

# MANUAL TRANSMISSION

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### WARNING REGARDING SERVICING OF SUPPLEMENTAL RESTRAINT SYSTEM (SRS) EQUIPPED VEHICLES

#### WARNING!

- (1) Improper service or maintenance of any component of the SRS, or any SRS-related component, can lead to personal injury or death to service personnel (from inadvertent firing of the air bag) or to driver and passenger (from rendering the SRS inoperative).
- (2) Service or maintenance of any SRS component or SRS-related component must be performed only at an authorized MITSUBISHI dealer.
- (3) MITSUBISHI dealer personnel must thoroughly review this manual, and especially its GROUP 52B – Supplemental Restraint System (SRS) before beginning any service or maintenance of any component of the SRS or any SRS-related component.

#### NOTE

The SRS includes the following components: SRS-ECU, SRS warning lamp, air bag module, clock spring and interconnecting wiring. Other SRS-related components (that may have to be removed/installed in connection with SRS service or maintenance) are indicated in the table of contents by an asterisk (\*).

## SERVICE SPECIFICATION

22100030027

Item	Standard value
Protruding length of stabilizer bar mounting bolt mm	22

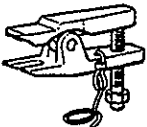
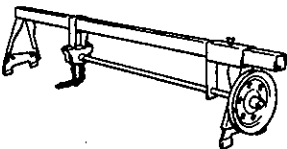
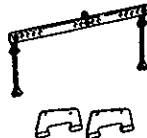
## LUBRICANT

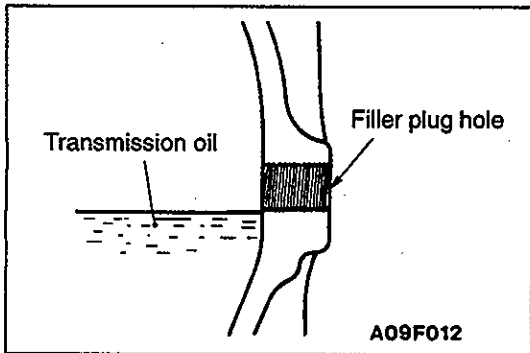
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Item	Specified lubricant	Quantity ℓ
Transmission oil	Hypoid gear oil SAE 75W – 90 or 75W – 85W conforming to API GL-4	2.1

## 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	



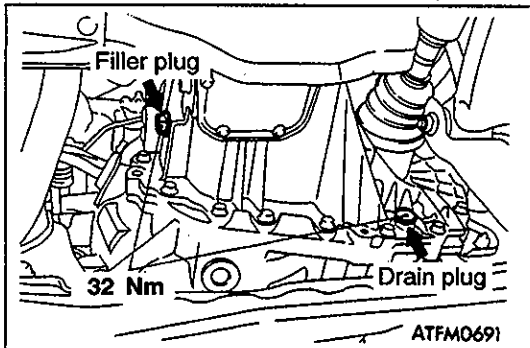
**ON-VEHICLE SERVICE**

22100090124

**TRANSMISSION OIL CHECK**

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

**Tightening torque: 32 Nm**



**TRANSMISSION OIL REPLACEMENT**

22100100100

- (1) Remove the drain plug to drain oil.
- (2) Tighten the drain plug to the specified torque.
- (3) Remove the filler plug and fill with specified oil till the level comes to the lower portion of filler plug hole.

**Transmission oil**

**Specified oil:**

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

**Quantity: 2.1 ℓ**

- (4) Tighten the filler plug to the specified torque.

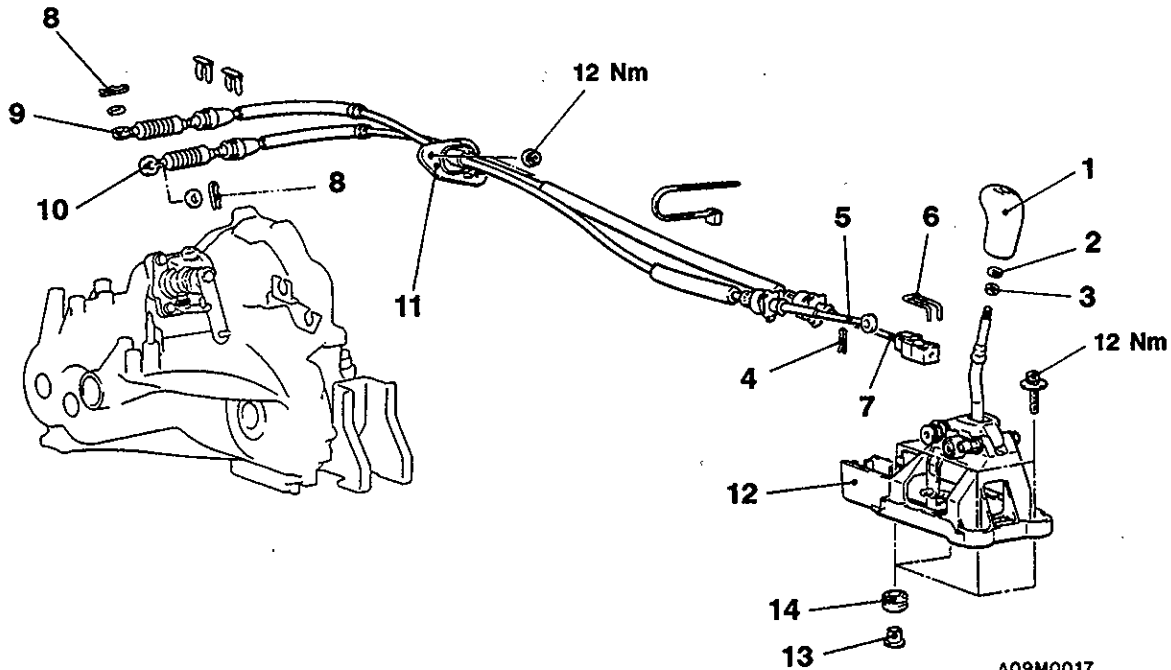
## TRANSMISSION CONTROL

## REMOVAL AND INSTALLATION

**Pre-removal and Post-installation Operation**  
Air Cleaner Assembly Removal and Installation

**Caution: SRS**

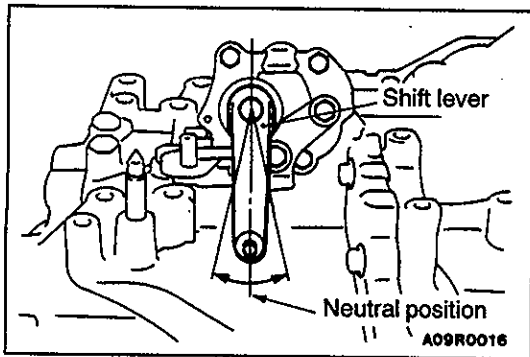
Be careful not to subject the SRS-ECU to any shocks during removal and installation of the shift cable and select cable assembly.

**Shift cable and select cable assembly removal steps**

- ▶B◀ 1. Shift knob
- ▶B◀ 2. Spring washer
- ▶B◀ 3. Nut
  - Front floor console (Refer to GROUP 52A.)
- 4. Snap pin
- 5. Select cable connection (Shift lever side)
- 6. Clip
- 7. Shift cable connection (Shift lever side)
- 8. Snap pin
- ▶A◀ 9. Select cable connection (Transmission side)
- ▶A◀ 10. Shift cable connection (Transmission side)
- ▶A◀ 11. Shift cable and select cable assembly

**Shift lever assembly removal steps**

- ▶B◀ 1. Shift knob
- ▶B◀ 2. Spring washer
- ▶B◀ 3. Nut
  - Front floor console (Refer to GROUP 52A.)
- 4. Snap pin
- 5. Select cable connection (Shift lever side)
- 6. Clip
- 7. Shift cable connection (Shift lever side)
- 12. Shift lever assembly
- 13. Distance piece
- 14. Bushing



### INSTALLATION SERVICE POINTS

#### ►A◄ SHIFT CABLE AND SELECT CABLE ASSEMBLY/ SHIFT CABLE CONNECTION/SELECT CABLE CONNECTION

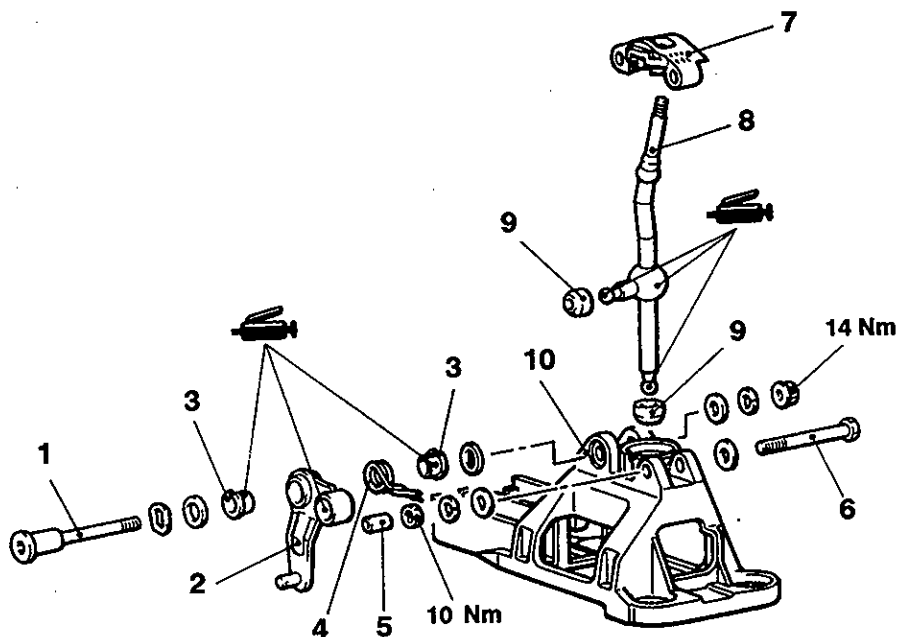
- (1) Set the transmission side shift lever and the passenger compartment side shift lever to the neutral position.

- (2) For the transmission side, the white and yellow paint marks on the shift and select cable ends should face the snap pins.
- (3) Move the shift lever to all positions and check that the operation is smooth.

#### ►B◄ NUT/SPRING WASHER/SHIFT KNOB INSTALLATION

- (1) Screw in the nut all the way by hand, turn back half a turn, and then insert the spring washer.
- (2) Screw in the shift knob until it touches the spring washer, and make one more turn. Then turn more to adjust the shift pattern on the shift knob.
- (3) If the above steps are impossible, you can turn back the shift knob by one turn at most after screwing in all the way to adjust the shift pattern.

## SHIFT LEVER ASSEMBLY DISASSEMBLY AND REASSEMBLY



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### Disassembly steps

- |                  |                        |
|------------------|------------------------|
| 1. Bolt          | 6. Bolt                |
| 2. Select lever  | 7. Cap                 |
| 3. Bushing       | 8. Shift lever         |
| 4. Return spring | 9. Shift lever bushing |
| 5. Collar        | 10. Base block         |

**TRANSMISSION ASSEMBLY**

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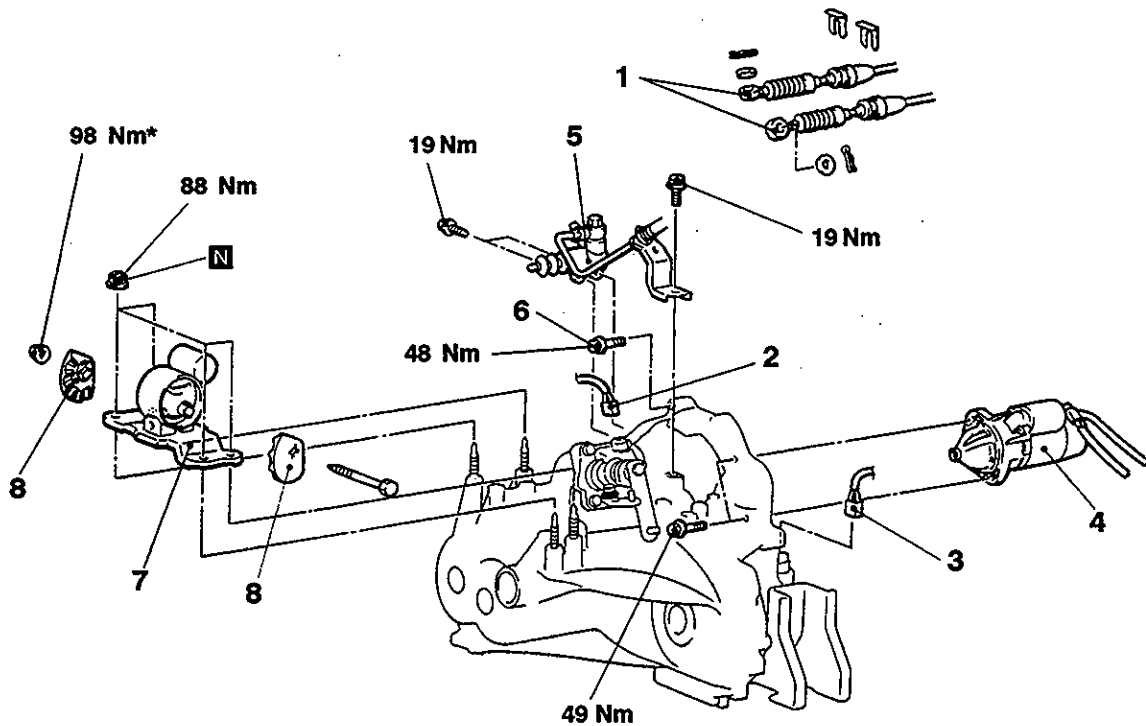
**REMOVAL AND INSTALLATION**

**Pre-removal Operation**

- (1) Transmission Oil Draining (Refer to P.22-3.)
- (2) Under Cover Removal
- (3) Battery and Battery Tray Removal
- (4) Air Cleaner Assembly Removal

**Post-installation Operation**

- (1) Air Cleaner Assembly Installation
- (2) Battery and Battery Tray Installation
- (3) Under Cover Installation
- (4) Transmission Oil Supplying (Refer to P.22-3.)
- (5) Shift Lever Operation Check
- (6) Speedometer Operation Check



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**Removal steps**

1. Shift cable and select cable connection (Refer to P.22-4.)
2. Backup lamp switch connector
3. Vehicle speed sensor connector
4. Starter motor

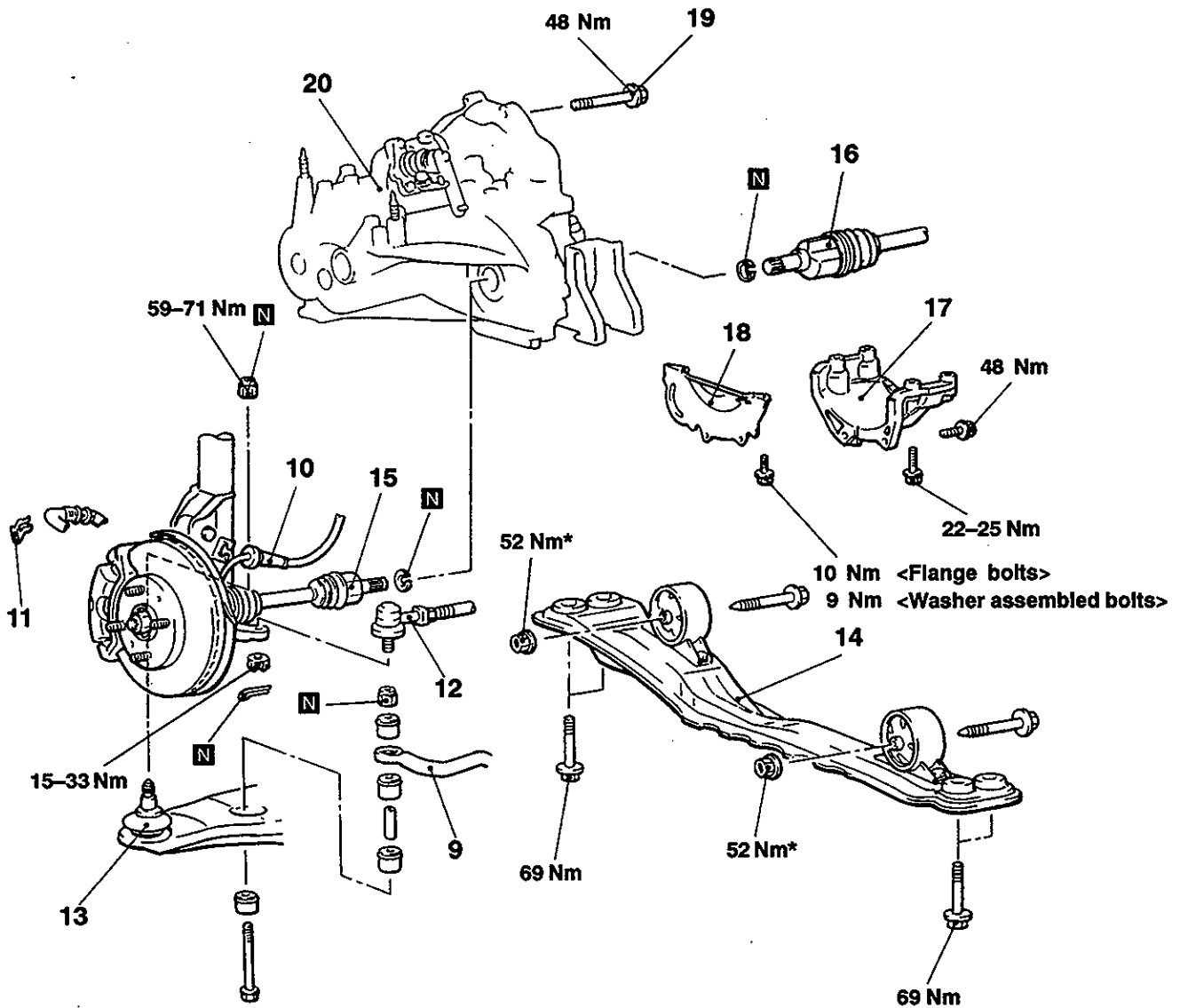


5. Clutch release cylinder connection
6. Transmission assembly upper part coupling bolts
7. Transmission mount bracket
8. Transmission mount stopper
- Engine assembly supporting



**Caution**

Mounting locations marked by \* should be provisionally tightened, and then fully tightened when the body is supporting the full weight of the engine.



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**Lifting up of the vehicle**

- ▶A 9. Stabilizer bar connection
- 10. Wheel speed sensor cable connection <Vehicles with ABS>
- 11. Brake hose clamp
- 12. Tie rod end connection
- 13. Lower arm ball joint connection
- 14. Centermember assembly
- 15. Drive shaft <LH> connection
- 16. Drive shaft <RH> connection
- 17. Transmission stay <4G13>

- 18. Bell housing cover
- 19. Transmission assembly lower part coupling bolts
- 20. Transmission assembly

**Caution**  
Mounting locations marked by \* should be provisionally tightened, and then fully tightened when the body is supporting the full weight of the engine.





**REMOVAL SERVICE POINTS**

**◀A▶ STARTER MOTOR REMOVAL**

Remove the starter motor with the starter motor harness still connected and secure it inside the engine compartment.

**◀B▶ CLUTCH RELEASE CYLINDER REMOVAL**

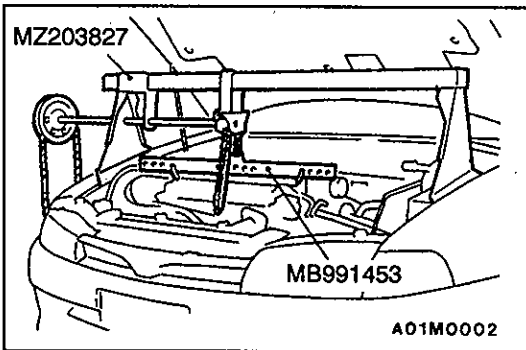
Remove the clutch release cylinder without disconnecting the oil line connection, and fix it to the vehicle chassis.

**◀C▶ TRANSMISSION MOUNT BRACKET REMOVAL**

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

**◀D▶ ENGINE ASSEMBLY SUPPORTING**

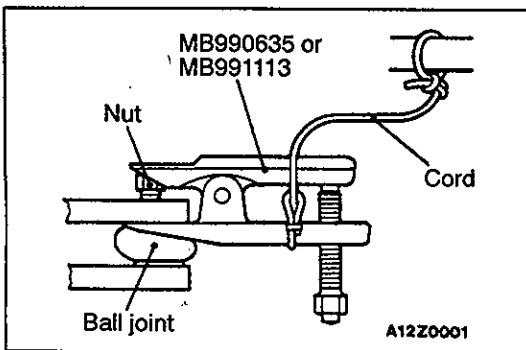
Set the special tool to the vehicle to support the engine assembly.



**◀E▶ TIE ROD END/LOWER ARM BALL JOINT DISCONNECTION**

**Caution**

1. Use the special tool to 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. not to let it come off.



**◀F▶ DRIVE SHAFT <LH>/DRIVE SHAFT <RH> DISCONNECTION**

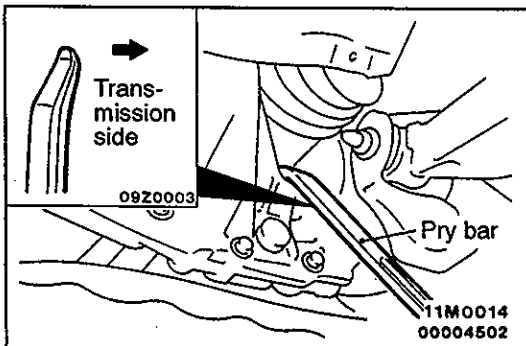
- (1) Insert a pry bar between the transmission case and the drive shaft as shown to remove the drive shaft.

**NOTE**

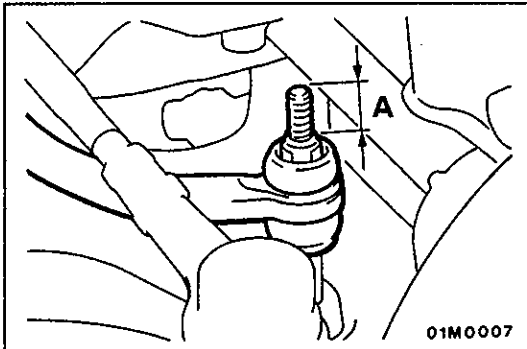
Do not remove the hub and knuckle from the drive shaft.

**Caution**

Always use a pry bar, or the TJ will be damaged.



- (2) Suspend the removed drive shaft with a wire so that there are no sharp bends in any of the joints.
- (3) Use a shop towel to cover the transmission case not to let foreign material get into it.

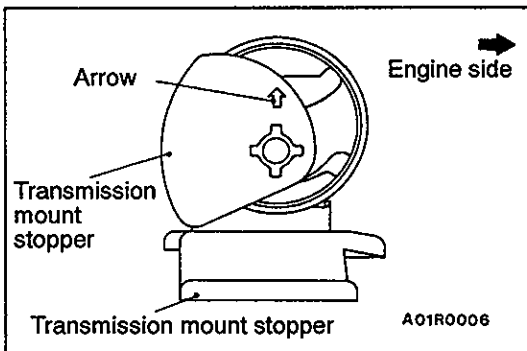


### INSTALLATION SERVICE POINTS

#### ▶A◀ STABILIZER BAR INSTALLATION

Tighten the self-locking nut so that the stabilizer bar mounting bolt protrudes as shown.

Standard value (A): 22 mm



#### ▶B◀ TRANSMISSION MOUNT STOPPER INSTALLATION

Install the transmission mount stopper so that the arrow points as shown in the illustration.