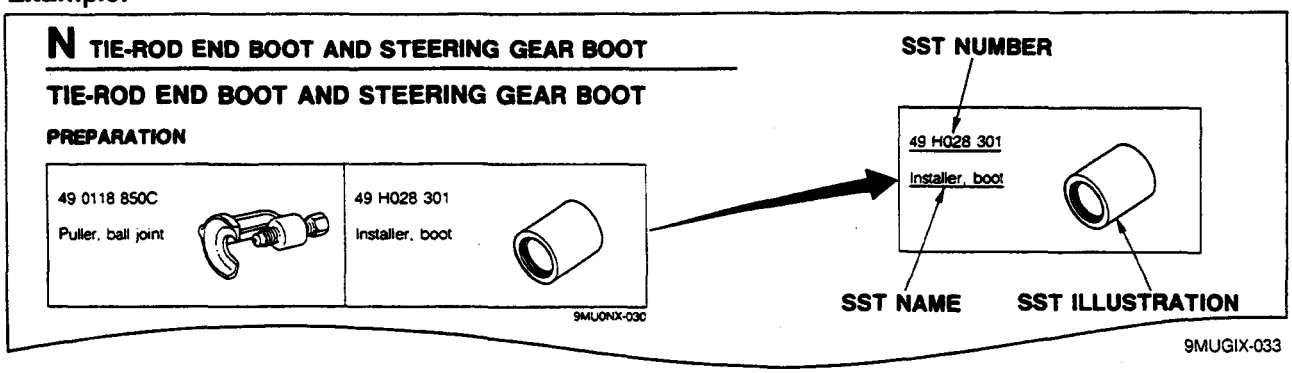
HOW TO USE THIS MANUAL

PREPARATION

PREPARATION points out the needed **SST** for the service operation that follows. It is best to gather all necessary **SST** before beginning work.

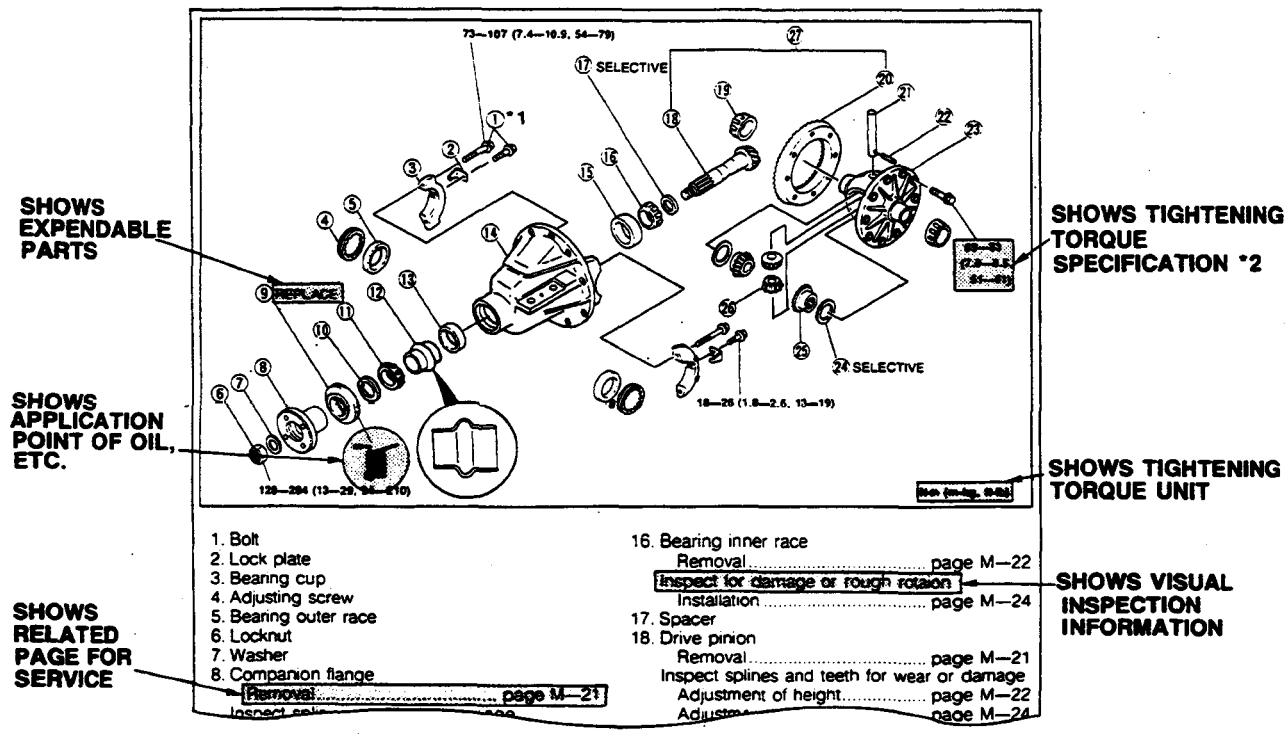
Example:



REPAIR PROCEDURE

1. 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.
2. Expendable parts, tightening torques, and symbols for oil, grease, and sealant are shown in the overview illustration.
3. Pages related to service procedures are shown under the illustration. Refer to this information when servicing the related part.

Example:



*1: The numbering (ex.①) shows service procedure.
*2: Units shown in N·m (m-kg, ft-lb) unless otherwise specified.

SCHEDULED MAINTENANCE SERVICES

MAINTENANCE TABLE (General RHD Models)

Chart Symbols

I : Inspect and if necessary correct, clean, or replace
A: Adjust
R: Replace or change
T : Tighten
L : Lubricate
C: Clean

- After 60,000 km (36,000 miles), continue to follow the prescribed maintenance items at the recommended intervals.
- For items marked * in this maintenance chart, please pay attention to these points.

*1 If the vehicle is operated under the following conditions, it is suggested that the engine oil and oil filter be changed more frequently.
a) Driving in dusty conditions
b) Extended periods of idling or low-speed operation
c) Driving for a prolonged period in cold temperatures, or driving short distances only
*2 If the vehicle is operated in very dusty or sandy areas, clean or replace more often than at usual recommended itervals.
*3 See page A–21 for detailed information.

Emission Control and Related Systems

The ignition and fuel systems are vitally important to the proper operation of the emissions control and related systems, as well as for efficient engine operation. It is strongly recommended that all serving related to these systems be done by your Authorized Mazda Dealer.

9TF0AX-002

Maintenance interval / Maintenance item		Kilometers (miles)												
	x1,000 km	1	5	10	15	20	25	30	35	40	45	50	55	60
	(x1,000 miles)	0.6	3	6	9	12	15	18	21	24	27	30	33	36

Engine

Engine valve clearance		I		I		I		I		I		I		I
Cylinder head bolts	HA engine	T				T				T				T
Intake and exhaust manifold		T				T				T				T
Drive belts		A	I	I	I	I	I	I	I	I	I	I	I	I
Engine oil*1	HA and SL engine	R		R		R		R		R		R		R
	SL Turbo engine	R	R	R	R	R	R	R	R	R	R	R	R	R
Oil filter*1		R		R		R		R		R		R		R
Oil bypass filter	HA and SL engine					R				R				R
	SL Turbo engine			R		R		R		R		R		R

Cooling System

Cooling system	I		I		I		I		I		I		I	
Engine coolant	(R) every 12 months													

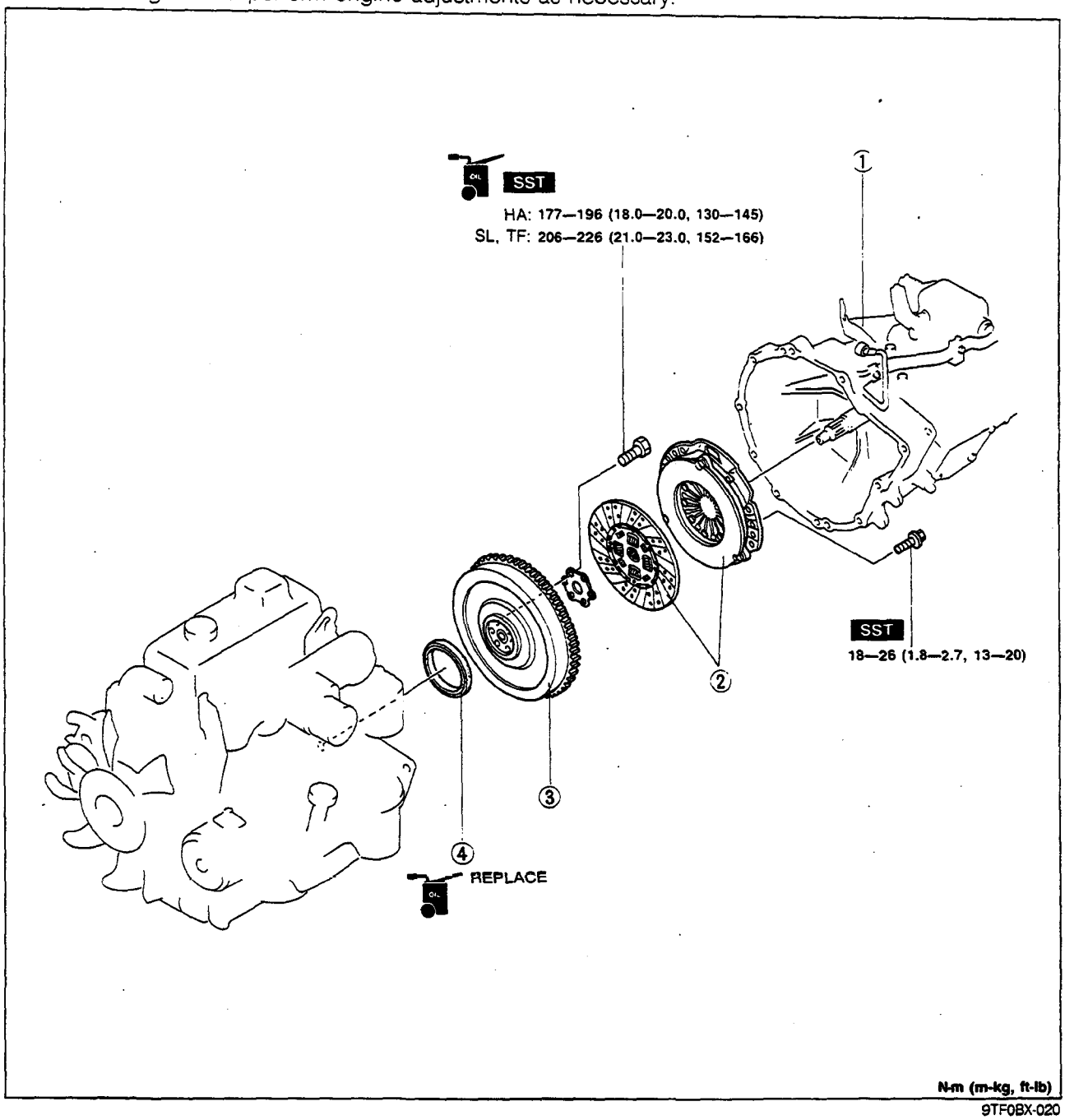
REAR OIL SEAL

Replacement

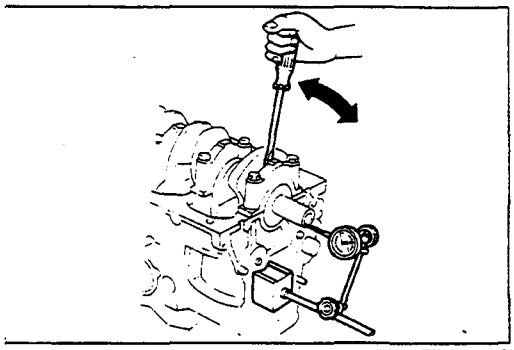
1. Disconnect the negative battery cable.
2. Remove in the order shown in the figure, referring to **Removal Note**.
3. Install in the reverse order of removal, referring to **Installation Note**.

Steps After Installation

1. Connect the negative battery cable.
2. Start the engine and perform engine adjustments as necessary.



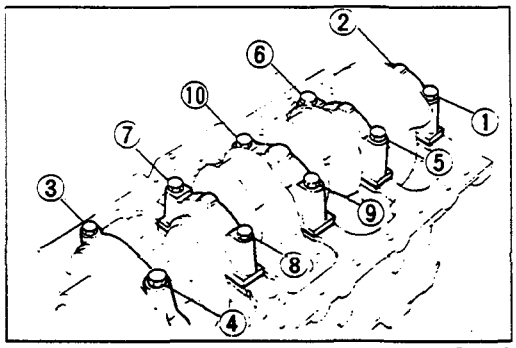
1. Transmission
   Service ..... Section J
2. Clutch cover, clutch disc
   Service ..... Section H
3. Flywheel
   Removal Note ..... page B–32
   Installation Note ..... page B–32
4. Oil seal
   Installation Note ..... page B–32



9TF0BX-042

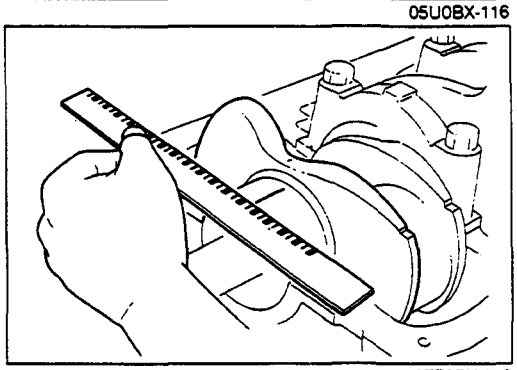
Main bearing cap

1. Before removing the main bearing caps, measure the crankshaft end play. (Refer to page B–94.)



05U0BX-116

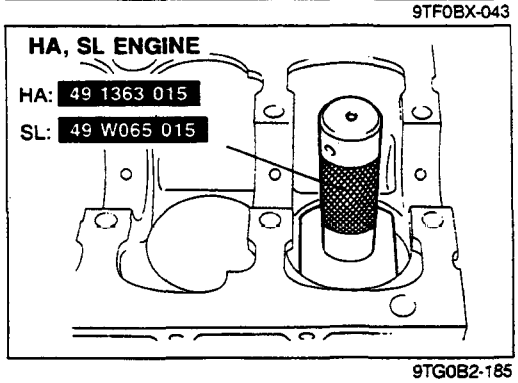
2. Loosen the main bearing cap bolts in two or three steps in the order shown in the figure.
3. Remove the main bearing caps.



9TF0BX-043

Crankshaft

1. Before removing the crankshaft, measure the main bearing oil clearances. (Refer to page B–92.)



9TG0B2-185

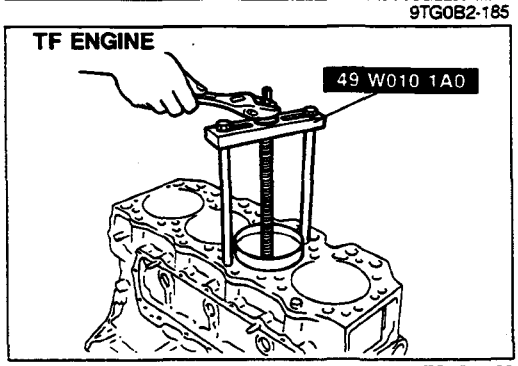
Cylinder liner

1. Mark the cylinder liner and the cylinder block for proper reassembly.

Note

- **If necessary, remove the cylinder liner with the SST.**

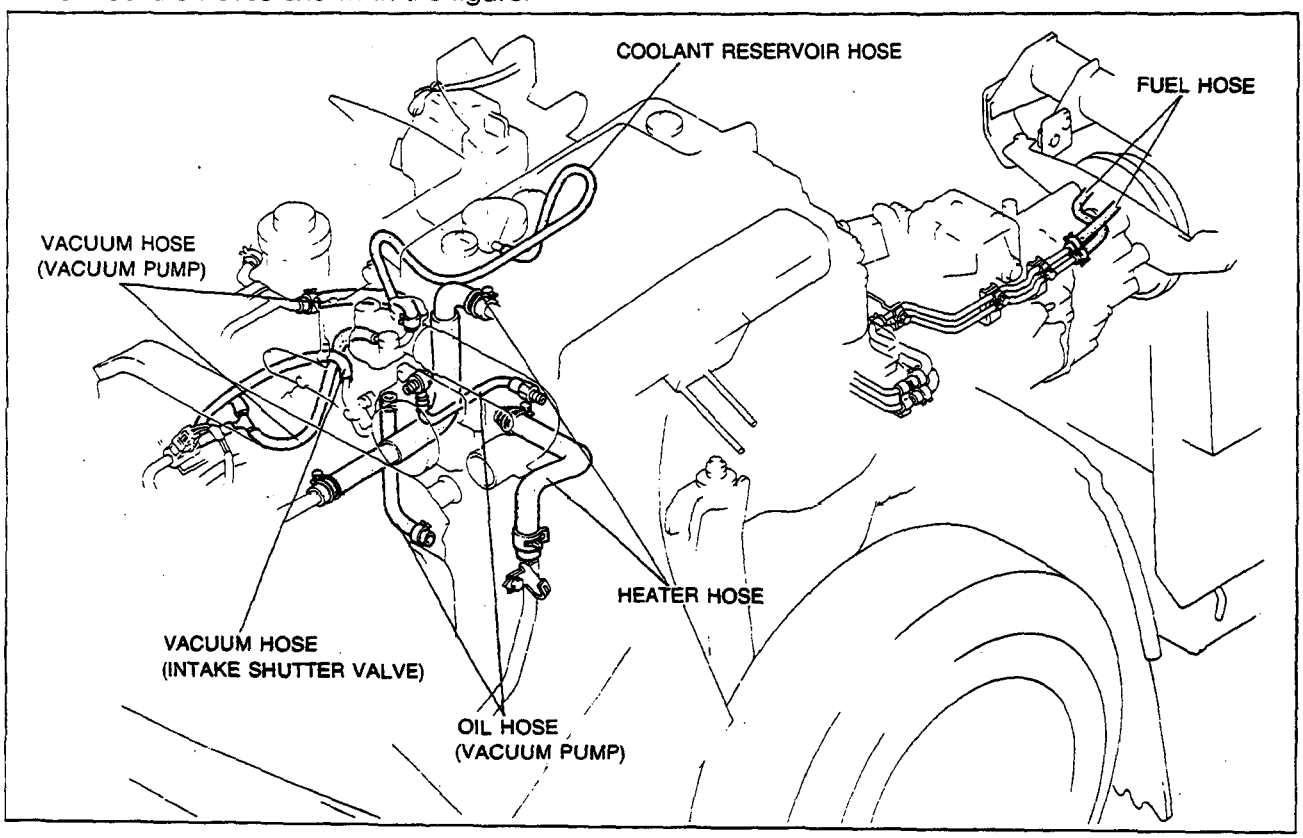
2. Remove the cylinder liner by hand.



9TG0B2-186

Step 4

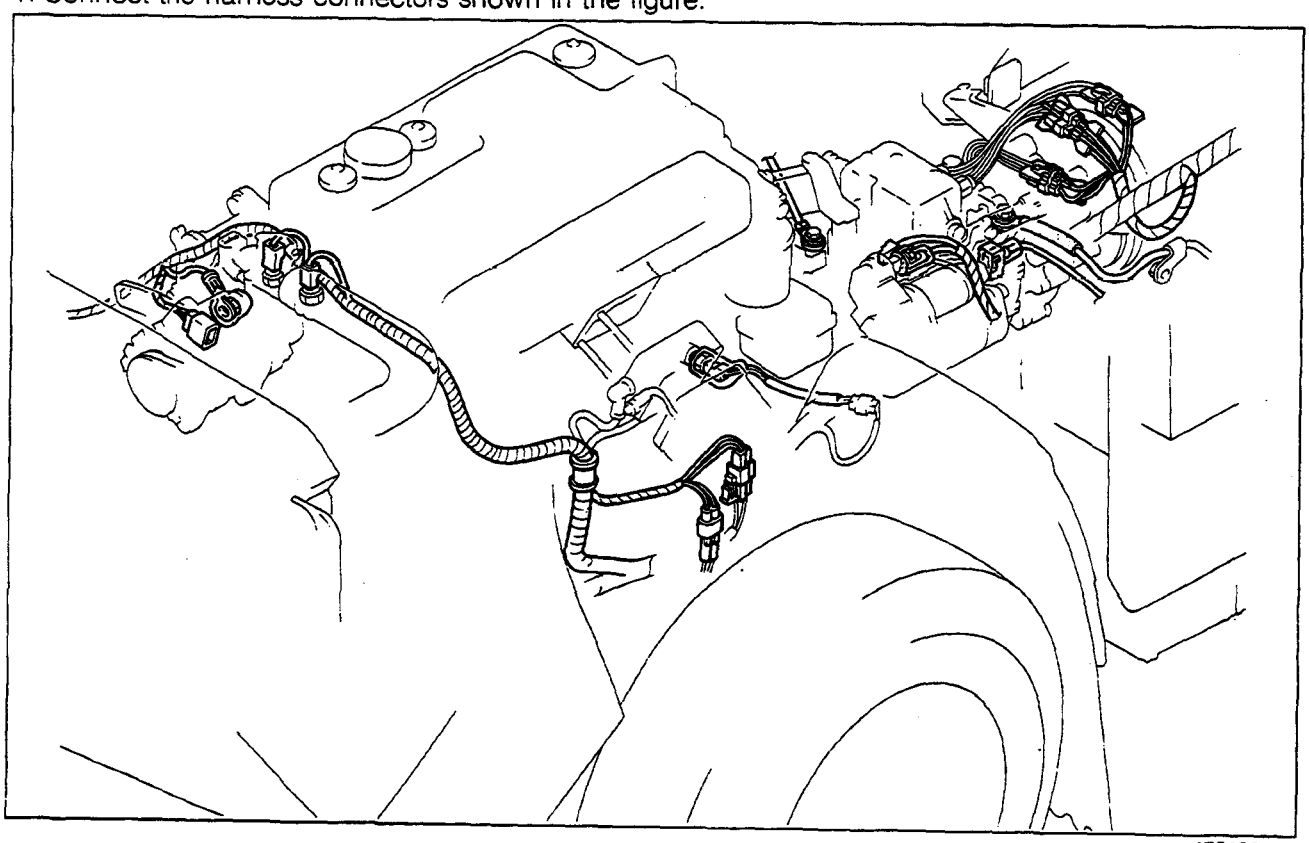
1. Connect the hoses shown in the figure.



9TG0B2-442

Step 5

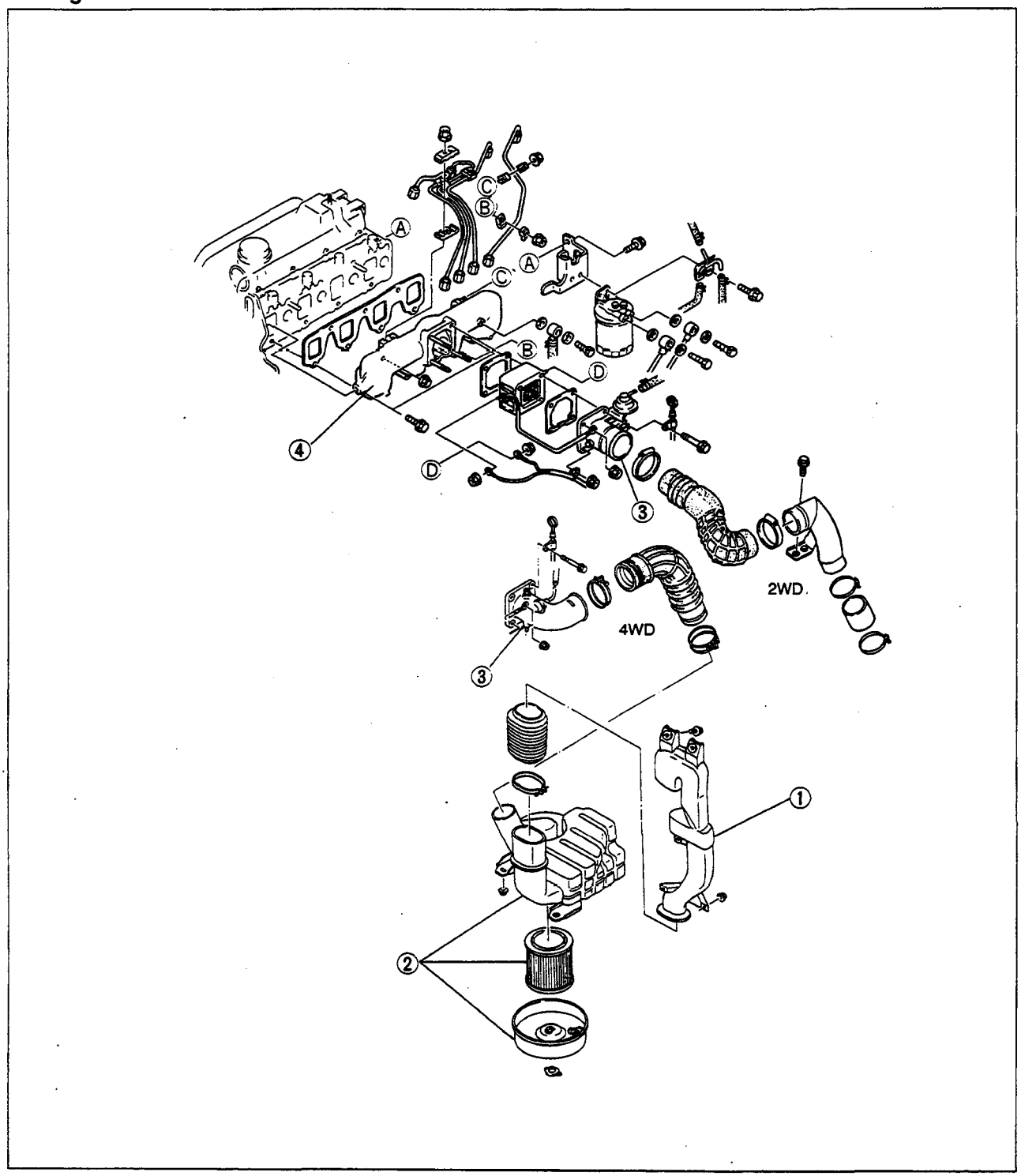
1. Connect the harness connectors shown in the figure.



9TG0B2-443

INDEX

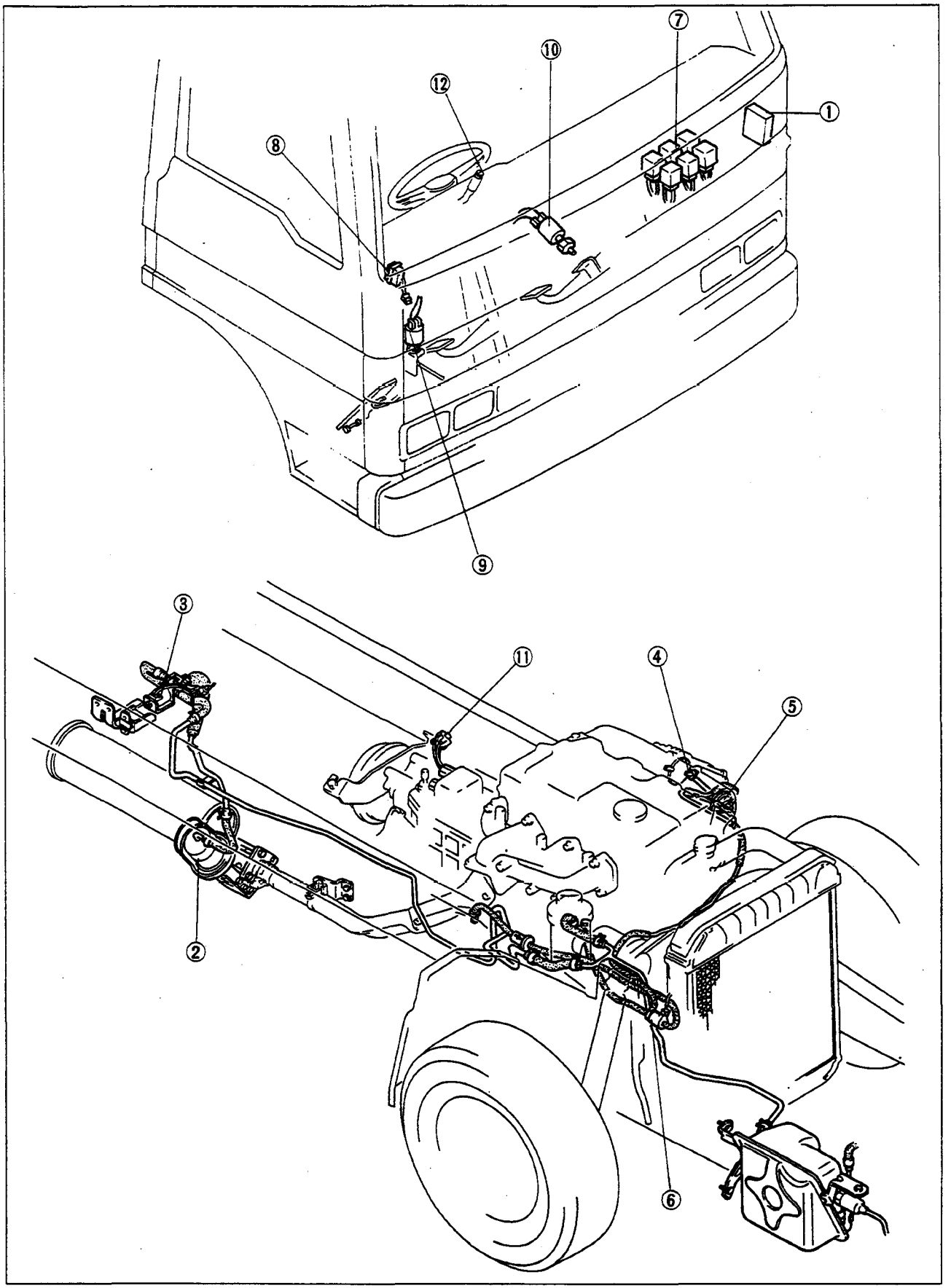
INTAKE DEVICES
SL Engine



9TG0F2-002

1. Fresh air duct
   Removal / Inspection / Installation ..... page F2–18
2. Air cleaner
   Inspection ..... page F2–13
3. Intake shutter valve
   Removal / Installation ..... page F2–18
   Inspection ..... page F2–49
4. Intake manifold
   Installation Note ..... page F2–20

EXHAUST AND EXHAUST CONTROLLED HEATING DEVICES



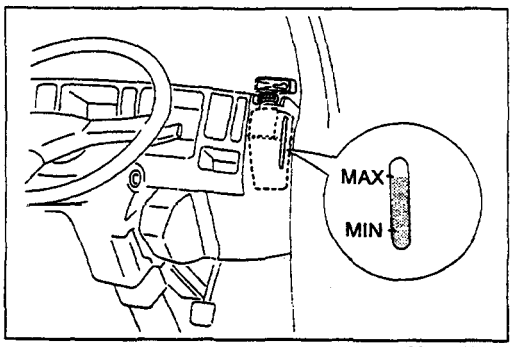
9TG0F3-004

CLUTCH FLUID

PREPARATION
SST

49 0259 770B Wrench, flare nut 	For air bleeding

03U0HX-005



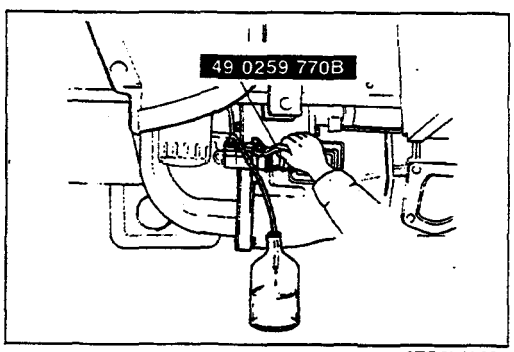
03U0HX-006

REPLACEMENT

Note
- **A common reservoir is used for the clutch and brake system fluids.**
- **The fluid in the reservoir must be maintained at the 3/4 level or higher during replacement.**

Caution
- **Be careful not to spill the fluid on a painted surface. If this should happen, wash it off immediately.**
- **Do not mix different brands of fluid.**
- **Do not reuse the clutch fluid that was drained.**

1. Drain the brake fluid from the master cylinder through a wheel cylinder.
2. Remove the bleeder cap from the clutch release cylinder and attach a vinyl hose to the bleeder plug.



9TG0HX-005

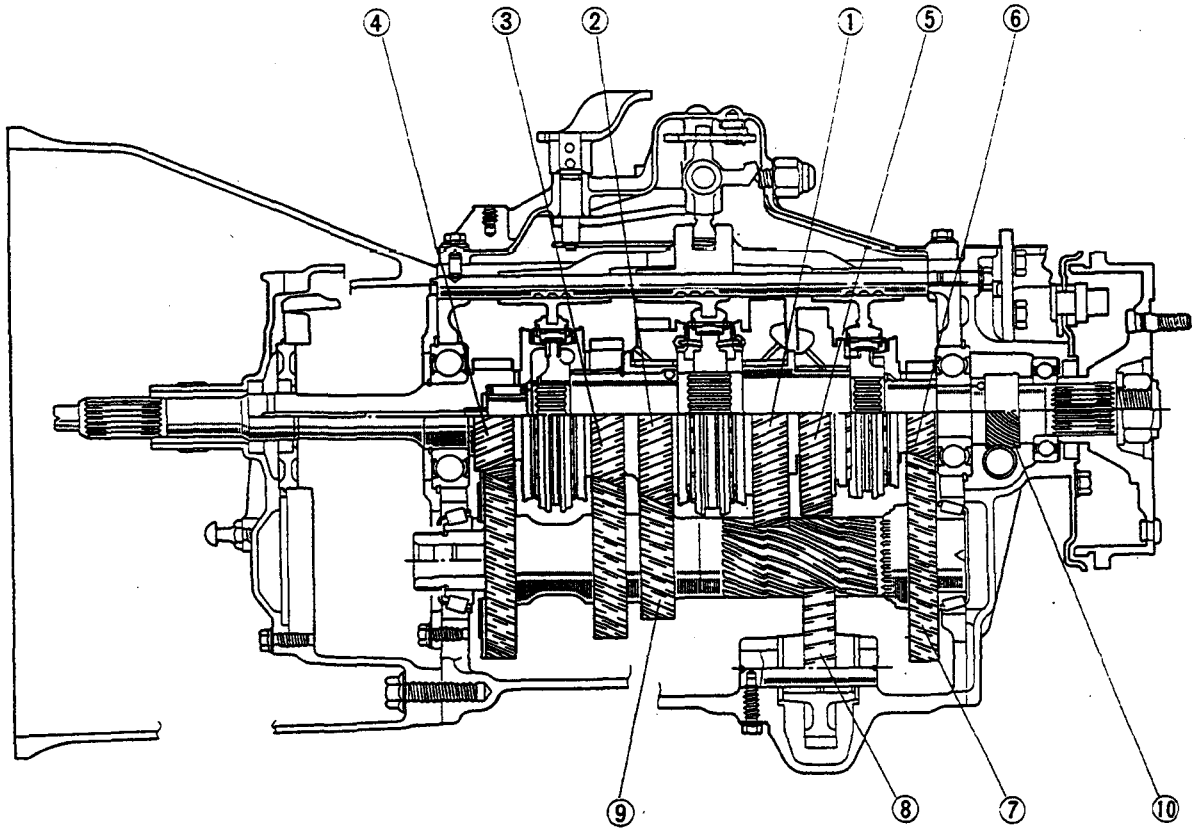
3. Place the other end of the vinyl hose in a clear container.
4. Slowly pump the clutch pedal several times.
5. With the clutch pedal depressed, loosen the bleeder screw with the **SST** to let the fluid escape. Close the bleeder screw with the **SST**.
6. Repeat Steps 4 and 5 until only clean fluid is seen.
7. Tighten the bleeder screw.

Tightening torque:
5.9—8.8 N·m (60—90 cm-kg, 52—78 in-lb)

8. Add fluid to the MAX mark.
9. Slowly pump the clutch pedal several times. Verify that there is no fluid leakage.
10. Verify operation of the clutch system.
11. Verify operation of the brake system.

STRUCTURAL VIEW

WITHOUT SUB-TRANSMISSION

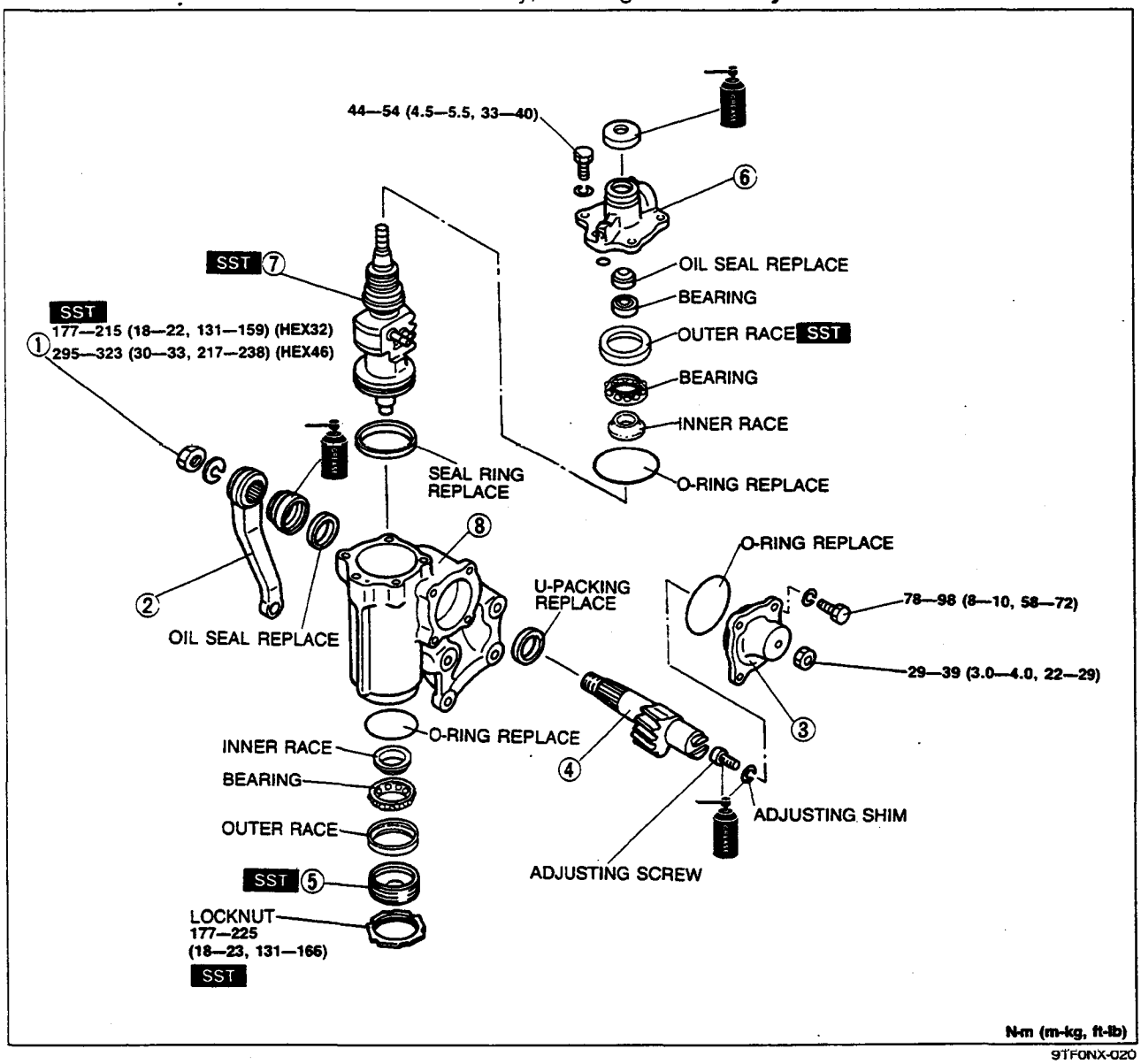


9TG0J2-005

1. 1st gear
2. 2nd gear
3. 3rd gear
4. Main drive gear (4th gear)
5. Reverse gear
6. 5th gear
7. Counter 5th gear
8. Reverse idler gear
9. Countershaft gear
10. Speedometer drive gear

Disassembly / Inspection / Assembly

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



9TF0NX-020

1. Locknut
2. Pitman arm
   - Disassembly note ..... page N–30
   - Assembly note ..... page N–36
3. Side cover
   - Disassembly note ..... page N–30
   - Inspect bearing for damage or corrosion
   - Assembly note ..... page N–34
4. Sector shaft
   - Disassembly note ..... page N–30
   - Inspection ..... page N–32
   - Assembly note ..... page N–34
5. Adjusting plug
   - Disassembly note ..... page N–30
   - Assembly note ..... page N–34
6. Valve housing
   - Disassembly note ..... page N–31
   - Inspect for damage
   - Assembly note ..... page N–33
7. Worm ball nut assembly
   - Disassembly note ..... page N–31
   - Inspection ..... page N–33
   - Assembly note ..... page N–32
8. Gear housing
   - Disassembly note ..... page N–31
   - Inspect for damage
   - Assembly note ..... page N–33, 35

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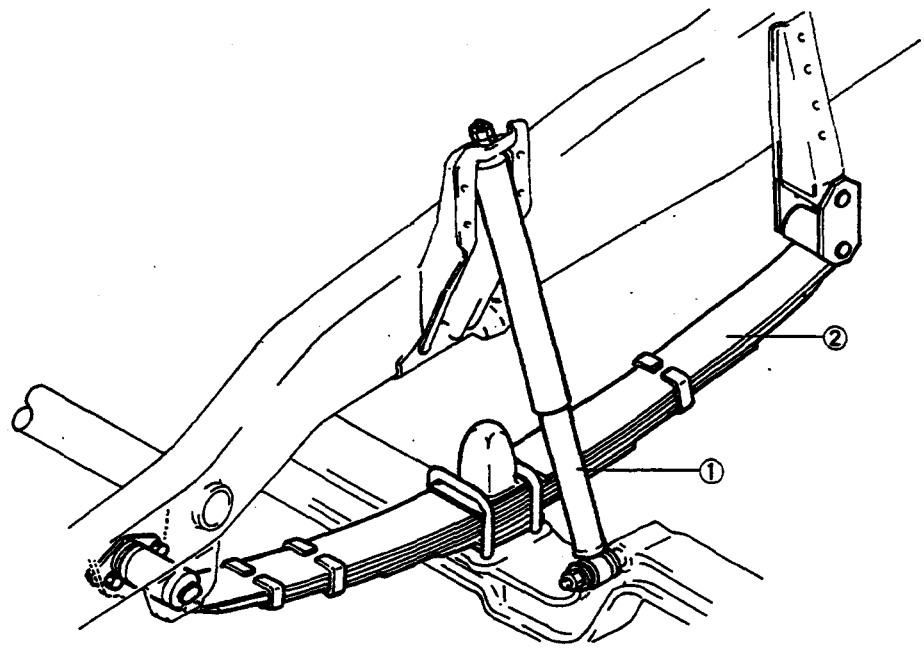
FRONT SUSPENSION



9TF0RX-002

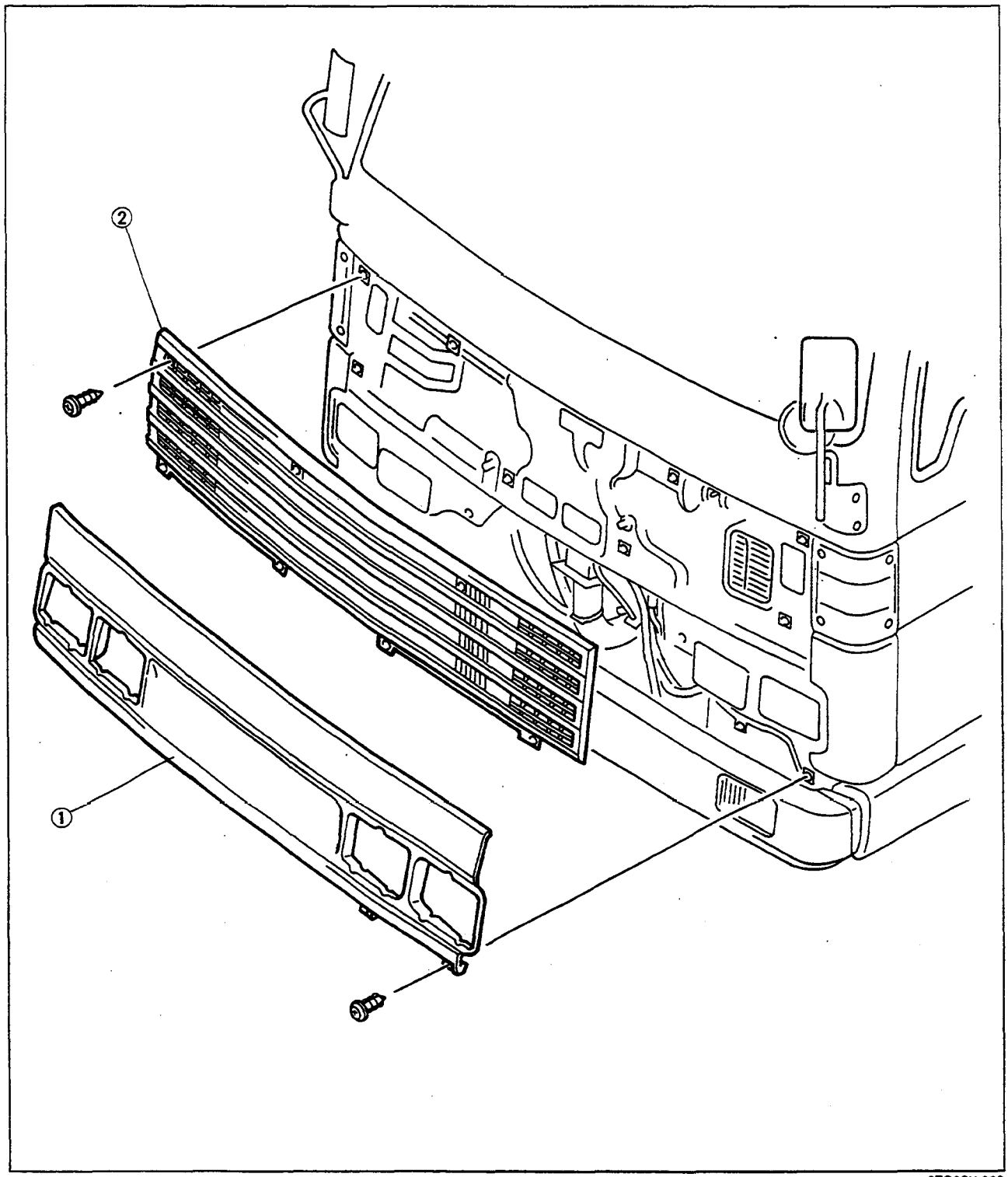
1. Front shock absorber
   Removal / Inspection / Installation ..... page R–13
   Inspection ..... page R–13
2. Front leaf spring
   Removal / Inspection / Installation ..... page R–14

RADIATOR GRILLE/FRONT GRILLE

COMPONENTS

Removal / Installation

1. Disconnect the negative battery cable.
2. Remove in the order shown in the figure.
3. Install in the reverse order of removal.

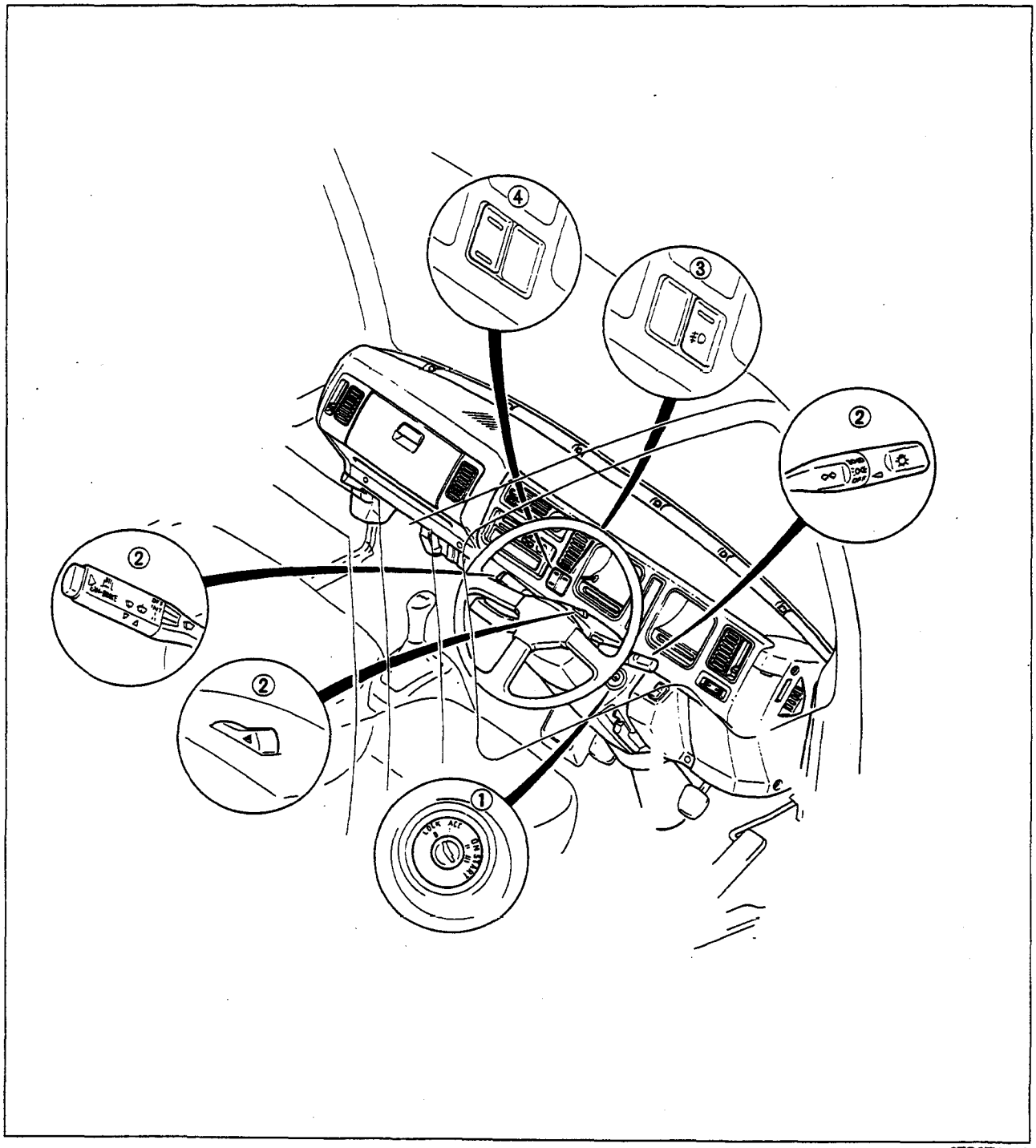


9TG0SX-026

1. Radiator grille
2. Front grille

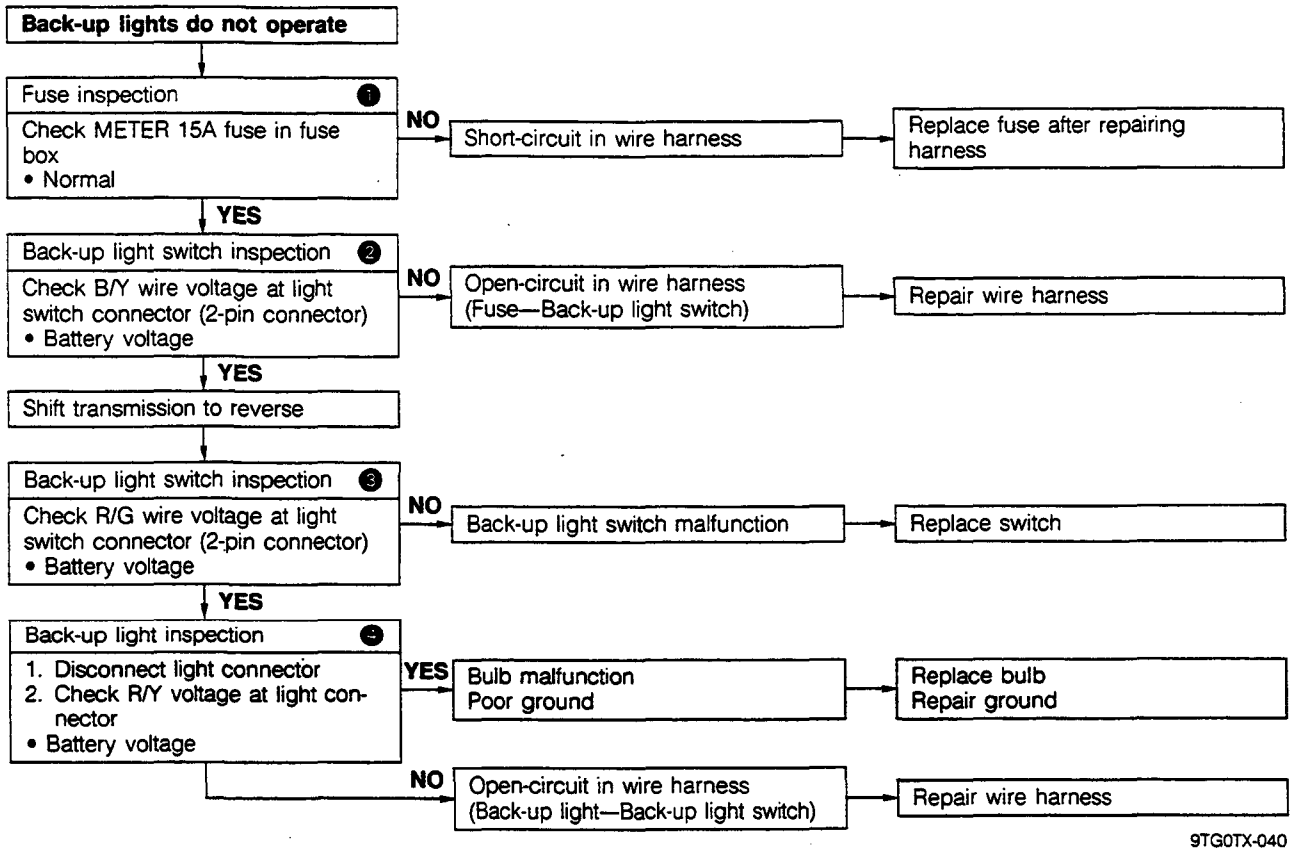
SWITCHES

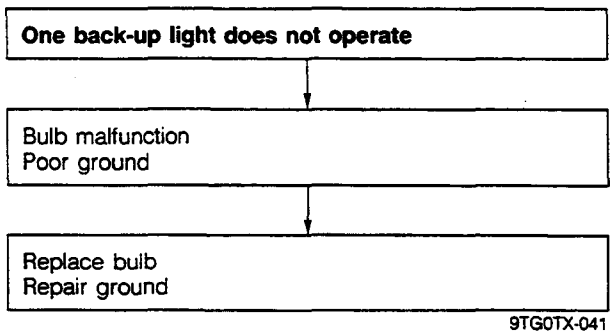
STRUCTURAL VIEW

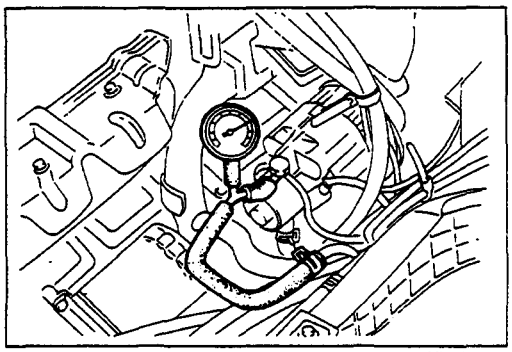


9TG0TX-018

1. Engine switch
   - Inspection ..... page T–17
   - Removal / Installation ..... page T–17
2. Combination switch
   (Including hazard warning switch)
   - Removal / Installation ..... page T–18
   - Disassembly / Assembly ..... page T–18
   - Inspection ..... page T–19
3. Fog light switch
   - Inspection ..... page T–42
4. Exhaust heating switch
   - Service ..... Section F2, F3


Back-up lights do not operate
Fuse inspection ❶
Check METER 15A fuse in fuse box
• Normal
NO
Short-circuit in wire harness
Replace fuse after repairing harness
YES
Back-up light switch inspection ❷
Check B/Y wire voltage at light switch connector (2-pin connector)
• Battery voltage
NO
Open-circuit in wire harness (Fuse—Back-up light switch)
Repair wire harness
YES
Shift transmission to reverse
Back-up light switch inspection ❸
Check R/G wire voltage at light switch connector (2-pin connector)
• Battery voltage
NO
Back-up light switch malfunction
Replace switch
YES
Back-up light inspection ❹
1. Disconnect light connector
2. Check R/Y voltage at light connector
• Battery voltage
YES
Bulb malfunction
Poor ground
Replace bulb
Repair ground
NO
Open-circuit in wire harness (Back-up light—Back-up light switch)
Repair wire harness
9TG0TX-040


One back-up light does not operate
Bulb malfunction
Poor ground
Replace bulb
Repair ground
9TG0TX-041


9TF0TX-014

Vacuum warning lamp

Vacuum warning lamp comes ON with buzzer after engine started

Connect vacuum gauge between vacuum pump and vacuum tank

↓

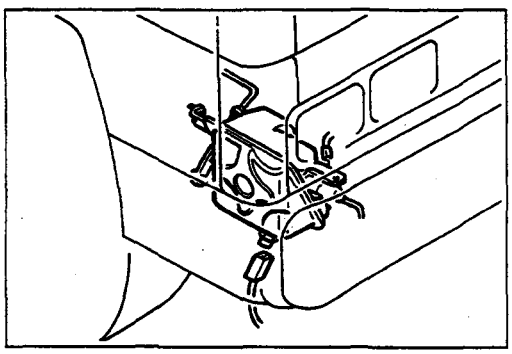
Start engine

↓

Check vacuum
- **Specified vacuum**
  –440 mmHg (–17.32 inHg)/1,500 rpm
  –580 mmHg (–22.83 inHg)/3,000 rpm
  max –700 mmHg (–27.56 inHg) or more

NO → Check vacuum pump (Refer to Section P) Vacuum leakage from vacuum hose

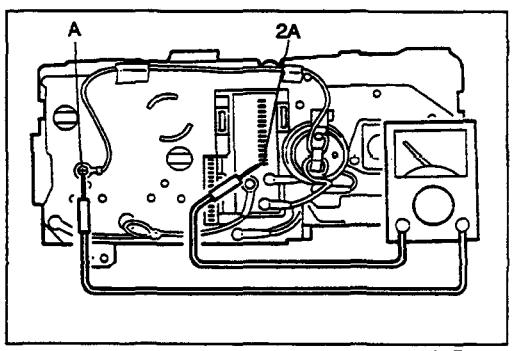
YES



1. Disconnect vacuum switch connector
2. Check that lamp goes OFF and buzzer stops
- Goes OFF and buzzer stops

YES → Vacuum switch malfunction

NO → *Short-circuit in wire harness (Vacuum switch—Instrument cluster)*



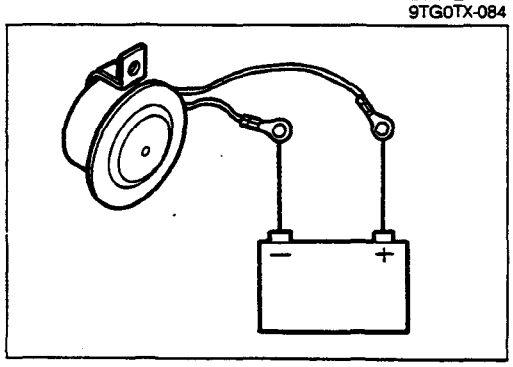
9TG0TX-084

Vacuum warning lamp comes ON without buzzer after engine started

Check continuity between 2A terminal at instrument cluster and buzzer A terminal as shown in the figure
- Continuity

NO → Instrument cluster malfunction

YES



Check buzzer operation (Refer to page T–61)
- Normal

NO → Buzzer malfunction

YES → Short-circuit in instrument cluster