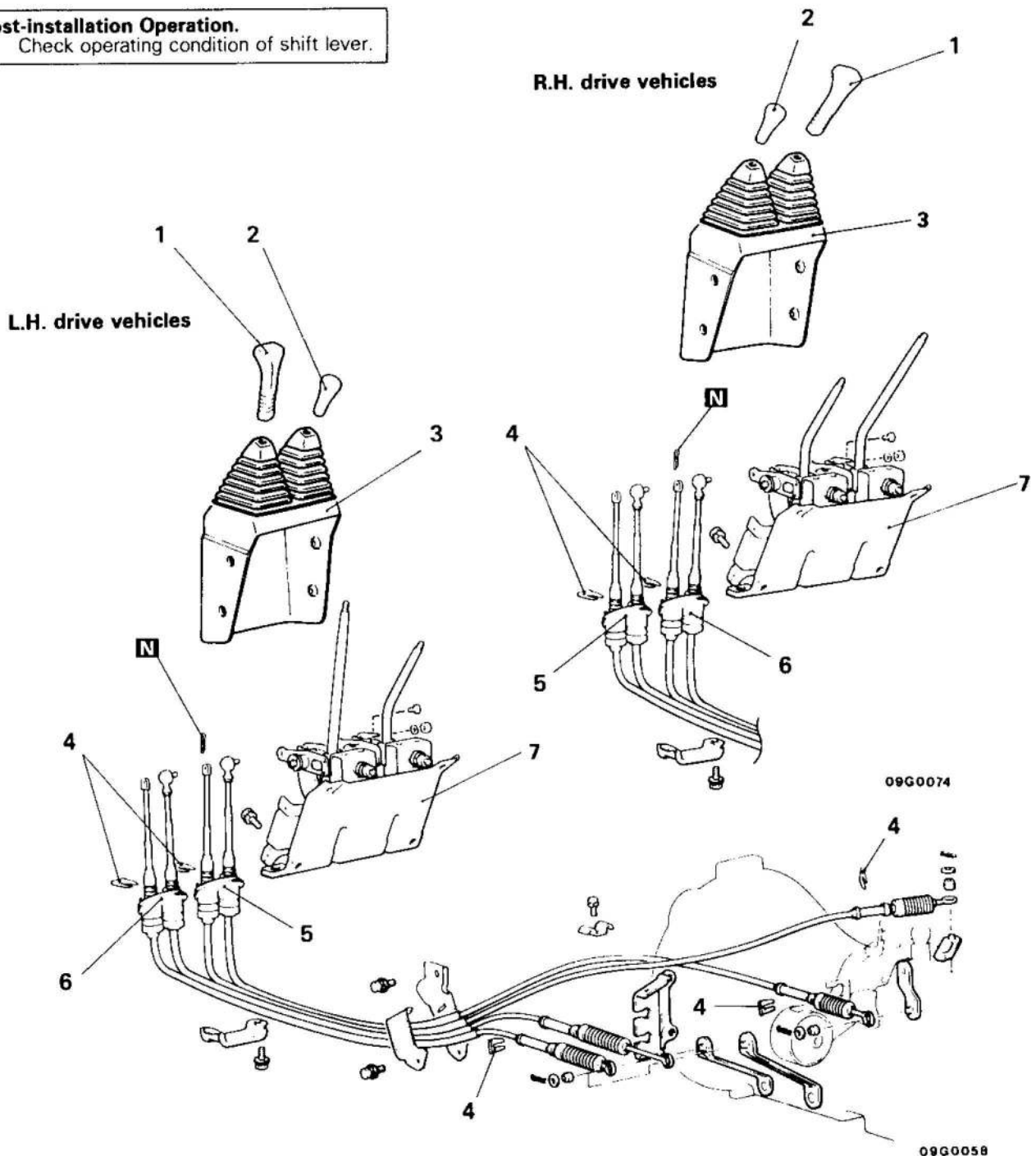
Specified grease: Multipurpose grease, SAE J310, NLGI No. 2

TRANSMISSION CONTROL (4WD)

REMOVAL AND INSTALLATION

Post-installation Operation.

- Check operating condition of shift lever.

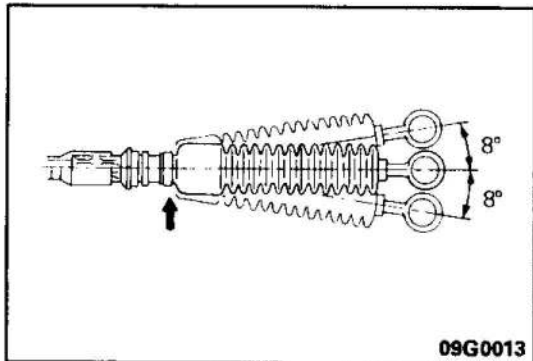
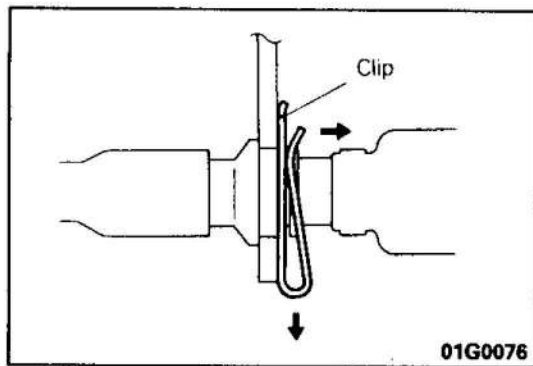


Removal steps

1. Transmission shift lever knob
2. Transfer shift lever knob
3. Floor console
4. Clip
5. Transfer control cable
6. Transmission control cable
7. Shift lever assembly

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**

E22HBAD

4. REMOVAL OF CLIP

Expand end and remove clip.

5. REMOVAL OF TRANSFER CONTROL CABLE/6. TRANSMISSION CONTROL CABLE

Be careful not to bend the part indicated by the arrow more than 8°.

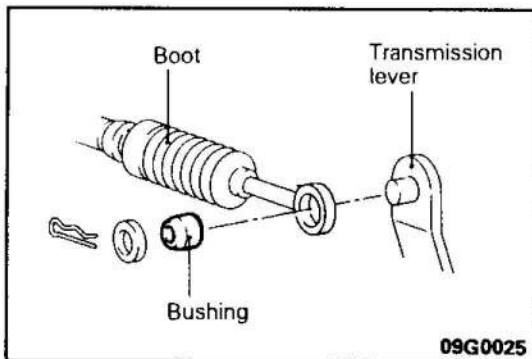
NOTE

Make the identification marks at the control cable and transmission lever connection for easier control cable installation.

INSPECTION

E22HCAF1

- Check for defective and incorrect control cable operation.
- Check for defective boot.

**SERVICE POINTS OF INSTALLATION**

E22HDAF1

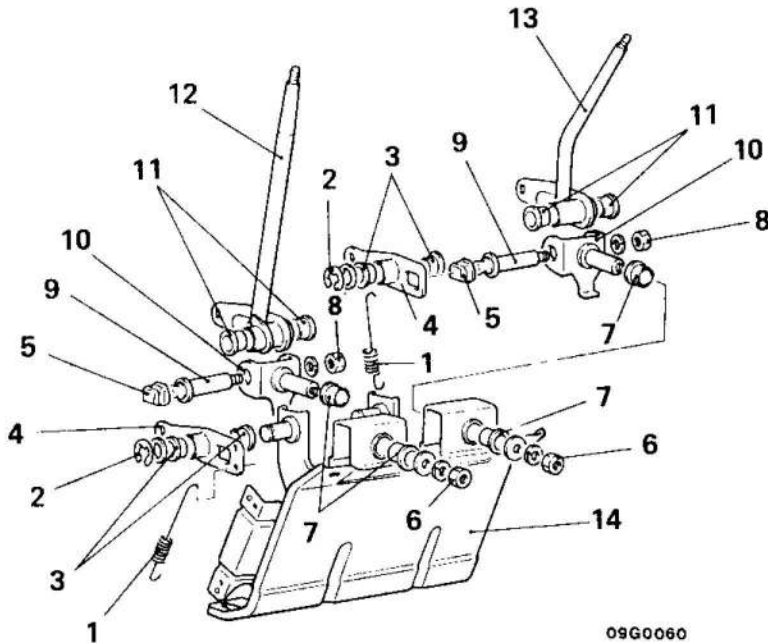
6. INSTALLATION OF TRANSMISSION CONTROL CABLE /5. TRANSFER CONTROL CABLE

- (1) Assemble bush in the direction indicated in the figure.
- (2) Be careful not to twist boot when assembling.

DISASSEMBLY AND REASSEMBLY

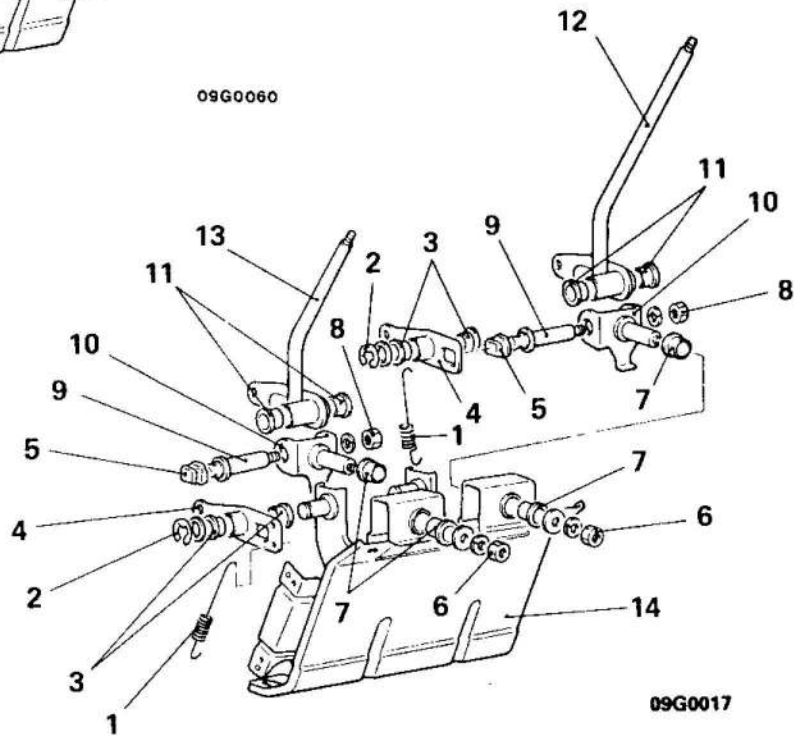
E22HE--1

L.H. drive vehicles



09G0060

R.H. drive vehicles



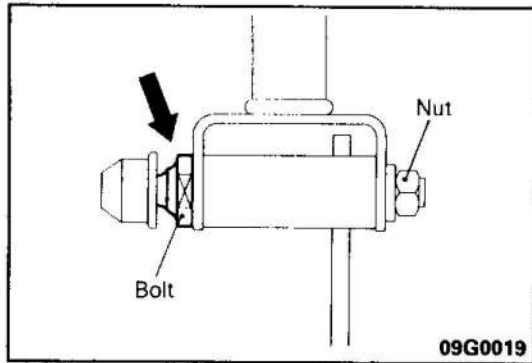
09G0017

Disassembly steps

- 1. Spring
- 2. Snap ring
- ◆◆ 3. Bushing
- ◆◆ 4. Selector lever
- ◆◆ 5. Bushing
- 6. Nut
- ◆◆ 7. Bushing
- ◆◆ 8. Nut
- ◆◆ 9. Bolt
- 10. Change lever support
- ◆◆ 11. Bushing
- 12. Transmission change lever
- 13. Transfer change lever
- 14. Bracket

NOTE

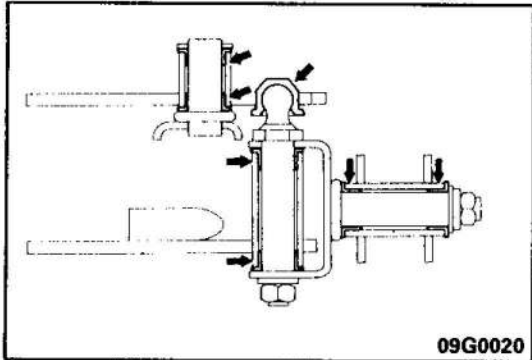
- (1) Reverse the disassembly procedures to reassemble.
- (2) ◆◆ : Refer to "Service Points of Disassembly".
- (3) ◆◆ : Refer to "Service Points of Reassembly".

**SERVICE POINTS OF DISASSEMBLY**

E22HF001

8. REMOVAL OF NUT/9.BOLT

When removing nut secure bolt by its notch.

**INSPECTION**

E22HG001

- Check bushes for wear or defects.
- Check spring for excessive wear.

SERVICE POINTS OF REASSEMBLY

E22HH001

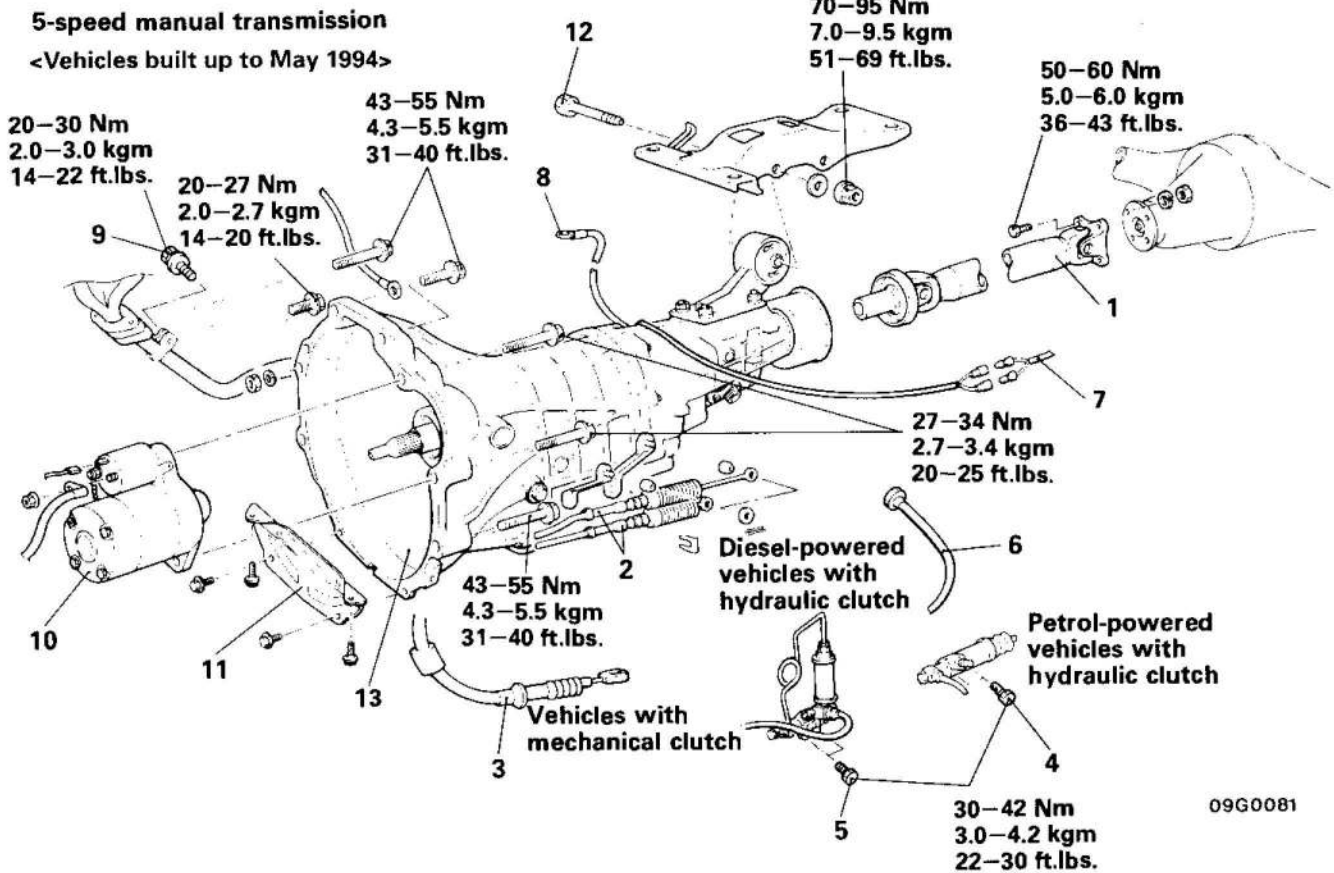
11. /7./5./3.APPLICATION OF GREASE TO BUSHING

Apply the specified grease to the sliding part of bushing.

**Specified grease: Multipurpose grease, SAE J310,
NLGI No. 2**

TRANSMISSION ASSEMBLY (2WD)

REMOVAL AND INSTALLATION



09G0081

Removal steps

- ◆◆ 1. Rear propeller shaft
- ◆◆ 2. Shift control cable connection
- 3. Clutch cable connection (vehicles with mechanical clutch)
- 4. Release cylinder installing bolt (petrol-powered vehicles with hydraulic clutch)
- 5. Release cylinder and oil chamber installing bolts (diesel-powered vehicles with hydraulic clutch)
- 6. Speedometer cable connection
- 7. Back-up lamp harness connection
- 8. Earth cable
- 9. Exhaust pipe clamp bolt (petrol-powered vehicles)
- 10. Starter motor
- 11. Bell housing cover
- ◆◆ 12. Transmission mounting bolt
- ◆◆ 13. Transmission assembly

Pre-removal Operation

- Draining Transmission Oil (Refer to P. 22-6)

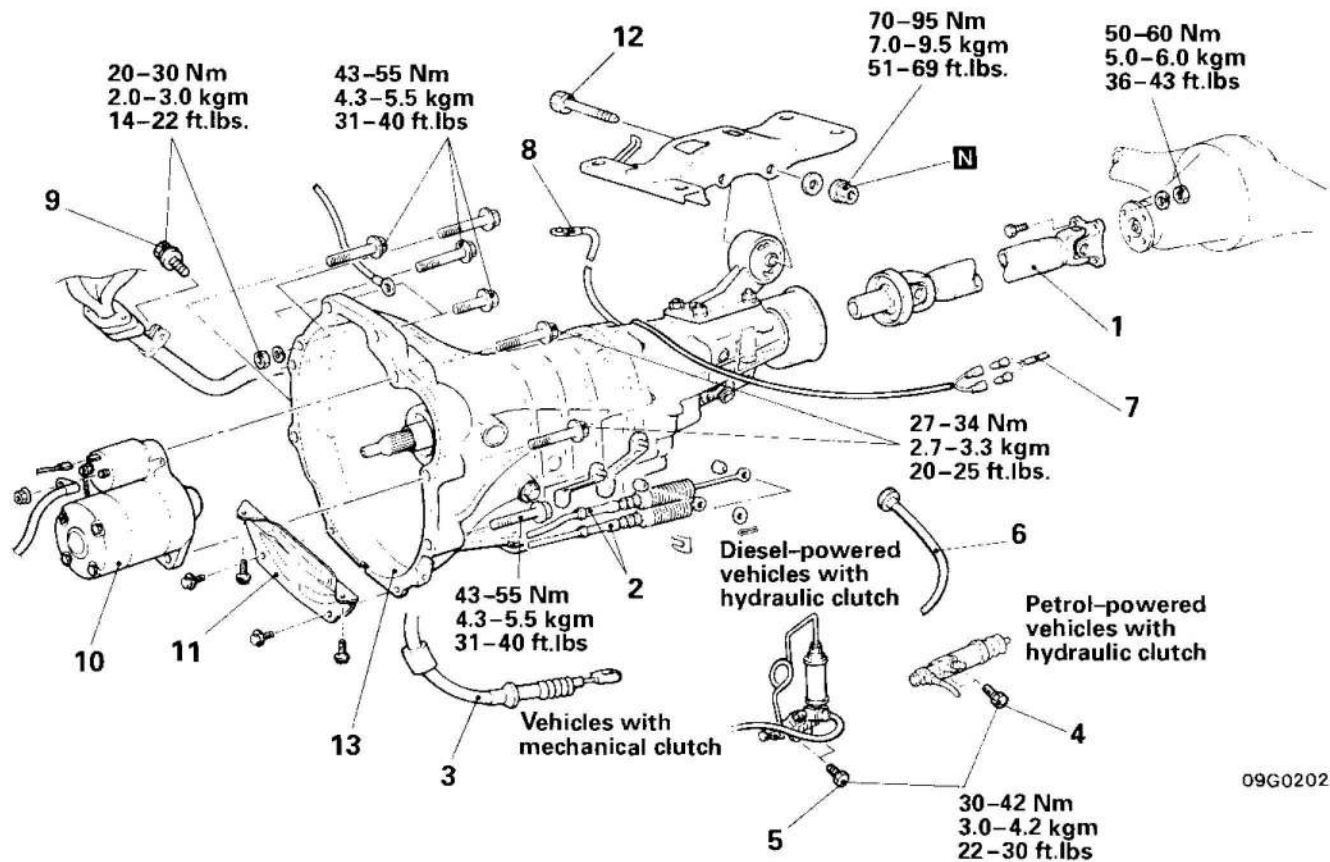
Post-installation Operation

- Filling Transmission Oil (Refer to P. 22-6)
- Confirmation of Clutch Operation (Refer to GROUP 21 CLUTCH-Service Adjustment Procedures.)
- Confirmation of Shift Lever Operating Condition
- Confirmation of All Gauge Operations

NOTE

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

<Vehicles built from June 1994>

**Removal steps**

- ◆◆ 1. Rear propeller shaft
- ◆◆ 2. Shift control cable connection
- ◆◆ 3. Clutch cable connection (vehicles with mechanical clutch)
- ◆◆ 4. Release cylinder installing bolt (petrol-powered vehicles with hydraulic clutch)
- ◆◆ 5. Release cylinder and oil chamber installing bolts (diesel-powered vehicles with hydraulic clutch)
- ◆◆ 6. Speedometer cable connection
- ◆◆ 7. Back-up lamp harness connection
- ◆◆ 8. Earth cable
- ◆◆ 9. Exhaust pipe clamp bolt (petrol-powered vehicles)
- ◆◆ 10. Starter motor
- ◆◆ 11. Bell housing cover
- ◆◆ 12. Transmission mounting bolt
- ◆◆ 13. Transmission assembly

Pre-removal Operation

- Draining Transmission Oil (Refer to P.22-6)

Post-installation Operation

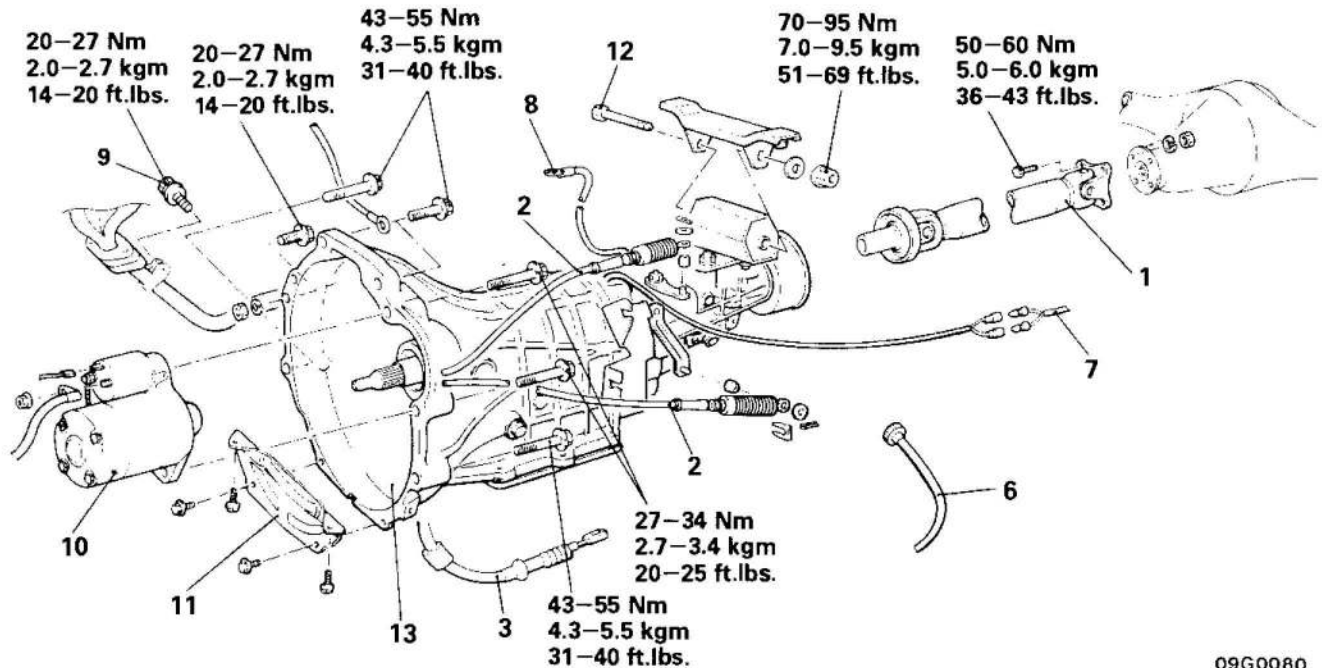
- Filling Transmission Oil (Refer to P.22-6)
- Confirmation of Clutch Operation (Refer to GROUP 21 CLUTCH – Service Adjustment Procedures.)
- Confirmation of Shift Lever Operating Condition
- Confirmation of All Gauge Operations

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.

NOTES

4-speed manual transmission



09G0080

Removal steps

1. Rear propeller shaft
- ◆◆ 2. Shift control cable connection
3. Clutch cable connection
6. Speedometer cable connection
7. Back-up lamp harness connection
8. Earth cable
9. Exhaust pipe clamp bolt
10. Starter motor
11. Bell housing cover
12. Transmission mounting bolt
- ◆◆ 13. Transmission assembly

Pre-removal Operation

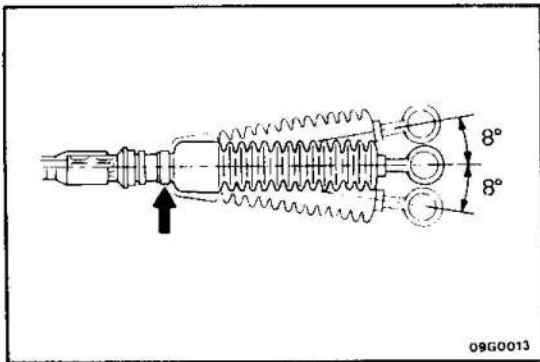
- Draining Transmission Oil (Refer to P. 22–6)

Post-installation Operation

- Filling Transmission Oil (Refer to P. 22–6)
- Confirmation of Clutch Operation (Refer to GROUP 21 CLUTCH–Service Adjustment Procedures.)
- Confirmation of Shift Lever Operating Condition
- Confirmation of All Gauge Operations

NOTE

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

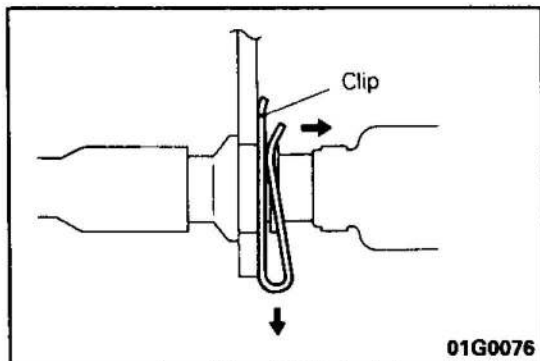


SERVICE POINTS OF REMOVAL

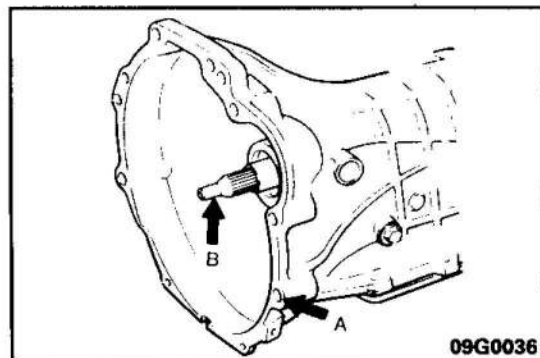
E22JB880

2. DISCONNECTION OF SHIFT CONTROL CABLE

- (1) Be careful not to bend the part indicated by the arrow more than 8°.



- (2) Expand end and remove clip.



SERVICE POINTS OF INSTALLATION

E22JDAB0

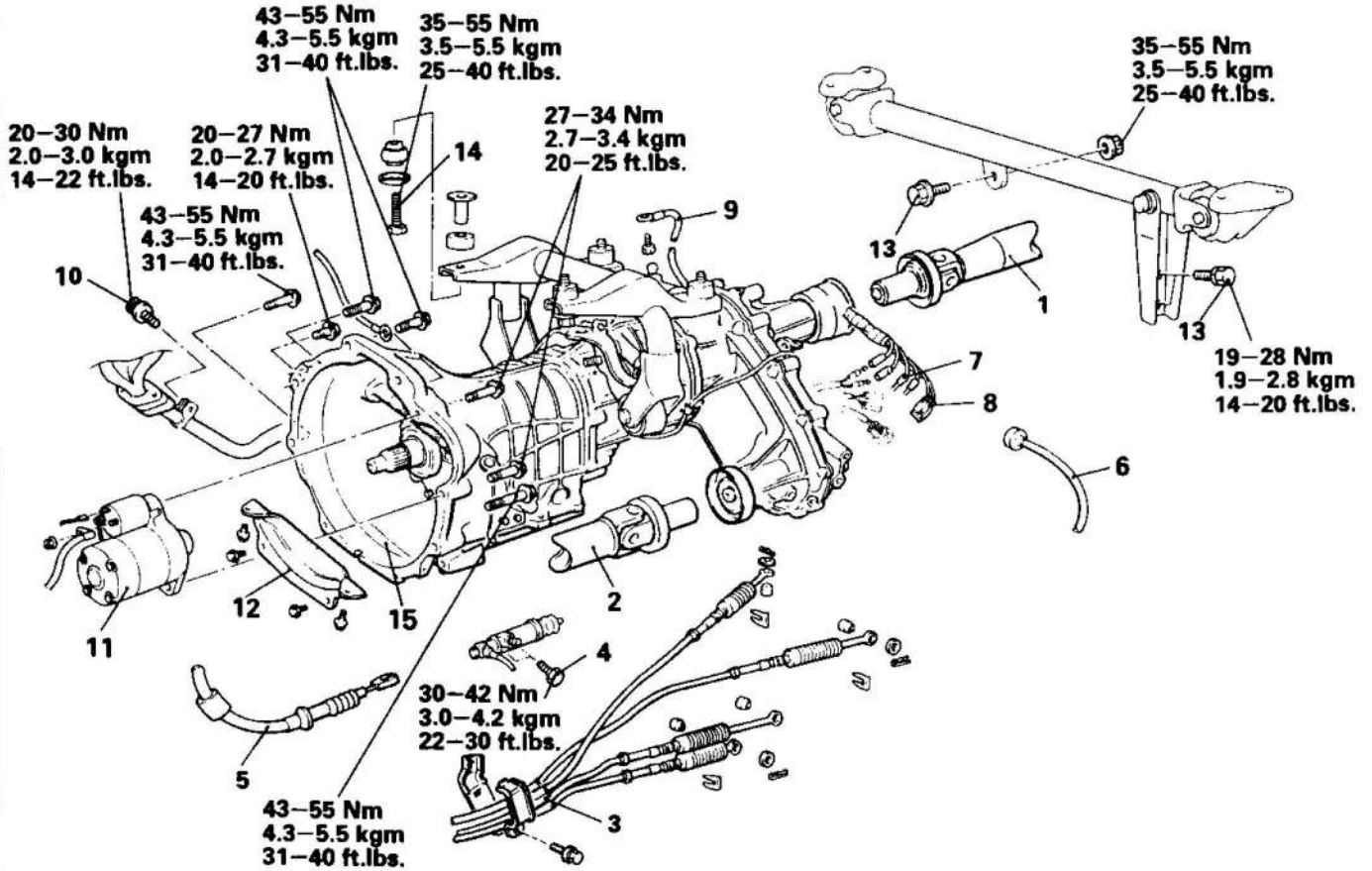
13. INSTALLATION OF TRANSMISSION

- (1) Match knock pin with A hole and secure tightly to engine.
- (2) Insert B along spline on clutch side.

TRANSMISSION AND TRANSFER ASSEMBLY

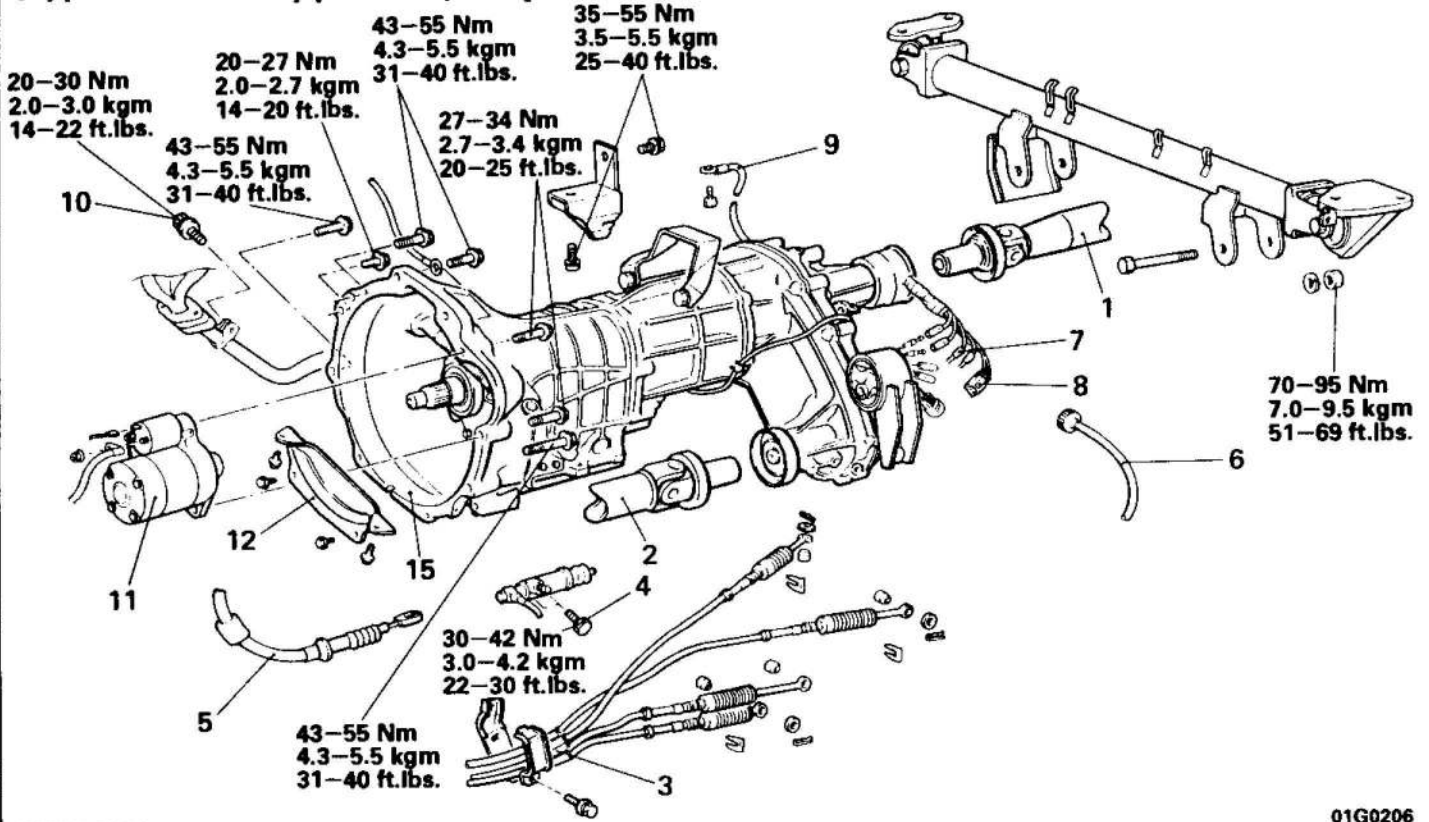
REMOVAL AND INSTALLATION

[Applicable through June production, 1987]



[Applicable from July production, 1987]

09G0082



01G0206

Pre-removal Operation

- Draining transmission and transfer oil
(Refer to P. 22-6)
- Removal of transfer protector
(Refer to GROUP 42 BODY-Under Cover.)

Removal steps

1. Rear propeller shaft
2. Front propeller shaft
- ◆◆ 3. Shift control cable connection
4. Release cylinder installing bolt
(vehicles with hydraulic clutch)
5. Clutch cable connection
(vehicles with mechanical clutch)
6. Speedometer cable connection
7. Back-up lamp harness connection
8. 4WD indicator lamp harness connection
9. Earth cable
10. Exhaust pipe clamp bolt
11. Starter motor
12. Bell housing cover
13. Transfer mounting bolt
14. Transmission mounting bolt
- ◆◆ 15. Transmission and transfer assembly

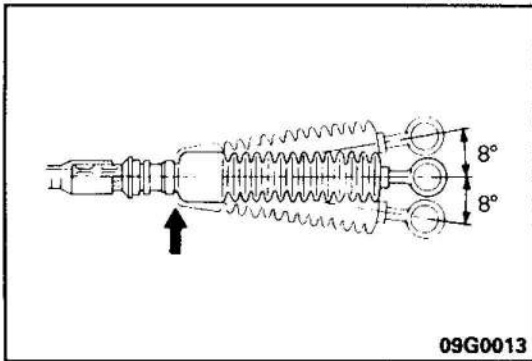
NOTE

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

Post-installation Operation

- Filling transmission and transfer oil
(Refer to P. 22-6)
- Removal of transfer protector
(Refer to GROUP 42 BODY-Under Cover.)
- Confirmation of Clutch Operation
(Refer to GROUP 21 CLUTCH-
Service Adjustment Procedures.)
- Confirmation of Shift Lever Operating Condition
- Confirmation of All Gauge Operations

22-22-2

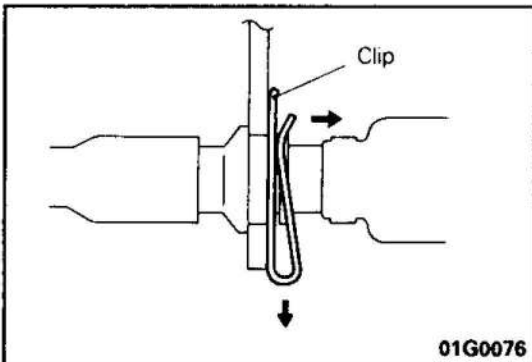


SERVICE POINTS OF REMOVAL

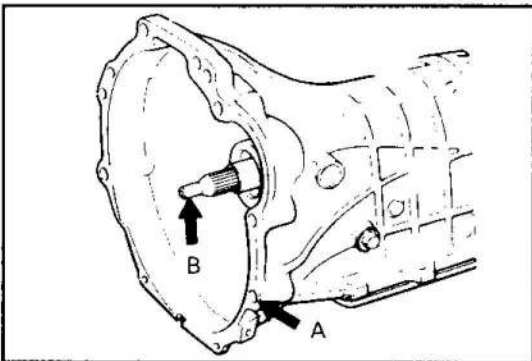
E22JB881

3. REMOVAL OF SHIFT CONTROL CABLE

- (1) Be careful not to bend the part indicated by the arrow more than 8°.



- (2) Expand end and remove clip.



SERVICE POINTS OF INSTALLATION

E22JDAB1

15. INSTALLATION OF TRANSMISSION ASSEMBLY

- (1) Match knock pin with A hole and secure tightly to engine.
- (2) Insert B along spline on clutch side.

