

## HOW TO USE THIS MANUAL

### PREPARATION

PREPARATION points out the needed **Special Service Tool (SST)** for the service operation that it proceeds. Gather all necessary **SST** before beginning work.

Example:

| MANUAL STEERING    |                            | SST NUMBER         | USAGE                      |
|--------------------|----------------------------|--------------------|----------------------------|
| PREPARATION<br>SST |                            | 49 0118 850C       | For removal of tie-rod end |
| 49 0118 850C       | Puller, ball joint         | Puller, ball joint |                            |
|                    | For removal of tie-rod end |                    |                            |
|                    |                            |                    |                            |

9MUGIX-033

### REPAIR PROCEDURE

- Most repair operations begin with an overview illustration. It identifies the components, shows how the parts fit together, and visual parts inspections. If a damaged or worn part is found, repair or replace it as necessary.
- Expendable parts, tightening torques, and symbols for oil, grease, and sealant are shown in the overview illustration.
- Pages related to service procedures are shown under the illustration. Refer to this information when servicing the related part.

Example:

**SHOWS NEEDED SST**

**SHOWS EXPENDABLE PARTS**

**SHOWS APPLICATION POINT OF OIL, ETC.**

**SHOWS TIGHTENING TORQUE SPECIFICATION \*2**

**SHOWS TIGHTENING TORQUE UNIT**

**SHOWS VISUAL INSPECTION INFORMATION**

**SHOWS RELATED PAGE FOR SERVICE**

73-107 (7.4-10.8, 54-79)

17 SELECTIVE

18-26 (1.8-2.6, 13-19)

24 SELECTIVE

128-284 (13-29, 34-410)

1. Bolt

2. Lock plate

3. Bearing cup

4. Adjusting screw

5. Bearing outer race

6. Locknut

7. Washer

8. Companion flange

16. Bearing inner race

17. Spacer

18. Drive pinion

19. Drive pinion nut

20. Drive pinion seal

21. Drive pinion seal

22. Drive pinion seal

23. Drive pinion seal

24. Drive pinion seal

25. Drive pinion seal

26. Drive pinion seal

Removal..... page M-21

Inspect splines..... page M-21

16. Bearing inner race

Removal..... page M-22

Inspect for damage or rough rotation..... page M-24

Installation..... page M-24

17. Spacer

18. Drive pinion

Removal..... page M-21

Inspect splines and teeth for wear or damage..... page M-22

Adjustment of height..... page M-22

Adjustment of height..... page M-24

\*1: The numbering (ex. ①) shows service procedure.

\*2: Units shown in N-m (m-kg, ft-lb) unless otherwise specified.

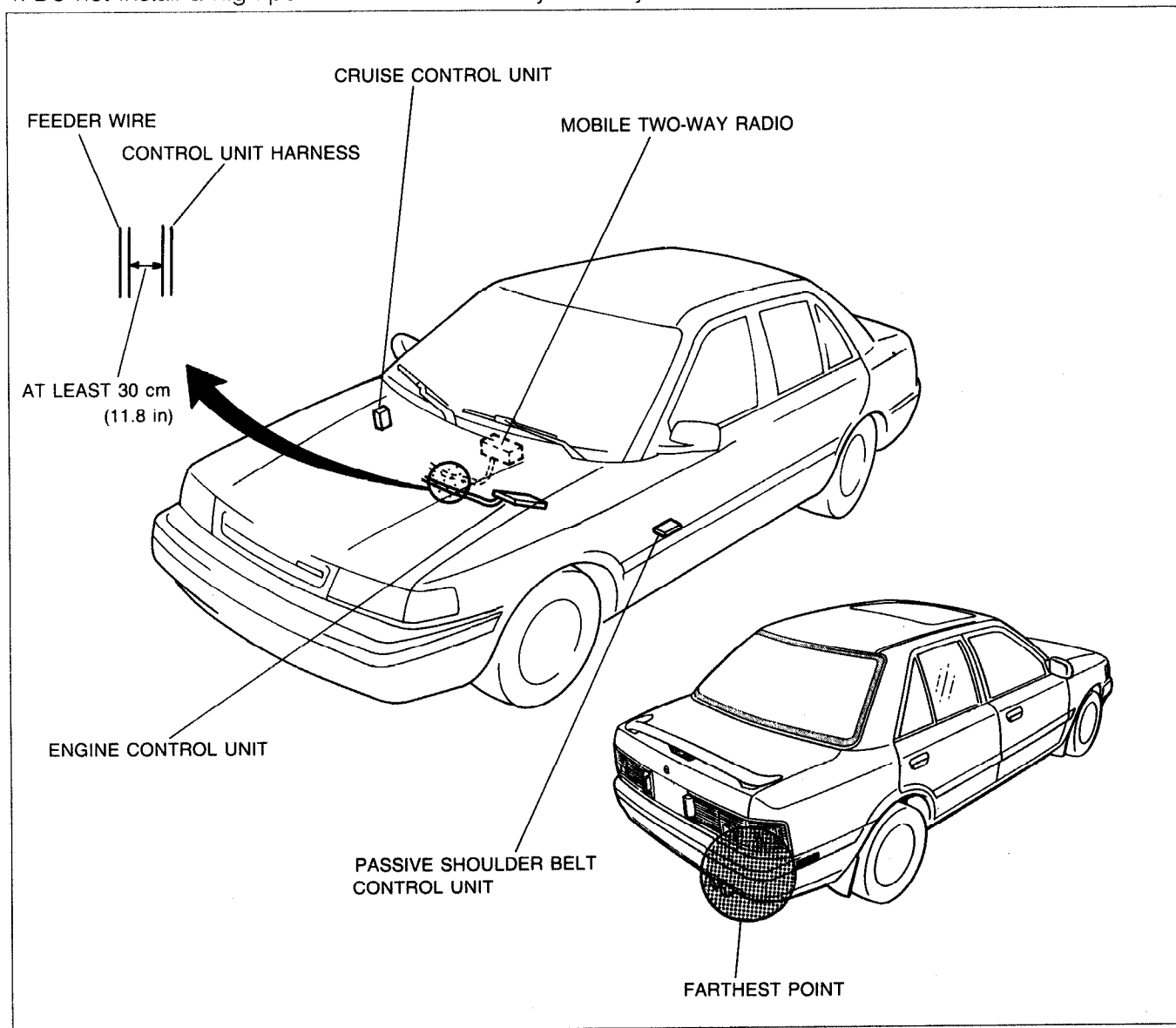
## CAUTION

## INSTALLATION OF MOBILE TWO-WAY RADIO SYSTEM

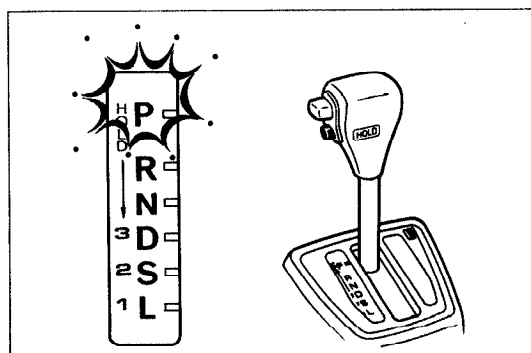
If a mobile two-way radio system is installed improperly or if a high-powered type is used, the EGI system and other systems may be affected.

When the vehicle is to be equipped with a mobile two-way radio, observe the following precautions:

1. Install the antenna at the farthest point from control units.
2. Install the antenna feeder as far as possible from the control unit harnesses (**at least 30 cm [11.8 in]**).
3. Ensure that the antenna and feeder are properly adjusted.
4. Do not install a high-powered mobile two-way radio system.



05UGIX-013



03UGIX-005

## REMOVAL OF IGNITION KEY ON AUTOMATIC TRANSAXLE MODEL

The selector lever must be in P (PARK) to turn the ignition key to the OFF position. If the switch seems to be off but the key cannot be removed, the switch may still be in the ACC position, or the selector lever may not be in P (PARK). Shift the selector lever to P (PARK), and turn the ignition key to the LOCK position. The key should now be free for removal.

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HYDRAULIC LASH ADJUSTER (HLA)  
INSPECTION, PAGE B1-7

INTAKE MANIFOLD  
TIGHTENING TORQUE  
19-25 N-m (1.9-2.6 m-kg, 14-19 ft-lb)

ENGINE COOLANT/  
SERVICE, SECTION E

ENGINE OIL  
INSPECTION/  
REPLACEMENT,  
SECTION D

EXHAUST MANIFOLD  
TIGHTENING TORQUE  
16-23 N-m (1.6-2.3 m-kg,  
12-17 ft-lb)

DEFLECTION AT (98 N, 10 kg, 22 lb) mm (in)

| DRIVE BELT     | NEW                    | USED                    | LIMIT          |
|----------------|------------------------|-------------------------|----------------|
| ALTERNATOR     | 8.0-9.0<br>(0.31-0.35) | 9.0-10.0<br>(0.35-0.39) | 12.5<br>(0.49) |
| P/S, P/S + A/C | 8.0-9.0<br>(0.31-0.35) | 9.0-10.0<br>(0.35-0.39) | 11.5<br>(0.45) |
| A/C            | 8.0-9.0<br>(0.31-0.35) | 9.0-10.0<br>(0.35-0.39) | 11.5<br>(0.45) |

COMPRESSION INSPECTION PAGE B1-10 kPa (kg/cm<sup>2</sup>, psi)-rpm

|          | B6 SOHC               | BP SOHC               |
|----------|-----------------------|-----------------------|
| Standard | 1,236 (12.6, 179)-300 | 1,197 (12.2, 173)-300 |
| Minimum  | 863 (8.8, 125)-300    | 834 (8.5, 121)-300    |

23U0B1-002

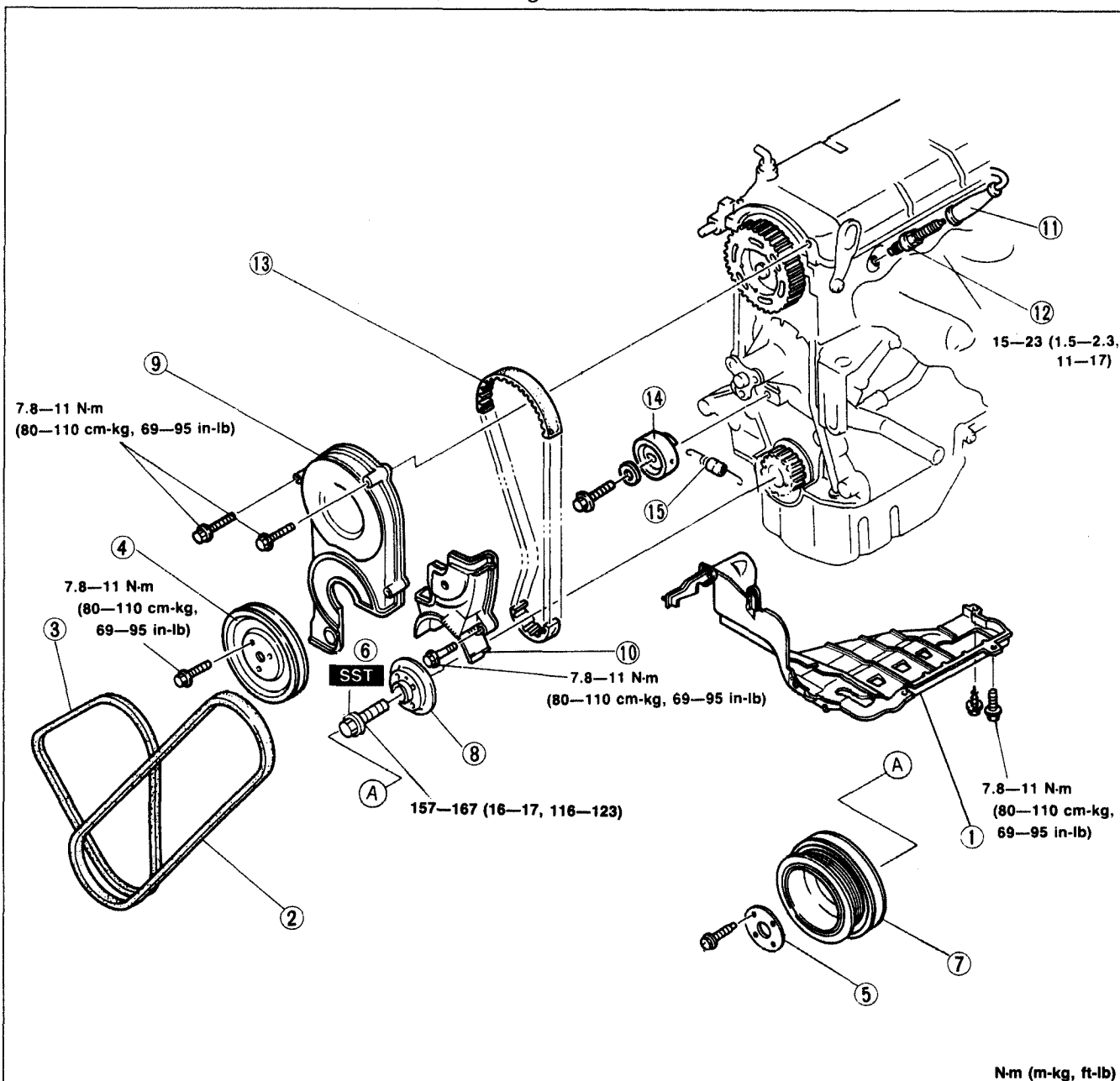
1. Timing belt  
Removal / Installation ..... page B1-12
2. Cylinder head gasket  
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3. HLA  
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4. Front oil seal  
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5. Rear oil seal  
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6. Engine  
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Engine stand dismounting ..... page B1-92  
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### TIMING BELT

#### Removal / Installation

1. Disconnect the negative battery cable.
2. Raise the vehicle on a lift and remove the right front wheel.
3. Remove in the order shown in the figure, referring to **Removal Note**.
4. Install in the reverse order of removal, referring to **Installation Note**.



1. Under cover and side cover

2. P/S and/or A/C drive belt

3. Alternator drive belt

4. Water pump pulley

5. Plate

6. Pulley lock bolt

Removal Note..... page B1-13

Installation Note..... page B1-14

7. Crankshaft pulley

8. Pulley boss

9. Timing belt cover, upper

10. Timing belt cover, lower

11. High-tension leads

12. Spark plugs

13. Timing belt

Removal Note..... page B1-13

Installation Note..... page B1-13

14. Tensioner

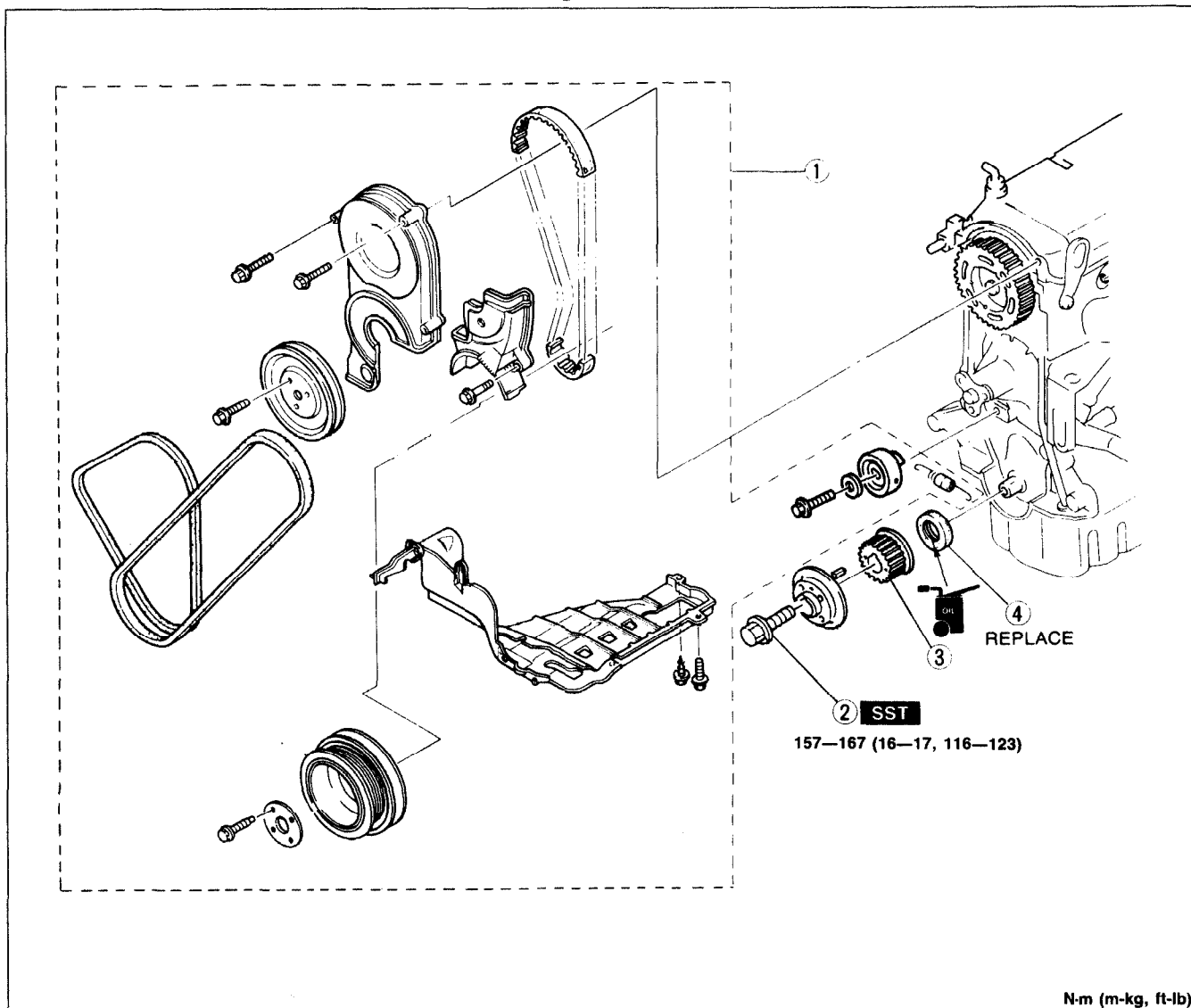
Installation Note..... page B1-13

15. Tensioner spring

Installation Note..... page B1-13

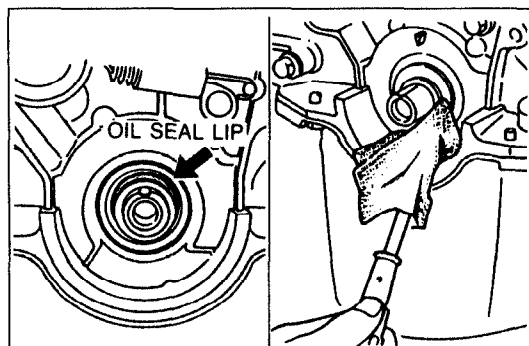
**FRONT OIL SEAL****Replacement**

1. Disconnect the negative battery cable.
2. Remove in the order shown in the figure, referring to **Removal Note**.
3. Install in the reverse order of removal, referring to **Installation Note**.



1. Timing belt  
Removal / Installation..... page B1-12
2. Pulley lock bolt  
Installation Note..... page B1-24

3. Timing belt pulley  
Installation Note..... page B1-24
4. Oil seal  
Removal Note ..... below  
Installation Note..... page B1-24



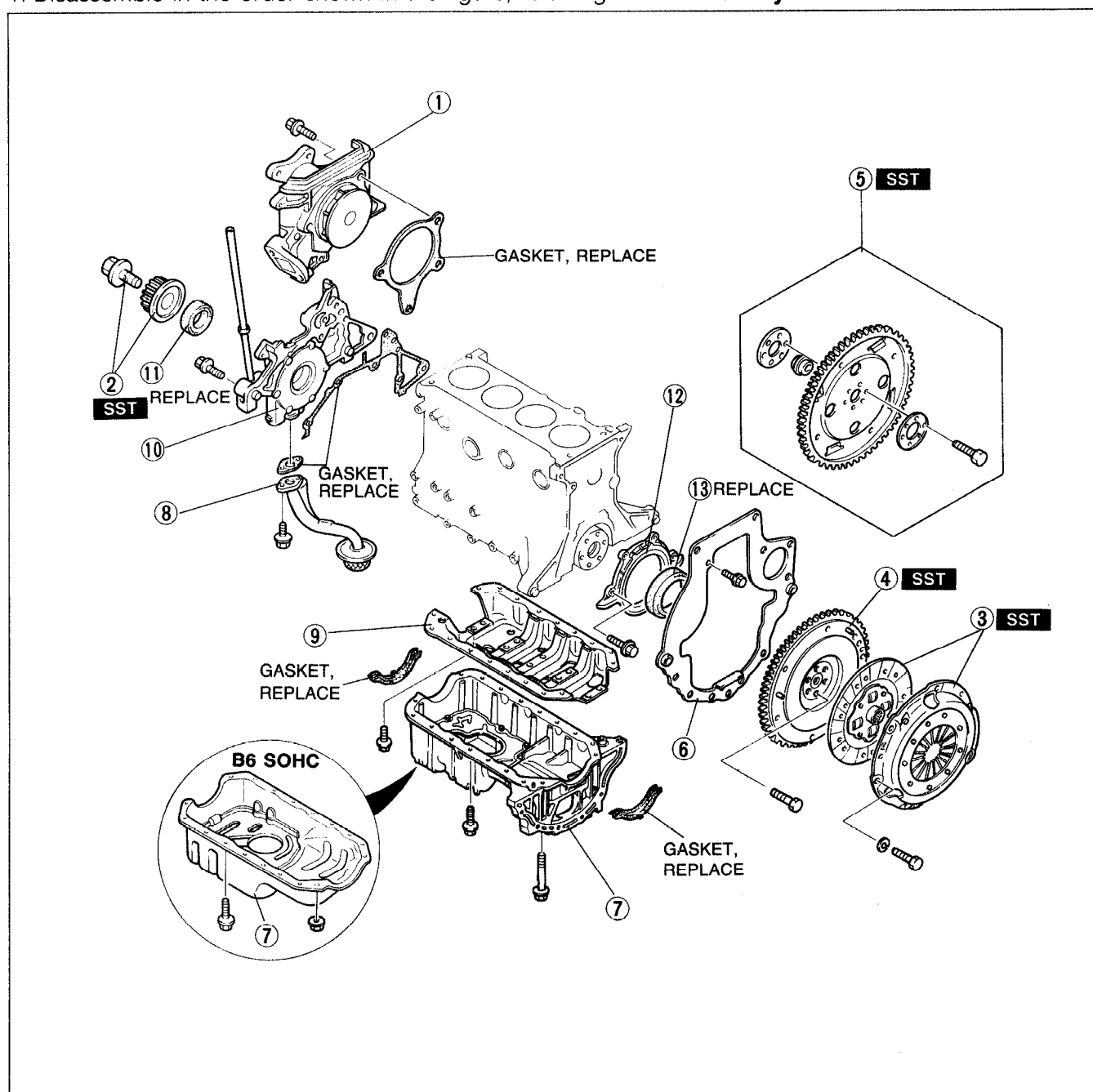
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**Removal Note**  
**Oil seal**

1. Cut the oil seal lip with a razor knife.
2. Remove the oil seal with a screwdriver protected with a rag.

**CYLINDER BLOCK (EXTERNAL PARTS)**

1. Disassemble in the order shown in the figure, referring to **Disassembly Note**.



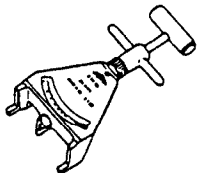
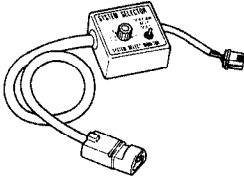
23U0B1-037

- |   |   |
|---|---|
| 1. Water pump<br>Service ..... Section E  | 7. Oil pan and gasket<br>Disassembly Note ..... page B1-49<br>Inspect for damage                |
| 2. Timing belt pulley and lock bolt<br>Disassembly Note ..... page B1-48<br>Inspection ..... page B1-65 | 8. Oil strainer   |
| 3. Clutch cover, clutch disc (MTX)<br>Service ..... Section H   | 9. Main bearing support plate (MBSP)<br>Disassembly Note ..... page B1-49<br>Inspect for damage |
| 4. Flywheel (MTX)<br>Disassembly Note ..... page B1-48<br>Inspect for wear or damage                    | 10. Oil pump<br>Service ..... Section D   |
| 5. Backing plate, drive plate, and adapter (ATX)<br>Disassembly Note ..... page B1-48                   | 11. Front oil seal<br>Disassembly Note ..... page B1-49   |
| 6. End plate  | 12. Rear cover  |
|   | 13. Rear oil seal<br>Disassembly Note ..... page B1-49  |

## ENGINE TUNE-UP PROCEDURE

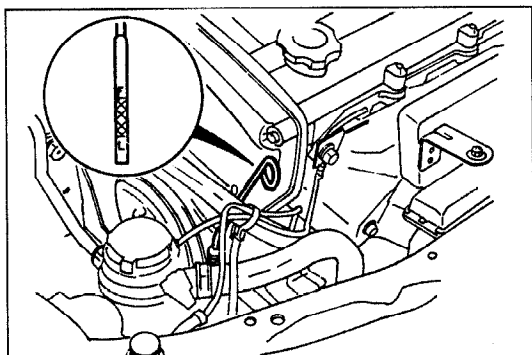
## PREPARATION

## SST

|  |   |   |   |
|--|---|---|---|
| <p>49 9200 020</p> <p>Tension gauge,<br/>V-ribbed belt</p>  | <p>For<br/>inspection of<br/>drive belt tension</p> | <p>49 B019 9A0</p> <p>System selector</p>  | <p>For<br/>inspection of<br/>ignition timing<br/>and idle speed</p> |
|--|---|---|---|

05U0BX-005

B2



23U0B2-048

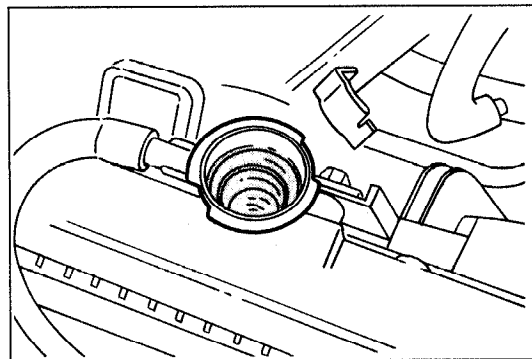
## ENGINE OIL

## Inspection

1. Be sure the vehicle is on level ground.
2. Warm up the engine to normal operating temperature and stop it.
3. Wait for 5 minutes.
4. Remove the oil level gauge and check the oil level and condition.
5. Add or replace oil if necessary.

## Note

- The distance between the L and F marks on the level gauge represents 0.8 liter (0.85 US qt, 0.70 Imp qt).



03U0BX-158

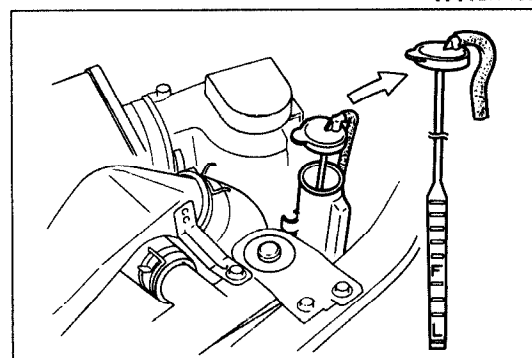
## ENGINE COOLANT

## Inspection

## Coolant level (engine cold)

## Warning

- Never remove the radiator cap while the engine is hot.
- Wrap a thick cloth around the cap when removing it.



05U0BX-008

1. Verify that the coolant level is near the radiator filler neck.
2. Remove the coolant level gauge and check the coolant level.
3. Add coolant if necessary.

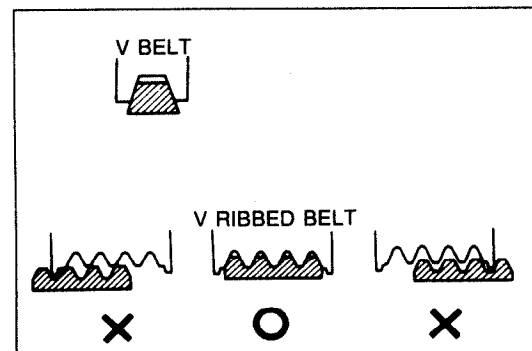
## Coolant quality

1. Verify that there is no buildup of rust or scale around the radiator cap or radiator filler neck.
2. Verify that the coolant is free of oil.
3. Replace the coolant if necessary.

## DRIVE BELT

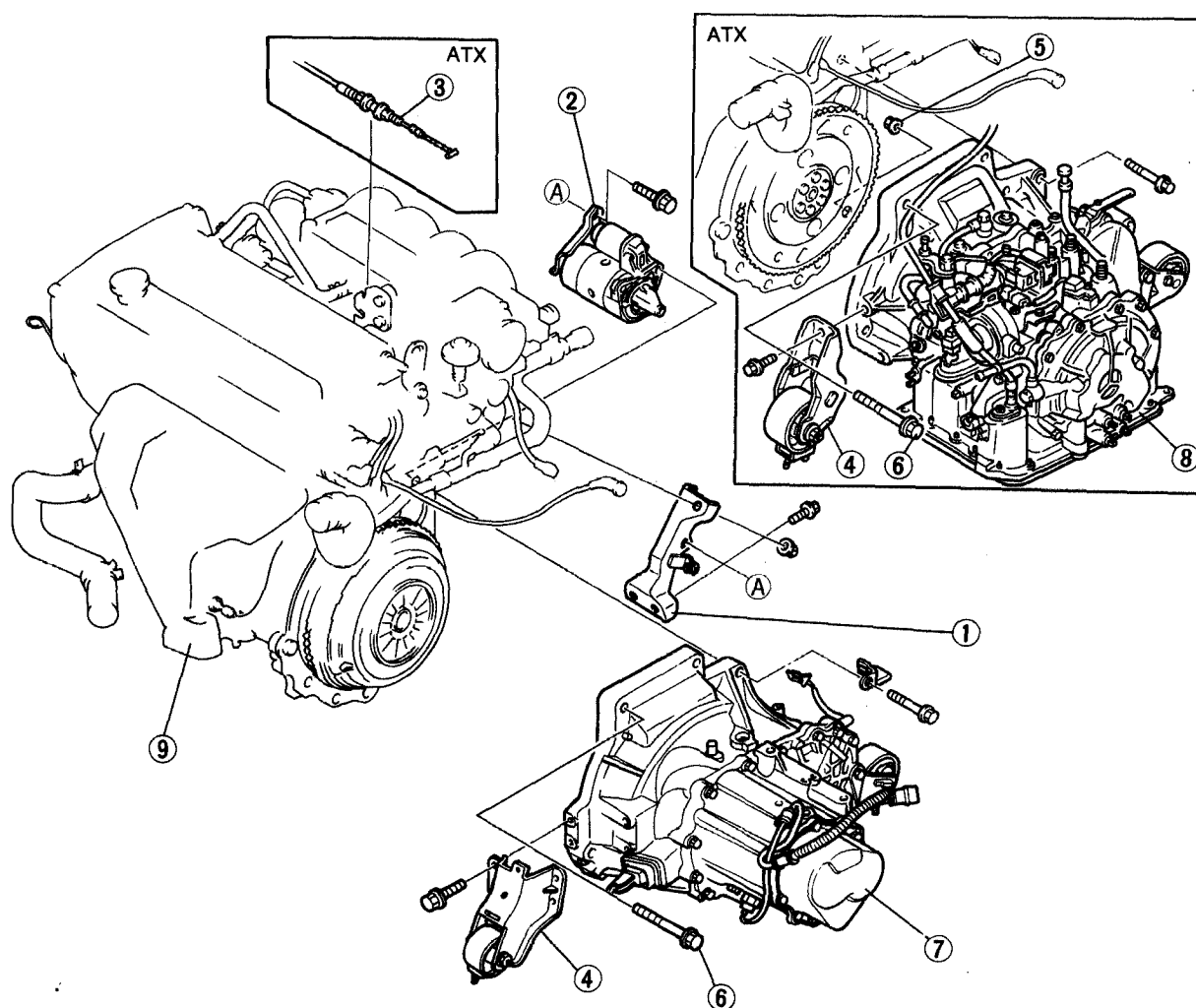
## Inspection

1. Check the drive belts for wear, cracks, and fraying. Replace if necessary.
2. Verify that the drive belts are correctly mounted on the pulleys.



03U0B2-005

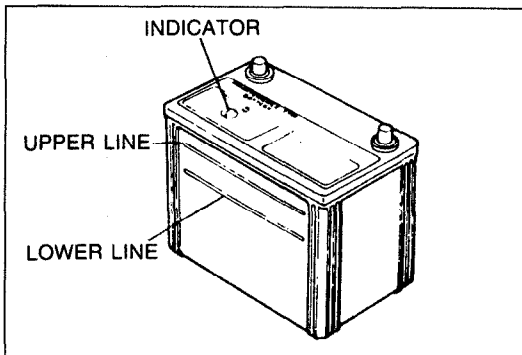
## Step 6



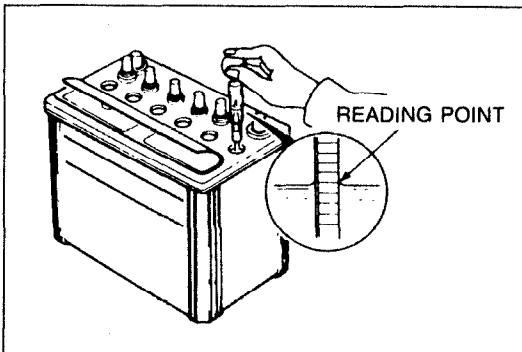
03U0B2-062

- |   |                             |
|---|-----------------------------|
| 1. Intake manifold bracket              | 6. Transaxle mounting bolts |
| 2. Starter                              | 7. Manual transaxle         |
| 3. Throttle cable (ATX)                 | 8. Automatic transaxle      |
| 4. No.2 engine mount rubber and bracket | 9. Engine assembly          |
| 5. Torque converter nuts (ATX)          |                             |





03U0GX-014



03U0GX-015

**BATTERY****Inspection****Indicator sign (If equipped)**

1. Check that the indicator is blue.
2. If the indicator is not blue, check if the electrolyte level lies between the upper and lower lines.
3. If low, add distilled water, being careful not to overfill.
4. If the electrolyte level is acceptable and yet the indicator is not blue, the battery must be recharged.

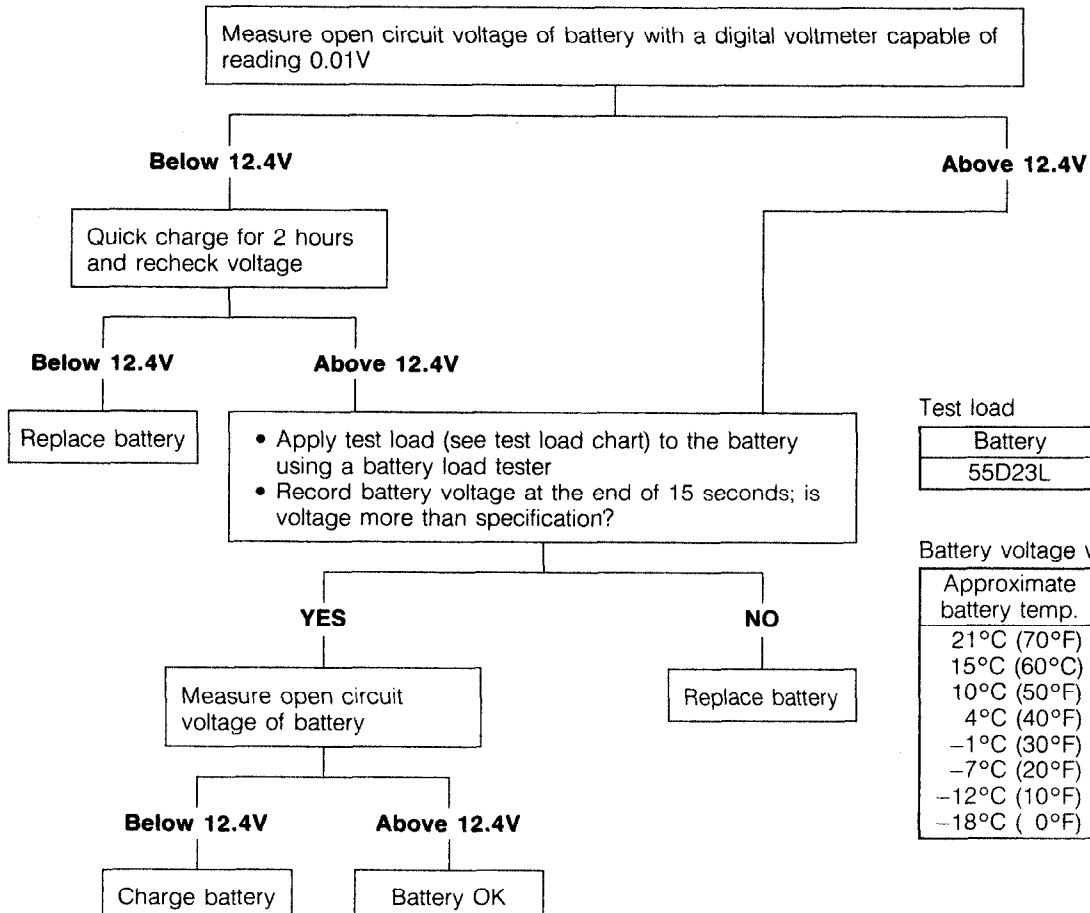
**Specific gravity of electrolyte**

Measure the specific gravity with a hydrometer.

**Specification: 1.27—1.29 (at 20°C [68°F])**

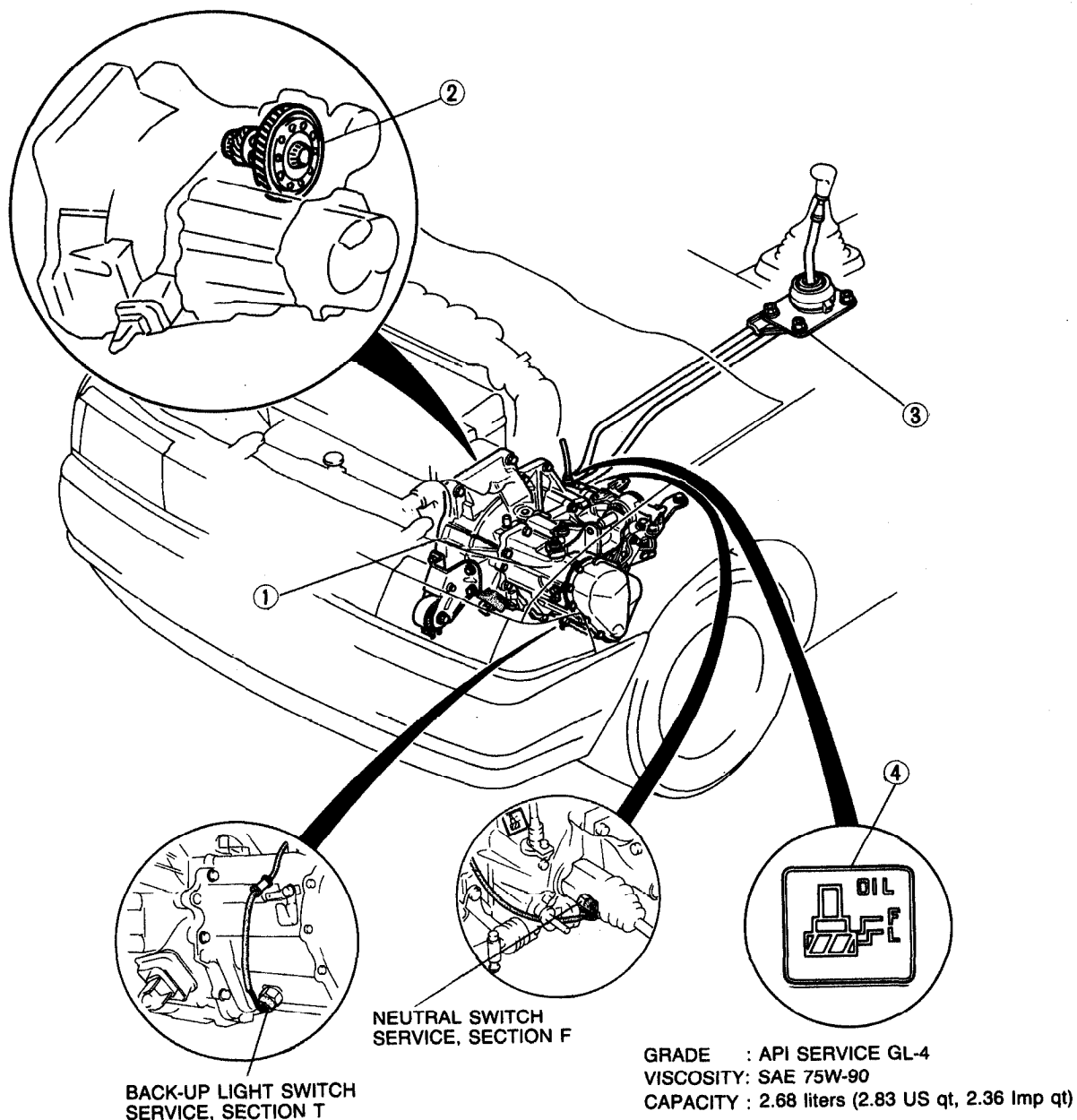
**Note**

- If the battery charge indicator is not blue when the specific gravity is normal, the indicator could be defective.

**Battery discharge test**

23U0GX-003

## INDEX



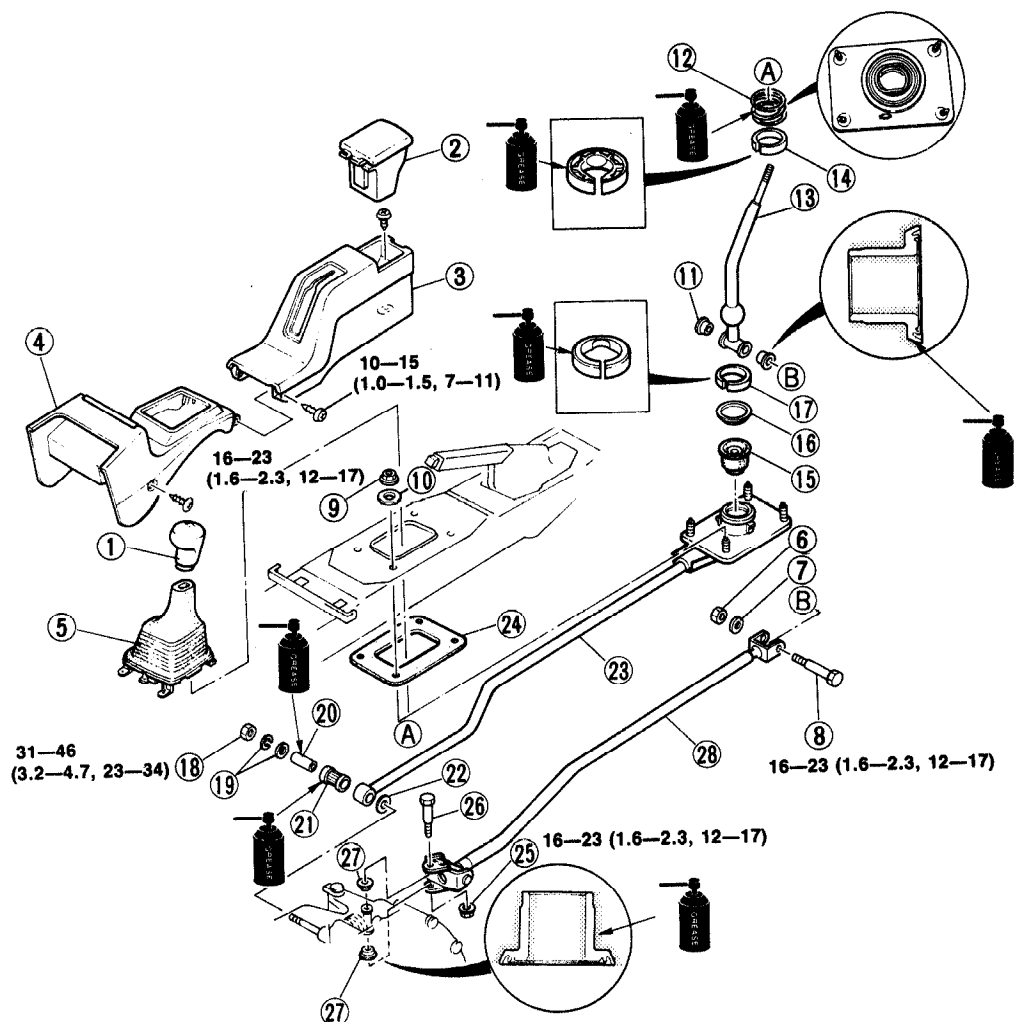
03U0J1-002

|                            |            |  |
|----------------------------|------------|--|
| 1. Transaxle               |            |  |
| Removal .....              | page J1-10 |  |
| Disassembly .....          | page J1-14 |  |
| Inspection .....           | page J1-27 |  |
| Assembly .....             | page J1-30 |  |
| Installation .....         | page J1-48 |  |
| 2. Differential            |            |  |
| Disassembly / Inspection / |            |  |
| Assembly .....             | page J1-53 |  |
| 3. Shift mechanism         |            |  |
| Overhaul .....             | page J1-56 |  |
| 4. Transaxle oil           |            |  |
| Inspection .....           | page J1- 7 |  |
| Replacement .....          | page J1- 7 |  |

## SHIFT MECHANISM

## OVERHAUL

1. Disassemble in the order shown in the figure.
2. Inspect all parts and repair or replace as necessary.
3. Assemble in the reverse order of disassembly, referring to **Assembly Note**.



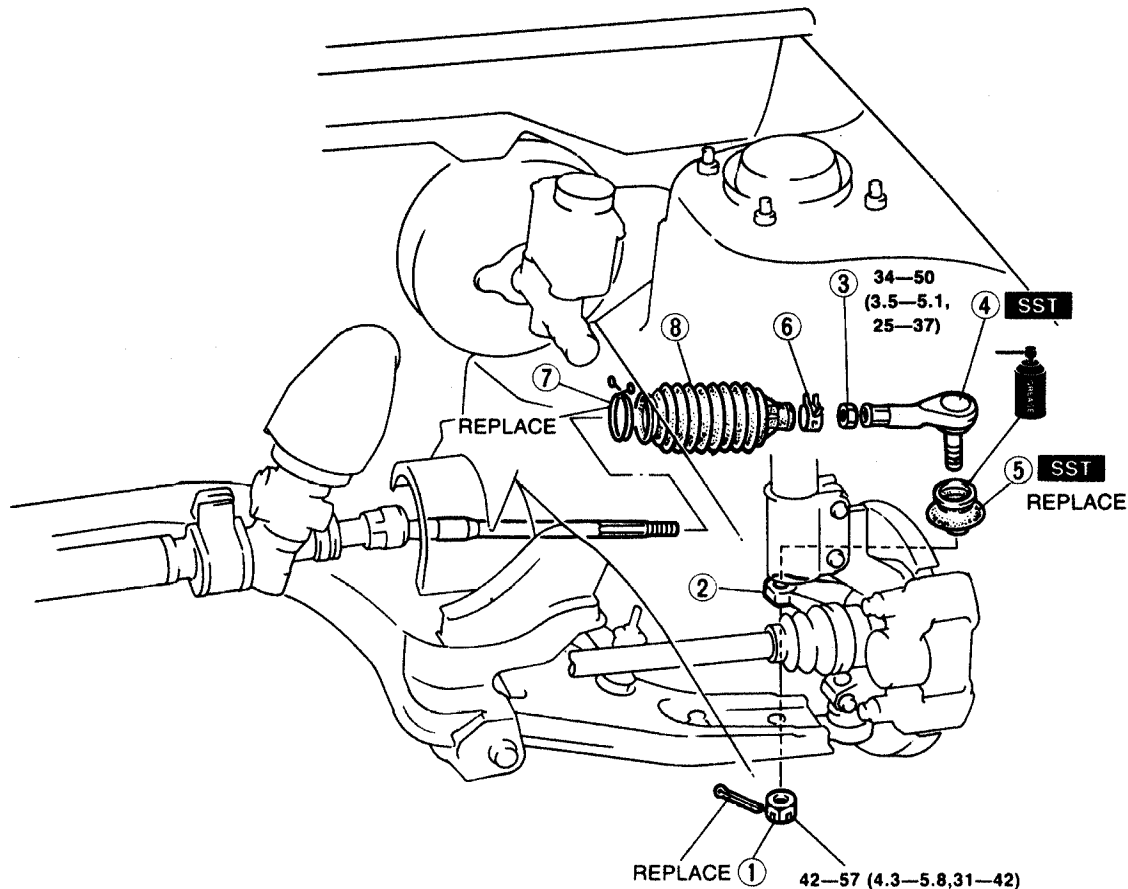
N-m (m-kg, ft-lb)

03U0J1-142

- |                                 |                               |
|---------------------------------|-------------------------------|
| 1. Shift lever knob             | 16. Holder                    |
| 2. Rear ashtray                 | 17. Ball seat (lower)         |
| 3. Rear console                 | 18. Nut                       |
| 4. Front console                | 19. Washer                    |
| 5. Boot                         | 20. Pipe                      |
| 6. Nut                          | 21. Bushing                   |
| 7. Washer                       | Inspect for wear and damage   |
| 8. Bolt                         | 22. Washer                    |
| 9. Nut                          | 23. Extension bar             |
| 10. Washer                      | Assembly Note..... page J1-57 |
| 11. Bushing                     | 24. Insulator                 |
| 12. Spring                      | Inspect for damage and cracks |
| Inspect for damage and weakness | 25. Nut                       |
| Assembly Note..... page J1-57   | 26. Bolt                      |
| 13. Shift lever                 | 27. Bushing                   |
| 14. Ball seat (upper)           | Inspect for wear and damage   |
| 15. Boot                        | 28. Change control rod        |
| Inspect for wear and damage     | Inspect for bending           |

**BOOT****Removal / Installation**

1. Remove in the order shown in the figure, referring to **Removal Note**.
2. Install in the reverse order of removal, referring to **Installation Note**.

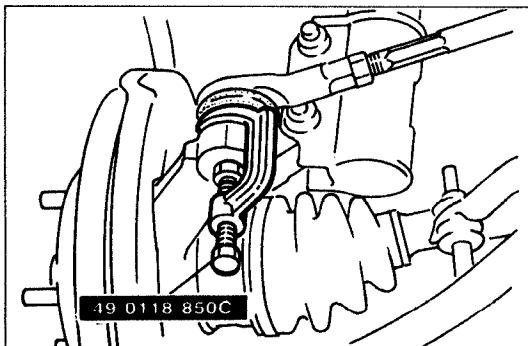


N-m (m-kg, ft-lb)

23U0NX-006

1. Cotter pin, nut
2. Tie rod end/Steering knuckle  
Removal Note ..... Below
3. Locknut  
Removal Note ..... page N- 7
4. Tie rod end

5. Tie rod end boot  
Removal Note ..... page N- 7  
Installation Note ..... page N- 7
6. Boot clip
7. Boot wire
8. Rack boot



23U0NX-007

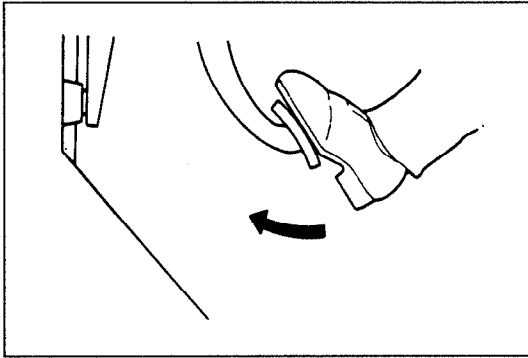
**Removal note****Tie rod end/Steering knuckle**

1. Pull out the cotter pin, and loosen the nuts until the nut contacts with the hole stud face.

**Caution**

- Leave the nuts temporarily tight not to damage the screw thread.

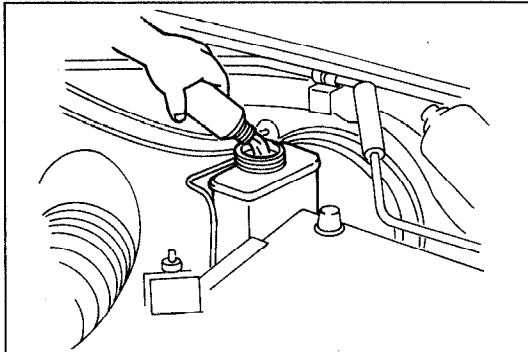
2. Remove the tie rod from the knuckle arm with the **SST**.



03U0PX-015

**BRAKE FLUID****Inspection****Leakage inspection**

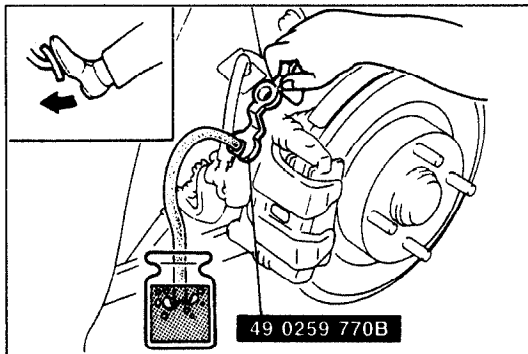
Depress the brake pedal several times, and inspect for leakage of the brake line system.



03U0PX-016

**Brake Fluid Level****Leakage check**

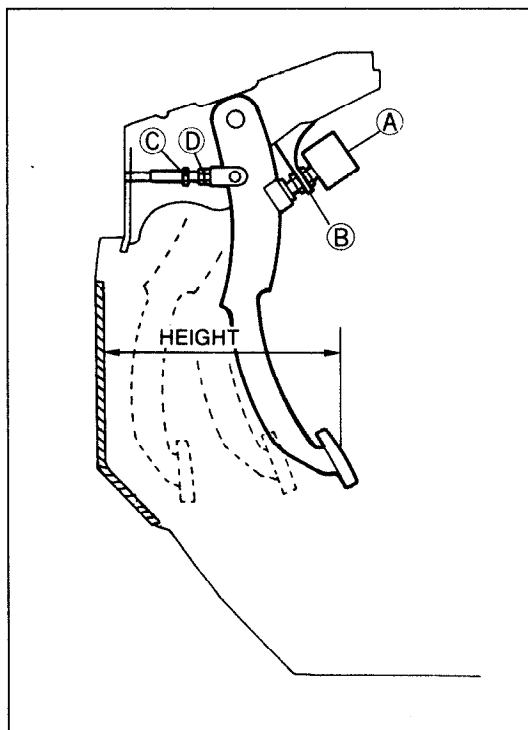
Verify that the fluid level in the reservoir is between the MAX and MIN lines on the reservoir. Add fluid if it is below MAX.



03U0PX-017

**Replacement**

1. Follow the procedure outlined in Air Bleeding. (Refer to page P-6).
2. Continue bleeding and replacing the brake fluid until only clean fluid is expelled.
3. Fill the reservoir to the MAX level.



23U0PX-010

**BRAKE PEDAL****Inspection, On-vehicle****Brake pedal height****Inspection**

Verify that the distance from the center on the pedal pad to the floor mat is as specified.

**Specification: 193—196mm (7.60—7.72 in)**

**Adjustment**

1. Disconnect the stoplight switch connector.
2. Loosen locknuts (B) and turn switch (A) until it does not contact the pedal.
3. Loosen locknuts (D) and turn rod (C) to adjust the height of the brake pedal.
4. Tighten the stoplight switch until it contacts the pedal; then turn it an additional 1/2 turn. Tighten locknuts (B) and (D).
5. Connect the stoplight switch connector.
6. Verify operation of the stoplights.

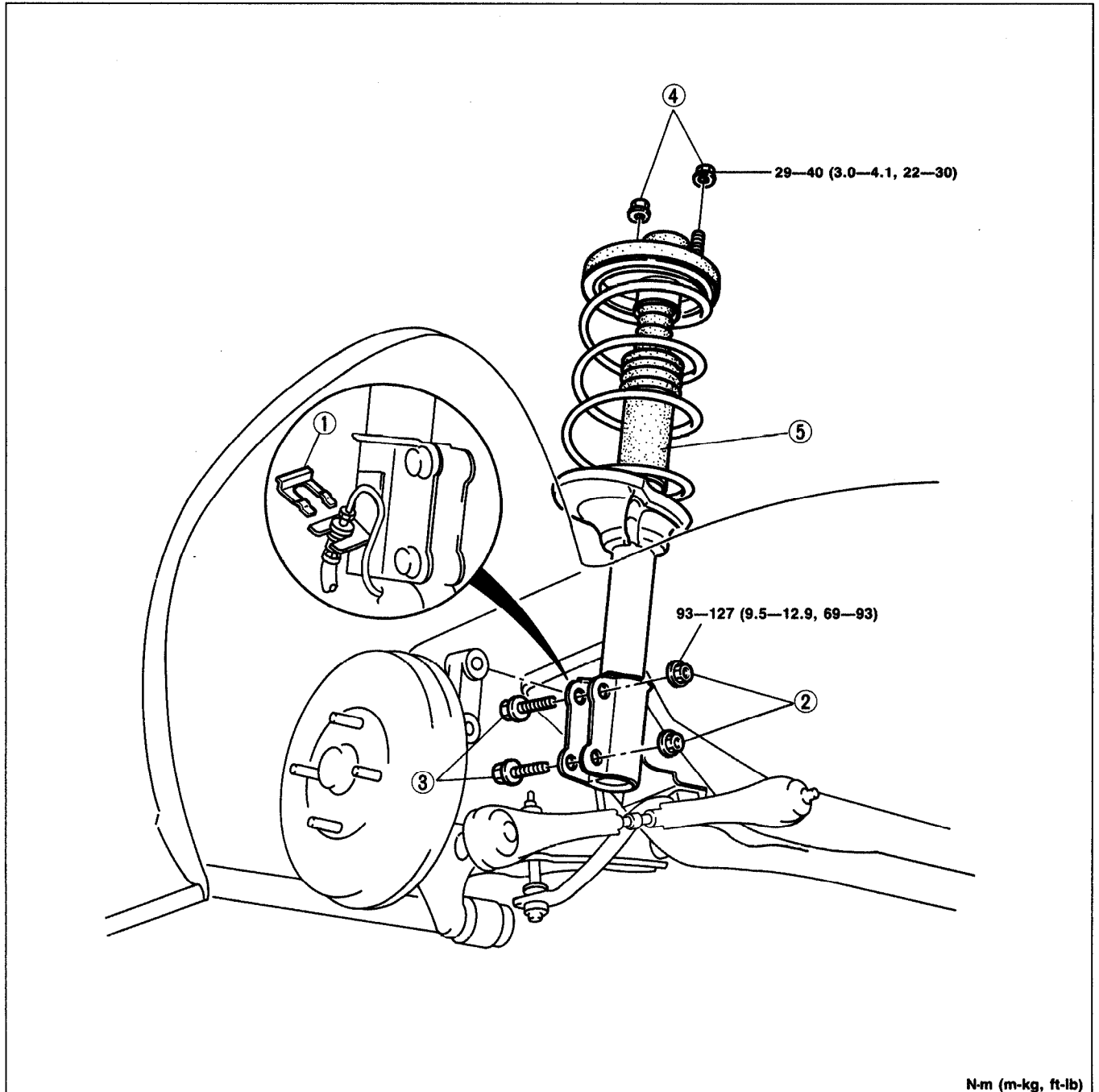
## REAR SHOCK ABSORBER AND SPRING

### Removal / Installation

1. Jack up the rear of the vehicle and support it with safety stands.
2. Remove the wheels.
3. Remove in the order shown in the figure.
4. Install in the reverse order of removal.
5. After installation, measure the rear wheel alignment, if necessary.

### Caution

- Retighten the shock absorber lower bolts to the specified torque after lowering the vehicle (unladen condition).



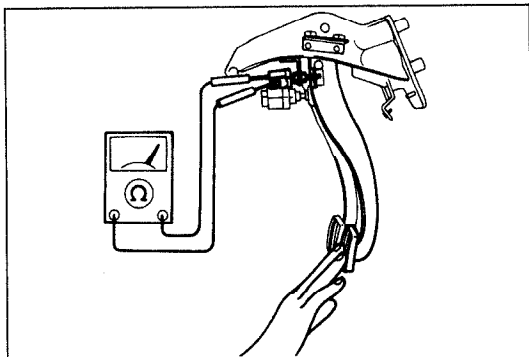
N·m (m·kg, ft·lb)

23U0RX-011

1. Clip
2. Nut
3. Bolt
4. Nut

### 5. Shock absorber and spring

|                   |           |
|-------------------|-----------|
| Disassembly ..... | page R-22 |
| Inspection .....  | page R-23 |
| Assembly .....    | page R-24 |

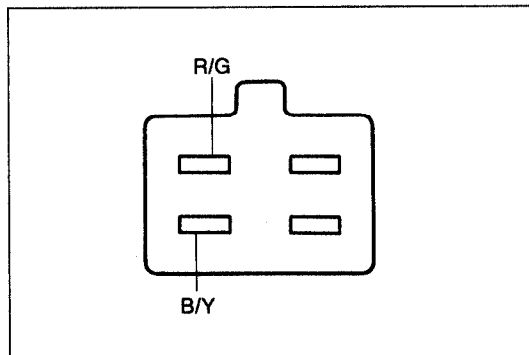


03U0TX-073

## STOPLIGHT SWITCH

### Inspection

1. Remove the stoplight switch connector.
2. Connect an ohmmeter between terminals of the stoplight switch.
3. Confirm continuity between the terminals when the brake pedal is depressed.



03U0TX-074

## BACK-UP LIGHT SWITCH (For MTX)

### Inspection

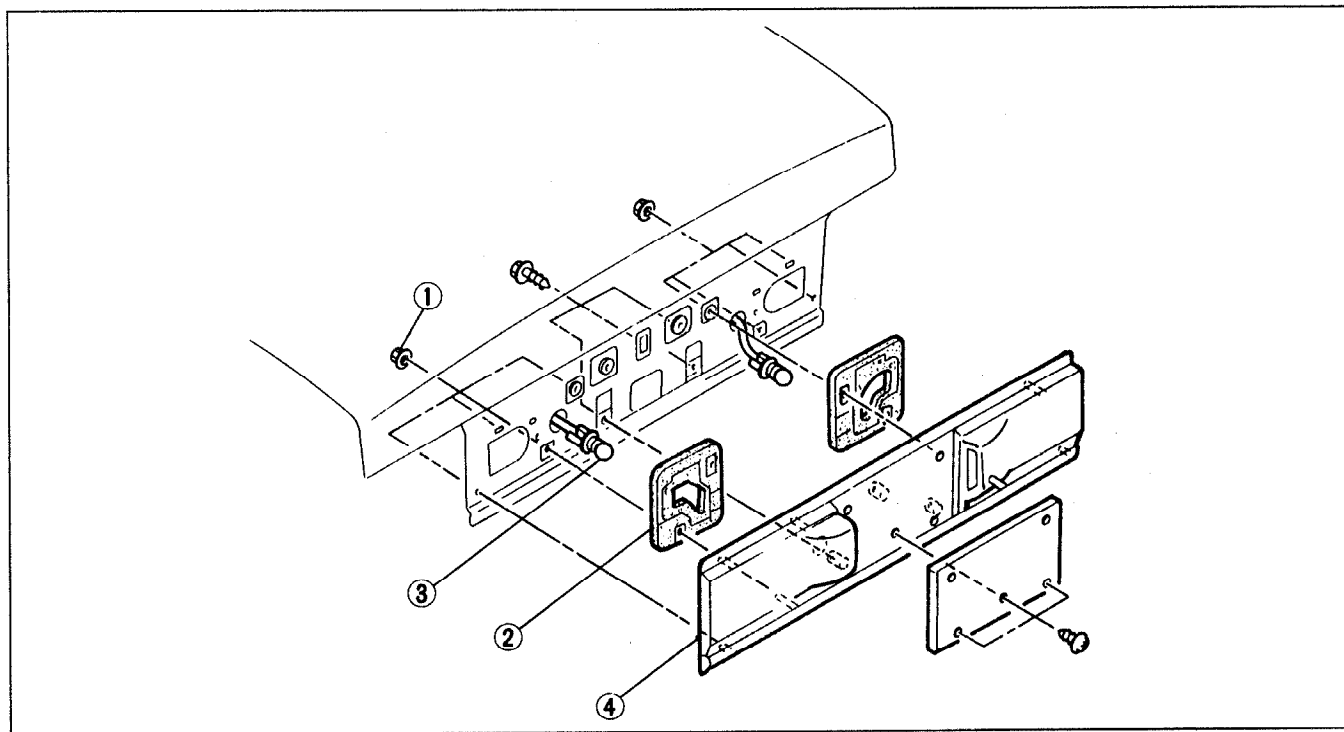
1. Remove the back-up light switch connector.
2. Shift to the reverse position.
3. Confirm continuity between the R/G and the B/Y wire of the connector.

## LICENSE PLATE LIGHT

### Removal / Inspection / Installation

1. Remove in the order shown in the figure.
2. Inspect all parts and repair or replace as necessary
3. Install in the reverse order of removal.

## PROTEGE



13U0TX-066

1. Nut
2. Gasket
3. Bulb

4. License plate light (Rear finisher)  
Visual inspection