
MANUAL TRANSMISSION

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GENERAL INFORMATION

22100010076

The manual transmission is F5M31.

Items		Specifications
Model		F5M31
Type		Manual, 5-speed, Front wheel drive
Gear ratio	1st	2.846
	2nd	1.833
	3rd	1.217
	4th	0.888
	5th	0.690
	Reverse	3.166
Final gear ratio		4.913
Speedometer gear ratio (driven/drive)		29/36

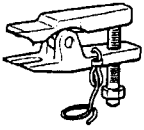
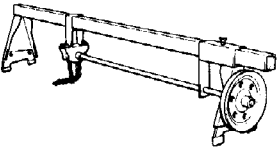
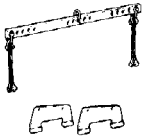
LUBRICANT

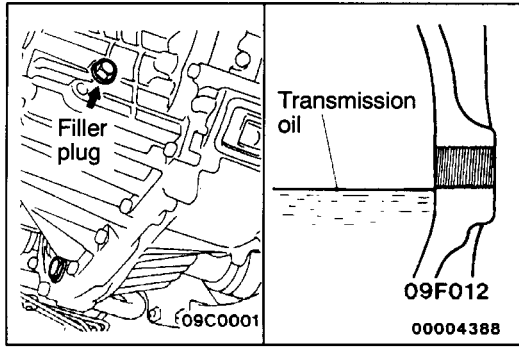
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Item	Specified lubricant	Quantity ℓ
Transmission oil	Hypoid gear oil SAE 75W-90 or 75W-85W conforming to API classification GL-4	2.0

SPECIAL TOOLS

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Tool	Number	Name	Use
	MB990635 or MB991113	Steering linkage puller	Tie rod end and lower arm disconnection
	GENERAL SERVICE TOOL MZ203827	Engine lifter	Supporting the engine assembly during removal and installation of the transmission
	MB991453	Engine hanger	
	MB991461	Plug	Prevention of entry of foreign objects into the transmission case



ON-VEHICLE SERVICE

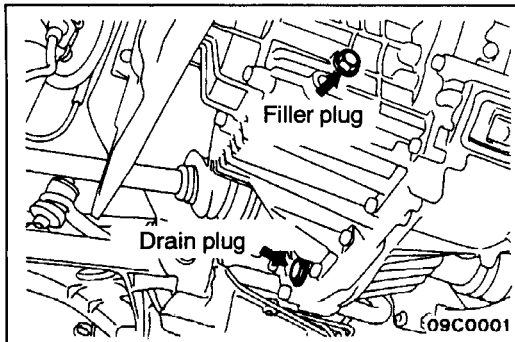
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TRANSMISSION OIL LEVEL CHECK

Inspect each component for evidence of leakage, and check the oil level by remaining the filler plug. If the oil is contaminated, it is necessary to replace it with new oil.

1. Oil level should be at the lower portion of the filler plug hole.
2. Check that the transmission oil is not noticeably dirty, and that it has a suitable viscosity.
3. Tighten the filler plug to the specified torque.

Tightening torque: 32 Nm



TRANSMISSION OIL REPLACEMENT

22100100094

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

Tightening torque: 32 Nm

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

Specified oil:

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

Quantity: 2.0 ℓ

5. Tighten the filler plug to the specified torque.

Tightening torque: 32 Nm

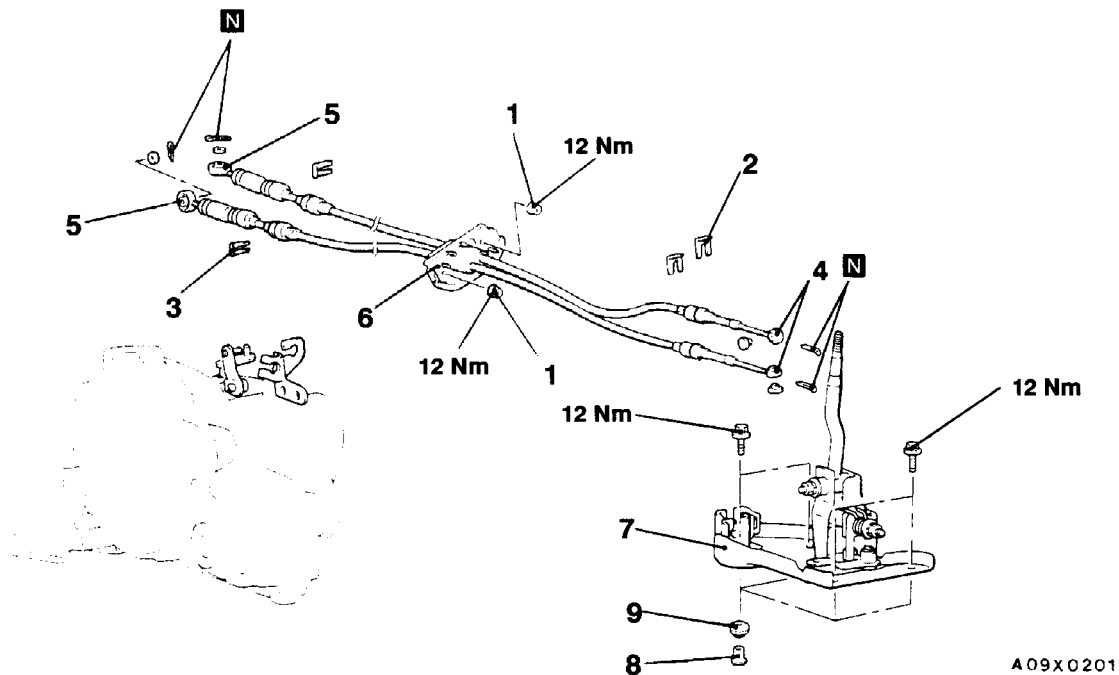
TRANSMISSION CONTROL

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REMOVAL AND INSTALLATION

Caution: SRS

Be careful not to subject the SRS-ECU unit to any shocks during removal and installation of the transmission control cable and shift lever assembly.

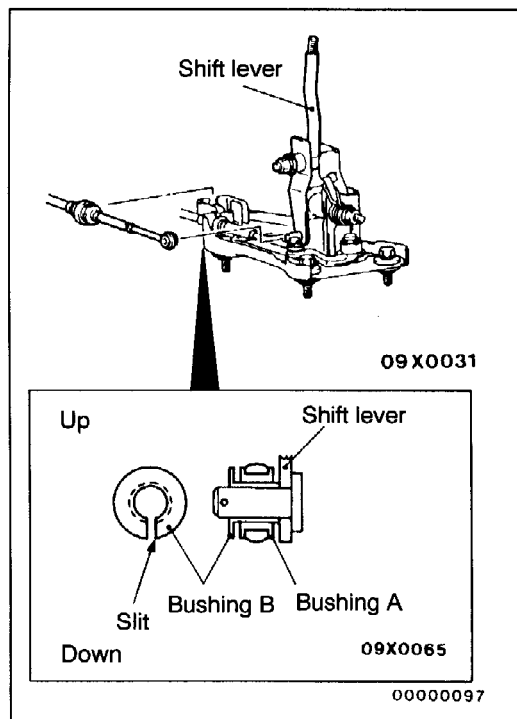
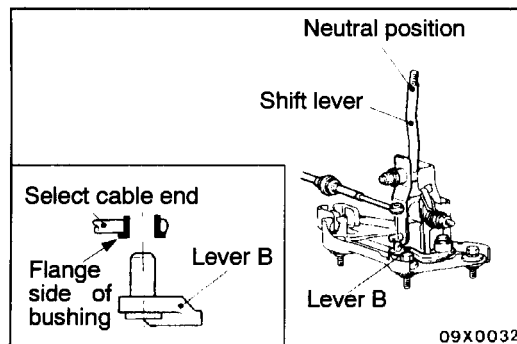
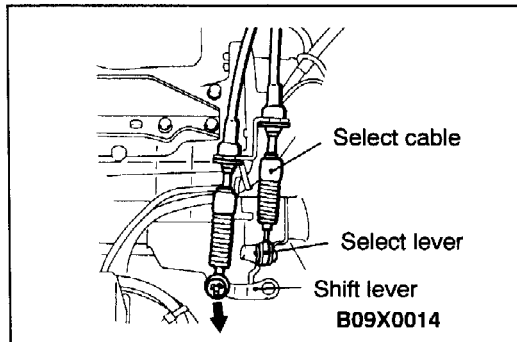
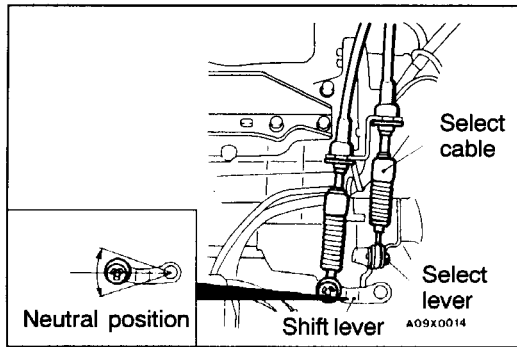


Transmission control cable assembly removal steps

- Air cleaner assembly
 - Floor console (Refer to GROUP 52A)
1. Nut
 2. Clip (passenger compartment side)
 3. Clip (transmission side)
 - ▶B◀ 4. Shift cable and select cable connection (passenger compartment side)
 - ▶A◀ 5. Shift cable and select cable connection (transmission side)
 6. Shift cable and select cable assembly

Shift lever assembly removal steps

- Floor console (Refer to GROUP 52A)
2. Clip (passenger compartment side)
 - ▶B◀ 4. Shift cable and select cable connection (passenger compartment side)
 7. Shift lever assembly
 8. Distance piece
 9. Bushing



INSTALLATION SERVICE POINTS

►A◄ SHIFT CABLE AND SELECT CABLE CONNECTION (TRANSMISSION SIDE)

SELECT CABLE

- (1) Connect the select cable to the transmission side select lever.
- (2) Set the shift lever of the transmission side at the neutral position.

NOTE

When the shift lever of the transmission side is set at the neutral position, the select lever of the transmission side is also set at the neutral position.

SHIFT CABLE

- (1) Connect the shift cable to the transmission shift lever.
- (2) While leaving the select lever at the transmission side in the neutral position, move the shift lever at the transmission side in the direction of the arrow in the illustration to set it to 4th gear.

NOTE

If the shift lever does not move easily, depress and hold the clutch pedal.

►B◄ SHIFT CABLE AND SELECT CABLE CONNECTION (PASSENGER COMPARTMENT SIDE)

SELECT CABLE

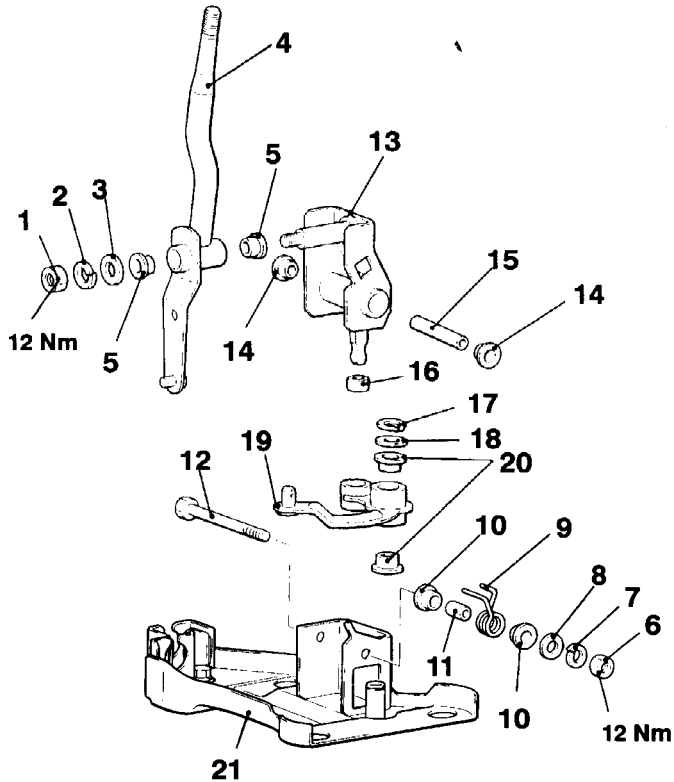
- (1) While leaving the shift lever inside the passenger compartment in the neutral position, install the select cable to the passenger compartment side of the shift lever.
- (2) Install the select cable so that the flange side of resin bushing is positioned at the edge of lever B side.

SHIFT CABLE

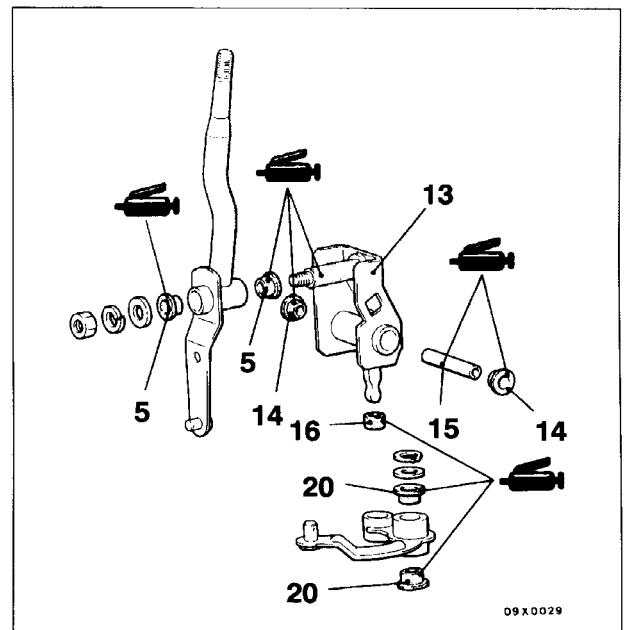
- (1) Pull the shift lever at the passenger compartment side fully in the direction shown in the illustration (4th gear position), and install the shift cable to the shift lever at the passenger compartment side. Install so that the slit section of the bushing B is facing either up or down.
- (2) Put the shift lever to all the positions and make sure that the operation is smooth.

SHIFT LEVER ASSEMBLY DISASSEMBLY AND REASSEMBLY

22100400064



09X0030



09X0029

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Disassembly steps

1. Nut
2. Spring washer
3. Plain washer
4. Shift lever
5. Bushing
6. Nut
7. Spring washer
8. Plain washer
9. Return spring
10. Bushing
11. Pipe

12. Bolt
13. Lever A
14. Bushing
15. Collar
16. Bushing
17. Snap ring
18. Washer
19. Lever B
20. Bushing
21. Bracket assembly

TRANSMISSION ASSEMBLY

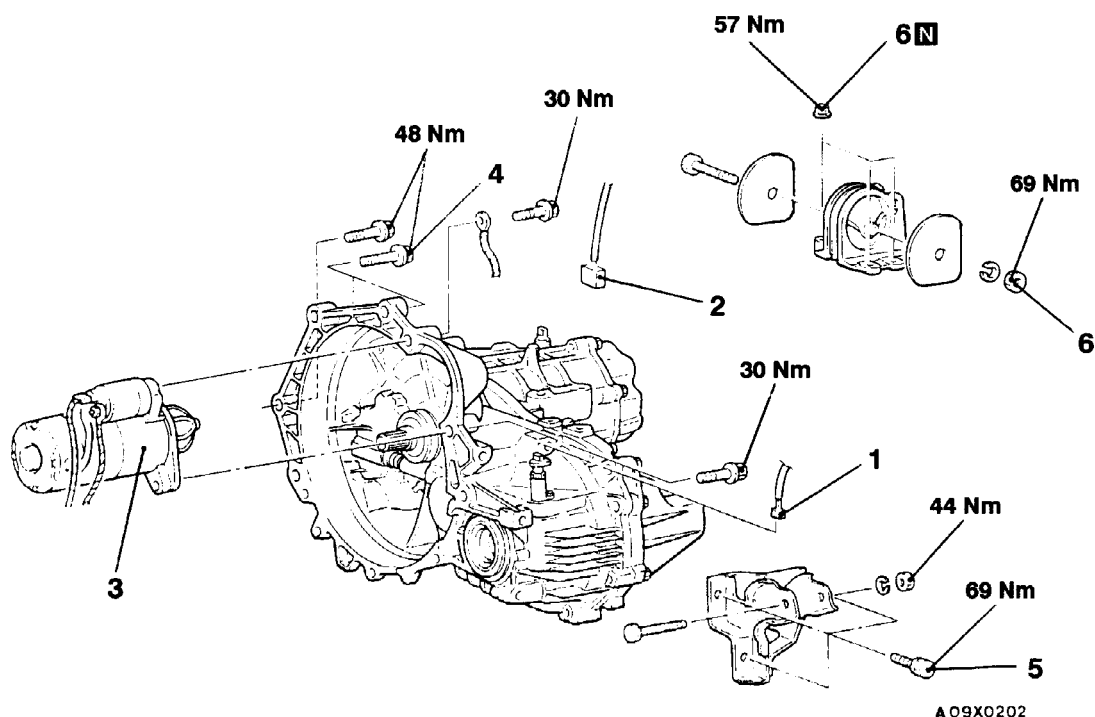
REMOVAL AND INSTALLATION

Pre-removal Operation

- (1) Transmission Oil Draining (Refer to P.22-4.)
- (2) Under Cover Removal
- (3) Air Cleaner Assembly and Air Intake Hose Removal
- (4) Battery Removal
- (5) Canister Removal (Refer to GROUP 17.)
- (6) Shift Cable and Select Cable Assembly Removal (Refer to P.22-5.)

Post-Installation Operation

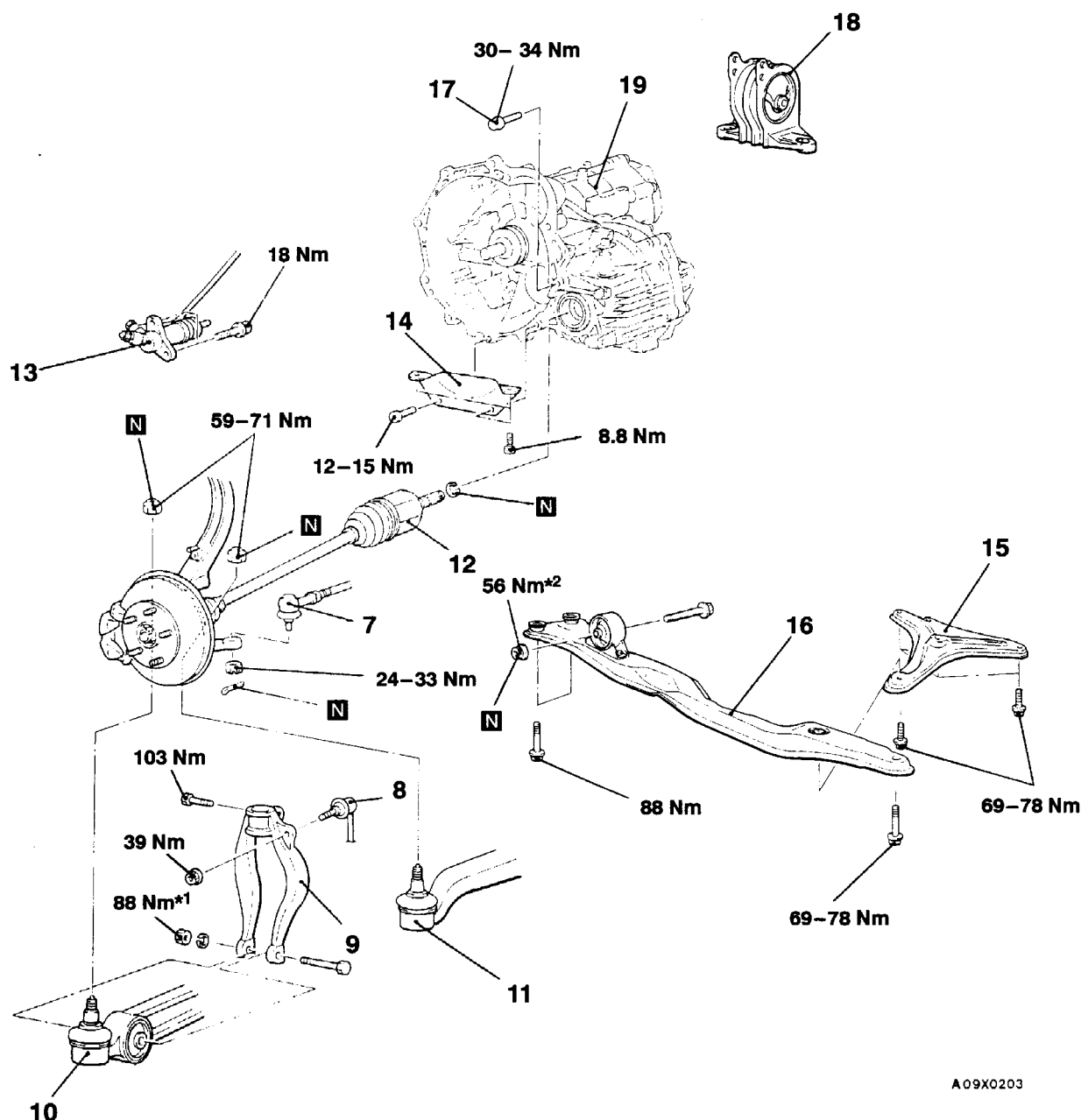
- (1) Shift Cable and Select Cable Assembly Installation (Refer to P.22-5.)
- (2) Canister Installation (Refer to GROUP 17.)
- (3) Battery Installation
- (4) Air Cleaner Assembly and Air Intake Hose Installation
- (5) Under Cover Installation
- (6) Transmission Oil Supplying (Refer to P.22-4.)
- (7) Shift Lever Operation Check
- (8) Speedometer Operation Check

**Removal steps**

1. Vehicle speed sensor connector
2. Backup lamp switch connector
3. Starter motor
4. Transmission assembly mounting bolts



5. Rear roll stopper bracket mounting bolts
6. Transmission mounting bracket mounting nuts
- Supporting engine assembly



A09X0203

Lifting up of the vehicle

- ◀C▶ 7. Tie rod end ball joint and knuckle connection
- ◀C▶ 8. Stabilizer link connection
- ◀C▶ 9. Damper fork
- ◀C▶ 10. Lateral lower arm ball joint and knuckle connection
- ◀C▶ 11. Compression lower arm ball joint and knuckle connection
- ◀D▶ ▶B▶ 12. Drive shaft connection
- ◀E▶ 13. Clutch release cylinder connection
- ◀E▶ 14. Bell housing cover
- ◀D▶ ▶B▶ 15. Stay (R.H.)
- ◀F▶ ▶A▶ 16. Centermember assembly
- ◀F▶ 17. Transmission assembly mounting bolts

- ◀F▶ 18. Transmission mounting
- ◀F▶ 19. Transmission assembly

Caution

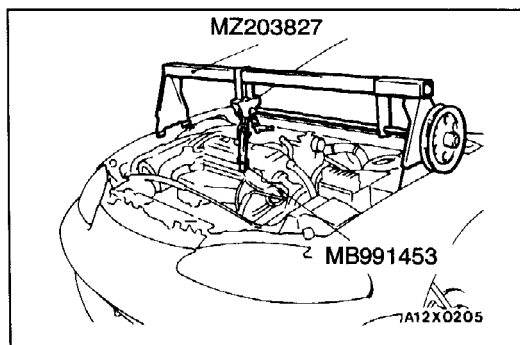
- *1: Indicates parts which should be temporarily tightened, and then fully tightened with the vehicle on the ground in the unladen condition.
- *2: For tightening locations indicated by the symbol, first tighten temporarily, and then make the final tightening with the entire weight of the engine applied to the vehicle body.

REMOVAL SERVICE POINTS**◀A▶ TRANSMISSION MOUNTING BRACKET
MOUNTING NUT REMOVAL**

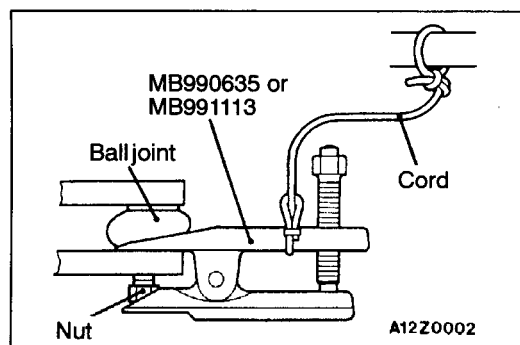
Jack up the transmission assembly gently with a garage jack, and then remove the transmission mounting bracket nuts.

Caution

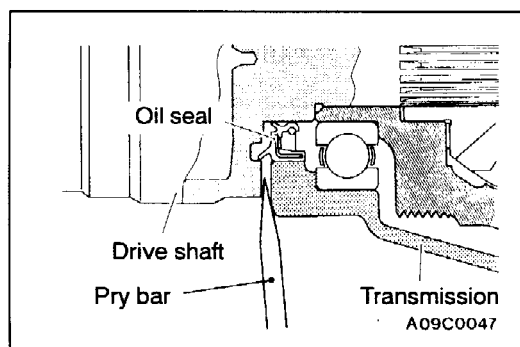
Be sure not to tilt the transmission assembly.

**◀B▶ SUPPORTING ENGINE ASSEMBLY**

Set the special tool to the vehicle to support the engine assembly.

**◀C▶ TIE ROD END BALL JOINT AND KNUCKLE/
LATERAL LOWER ARM BALL JOINT AND
KNUCKLE/COMPRESSION LOWER ARM BALL
JOINT AND KNUCKLE DISCONNECTION****Caution**

1. Using the special tool, loosen the tie rod end mounting nut. Only loosen the nut; do not remove it from the ball joint.
2. Support the special tool with a cord, etc. to prevent it from coming off.

**◀D▶ DRIVE SHAFT DISCONNECTION**

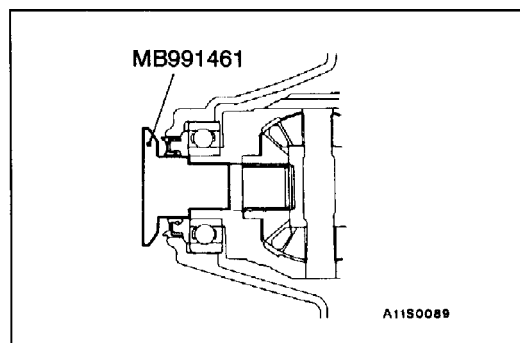
- (1) Insert a pry bar between the transmission case and the drive shaft to remove the drive shaft.

NOTE

Do not remove the hub and knuckle from the drive shaft.

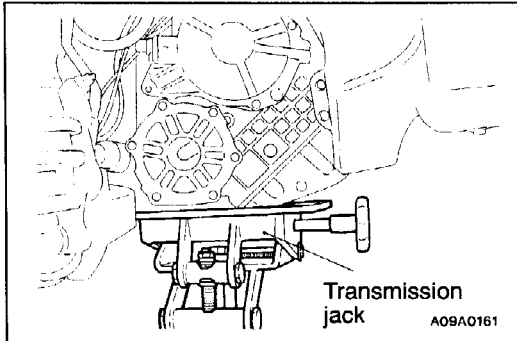
Caution

1. Use a pry bar to remove the drive shaft from the B.J. assembly, or the T.J. assembly may be damaged.
2. Do not insert the bar too far, or the oil seal may be damaged.
- (2) Suspend the removed drive shaft with wire so that there are no sharp bends in any of the joints.
- (3) Use the special tool as a cover not to let foreign objects get into the transmission case.



◀E▶ CLUTCH RELEASE CYLINDER DISCONNECTION

Remove the clutch release cylinder without disconnecting the oil line, and suspend it to a nearby parts with a wire, etc.



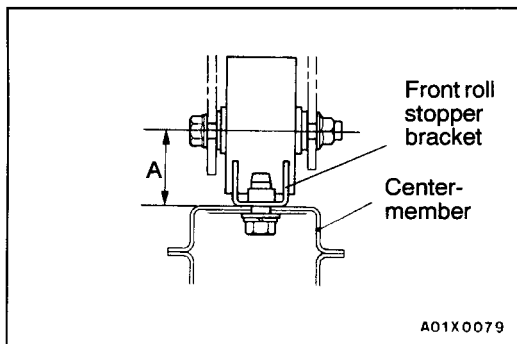
◀F▶ TRANSMISSION ASSEMBLY MOUNTING BOLT/TRANSMISSION ASSEMBLY REMOVAL

- (1) Use a transmission jack to support the transmission assembly.

Caution

Support the transmission case side, not the oil pan.

- (2) Remove the transmission assembly mounting bolt and lower the transmission assembly.



INSTALLATION SERVICE POINTS

▶A◀ CENTERMEMBER ASSEMBLY INSTALLATION

If the dimension shown in the illustration is outside the standard value when the weight of the engine is on the body, replace the front roll stopper bracket assembly.

Standard value (A): 43±3 mm

▶B◀ DRIVE SHAFT CONNECTION

Temporarily install the drive shaft so that the T.J. case of the drive shaft is perpendicular to the transmission.

Caution

Do not damage the oil seal lip by the serrated part of the drive shaft.

NOTES