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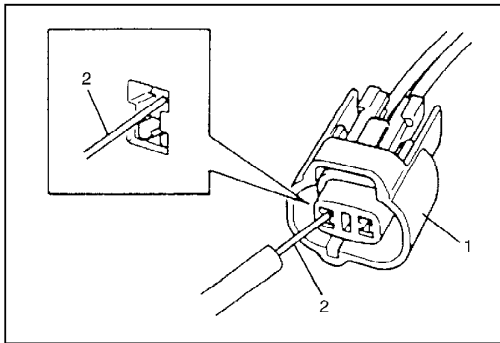
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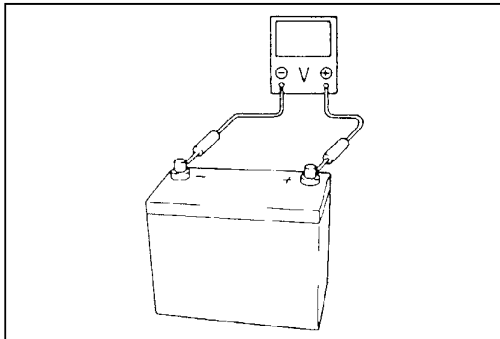
10B -AIR BAG SYSTEM



- When connecting meter probe (2) from terminal side of coupler (1) because it can't be connected from harness side, use extra care not to bend male terminal of coupler or force its female terminal open for connection. In case of such coupler as shown connect probe as shown to avoid opening female terminal.

Never connect probe where male terminal is supposed to fit.

- When checking connection of terminals, check its male half for bend and female half for excessive opening and both for locking (looseness), corrosion, dust, etc.



- Before measuring voltage at each terminal, check to make sure that battery voltage is 11 V or higher. Such terminal voltage check at low battery voltage will lead to erroneous diagnosis.

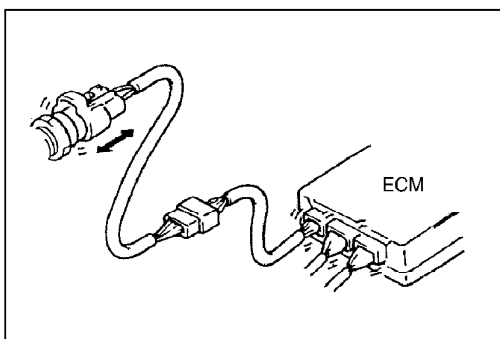
ELECTRICAL CIRCUIT INSPECTION PROCEDURE

While there are various electrical circuit inspection methods, described here is a general method to check its open and short circuit by using an ohmmeter and a voltmeter.

OPEN CIRCUIT CHECK

Possible causes for the open circuit are as follows. As the cause is in the connector or terminal in many cases, they need to be checked particularly carefully.

- Loose connection of connector
- Poor contact of terminal (due to dirt, corrosion or rust on it, poor contact tension, entry of foreign object etc.)
- Wire harness being open



When checking system circuits including an electronic control unit such as ECM, TCM, ABS control module, etc., it is important to perform careful check, starting with items which are easier to check.

- 1) Disconnect negative (-) cable from battery
- 2) Check each connector at both ends of the circuit being checked for loose connection. Also check lock condition of connector if equipped with connector lock.

MAINTENANCE RECOMMENDED UNDER SEVERE DRIVING CONDITIONS

If the vehicle is usually used under the conditions corresponding to any severe condition code given below, it is recommended that applicable maintenance operation be performed at the particular interval as given in the chart below.

Severe condition code

A – Repeated short trips

B – Driving on rough and/or muddy roads

C – Driving on dusty roads

D – Driving in extremely cold weather and/or salted roads

E – Repeated short trips in extremely cold weather

F – - - - -

G – - - - -

H – Trailer towing

Severe Condition Code	Maintenance	Maintenance Operation	Maintenance Interval
- B C D - - - -	ITEM 1-1 Drive belt (V-rib belt)	I	Every 15,000 km (9,000 miles) or 12 months
		R	Every 45,000 km (27,000 miles) or 36 months
A - C D E - - H	ITEM 1-4 Engine oil and oil filter	R	Every 5,000 km (3,000 miles) or 4 months
A B C - E - - H	ITEM 2-1 Spark plugs	R	Every 10,000 km (6,000 miles) or 8 months
- - C - - - - -	ITEM 3-1 Air cleaner filter *1	I	Every 2,500 km (1,500 miles)
		R	Every 30,000 km (18,000 miles) or 24 months
- B C D - - - H	ITEM 6-2 Wheel bearings	I	Every 15,000 km (9,000 miles) or 12 months
- B - D E - - H	ITEM 6-3 Drive shaft boots	I	Every 15,000 km (9,000 miles) or 12 months
- B - - E - - H	ITEM 6-6 Manual transmission oil	I	First 15,000 Km (9,000 miles) or 12 months only
		R	Every 30,000 km (18,000 miles) or 24 months
- B - - E - - H	ITEM 6-7 Automatic transmission fluid	R	Every 30,000 km (18,000 miles) or 24 months

NOTES:

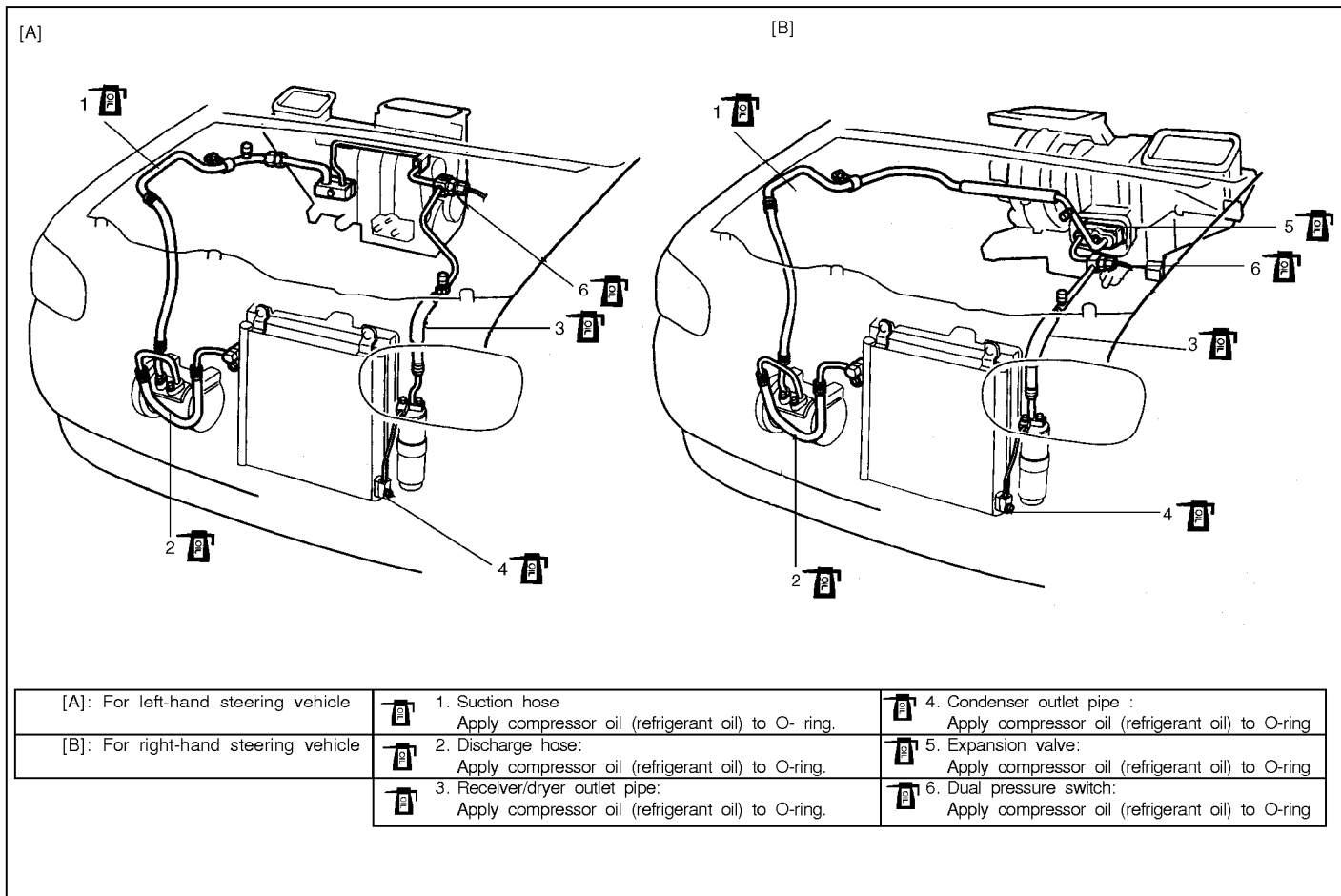
- “R”: Replace or change
- “I”: Inspect and correct or replace if necessary
- *1: Inspect or replace more frequently if necessary.

ON-VEHICLE SERVICE

SERVICE PRECAUTION

When servicing air conditioning system, note the following instructions.

REFRIGERANT LINE



- Never use heat for bending pipes. When bending a pipe, try to make its bending radius as slight as possible.
- Keep internal parts of air conditioning free from moisture and dirt. When disconnecting any line from system, install a blind plug or cap to the fitting immediately.
- When connecting hoses and pipes, apply a few drops of compressor oil (refrigerant oil) to seats of coupling nuts and O-ring.
- When tightening or loosening a fitting, use two wrenches, one for turning and the other for support.
- Tighten flared nuts by the following specified torque.

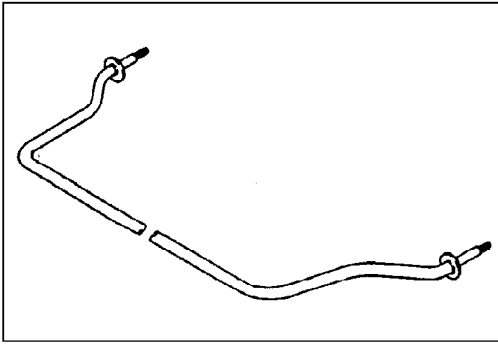
Tightening Torque (Flared Nut Used for)

8 mm pipe: 13 N-m (1.3 kg-m, 9.5 lb-ft)

12 mm pipe: 23 N-m (2.3 kg-m, 16.6 lb-ft)

14.5 mm pipe: 33 N-m (3.3 kg-m, 23.8 lb-ft)

- Route drain hose so that drained water does not make any contact to vehicle components.
- If pipes or hoses are replaced, replenish specified amount of compressor oil to compressor suction-side by referring to “REPLENISHING COMPRESSOR OIL” in this section.



DIAGNOSIS

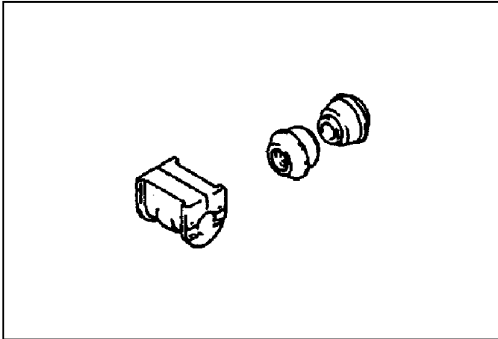
DIAGNOSIS TABLE

Refer to SECTION 3.

STABILIZER BAR AND/OR BUSHING CHECK

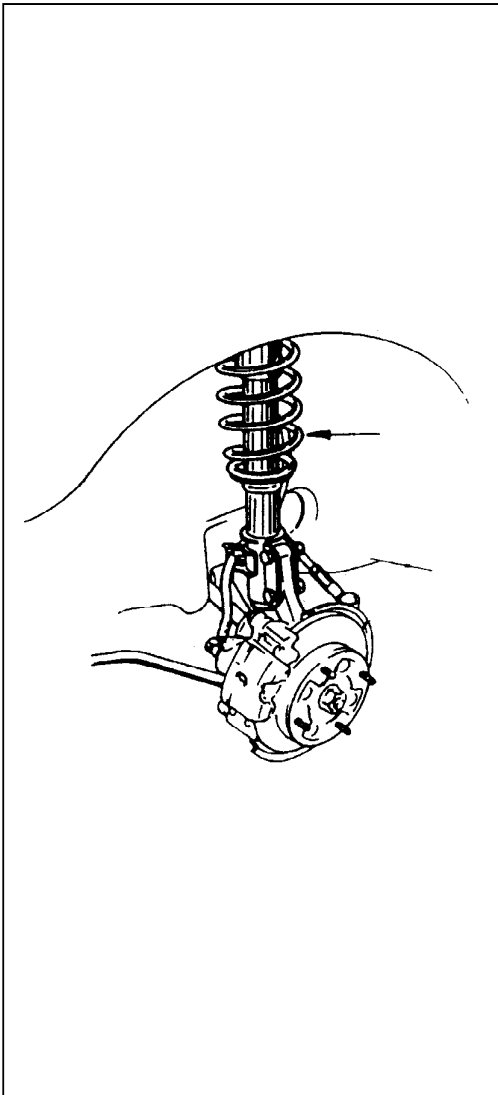
Bar

Inspect for damage or deformation. If defective, replace.



Bushing

Inspect for damage, wear or deterioration. If defective, replace.



STRUT ASSEMBLY CHECK

- 1) Inspect strut for oil leakage. If strut is found faulty, replace it as an assembly unit, because it can not be disassembled.
- 2) Strut function check.

Check and adjust tire pressure as specified. Bounce vehicle body three or four times continuously by pushing front end on the side with strut to be checked. Apply the same amount of force at each push and note strut resistance both when pushed and rebounding.

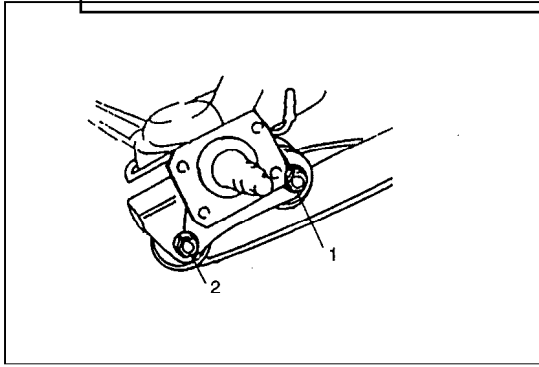
Also, note how many times vehicle body rebounds before coming to stop after hands are off. Do the same for strut on the other side.

Compare strut resistance and number of rebound on the right with those on the left. And they must be equal in both.

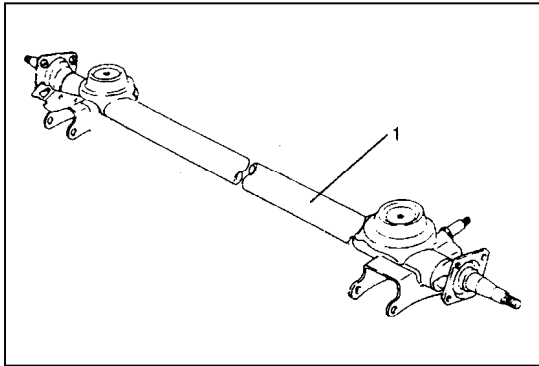
With proper strut, vehicle body should come to stop the moments hands are off or after only one or two small rebounds. If conditions of struts are in doubt, compare them with known good vehicle or strut.

- 3) Inspect for damage or deformation.
- 4) Inspect bearing for wear, abnormal noise or gripping.
- 5) Inspect spring seat for cracks or deterioration.
- 6) Inspect bump stopper for deterioration.
- 7) Inspect rebound stopper and strut mount for wear, cracks or deformation.

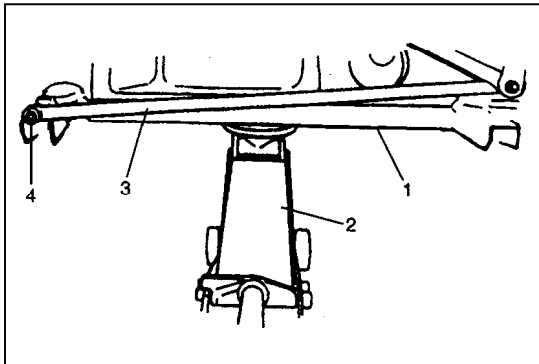
Replace any parts found defective in steps 2)–7).



12) Loosen center trailing arm nuts (1) and rear trailing arm nuts (2) but don't remove bolts.



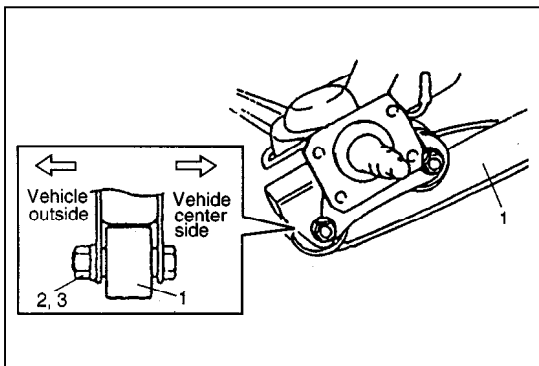
13) While supporting rear axle at both ends, remove center and rear trailing arm bolts, and then remove rear axle from chassis by lowering floor jack gradually.



INSTALLATION

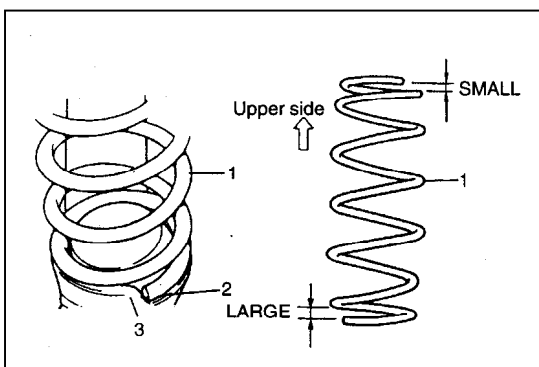
1) Place rear axle (1) on floor jack (2).

Then install lateral rod (3) to rear axle (1) and tighten nut (4) temporarily by hand at this step.

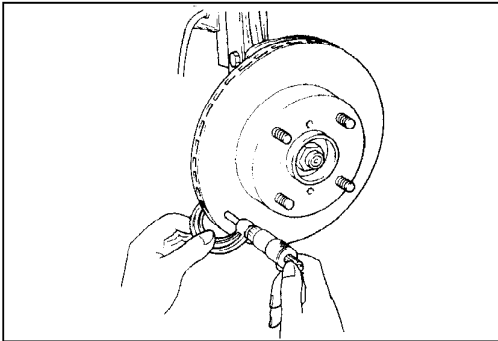


2) Install trailing arms (1) to rear axle in proper direction as shown in figure.

Tighten trailing arm center nuts (2) and trailing arm rear nuts (3) temporarily by hand at this step.



3) Install coil springs (1) with its small pitch end facing up and large pitch end (with paint marking) down and make sure that spring end contact to stepped part (2) of lower seat (3) as shown.



Brake Disc

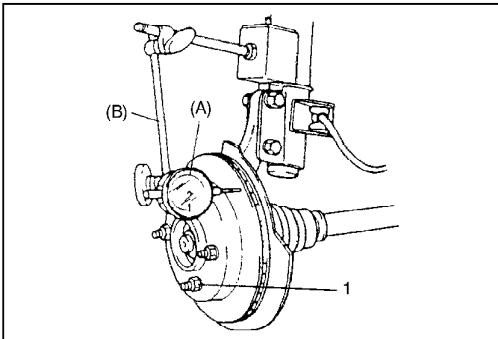
Check disc surface for scratches in wearing parts. Scratches on disc surface noticed at the time of specified inspection or replacement are normal and disc is not defective unless they are serious.

But when there are deep scratches or scratches all over disc surface, replace it. When only one side is scratched, polish and correct that side.

Disc thickness

Standard : 17.0 mm (0.67 in.)

Limit : 15.0 mm (0.59 in.)



Use wheel nuts (1) to hold the disc securely against the hub, then mount a dial gauge as shown.

To measure deflection of disc, take measurement at 2 points on its periphery and center with dial gauge while rotating it.

Limit on disc deflection: 0.15 mm (0.006 in.) max.

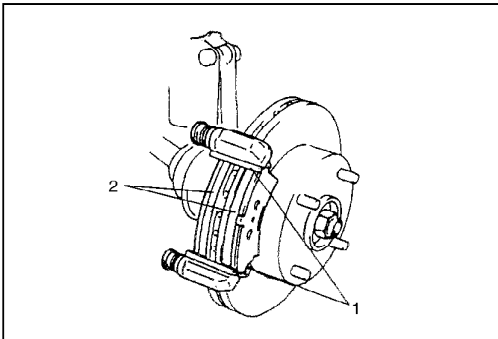
Special Tool

(A): 09900-20606

(B): 09900-20701

NOTE:

Check front wheel bearing for looseness before measurement.

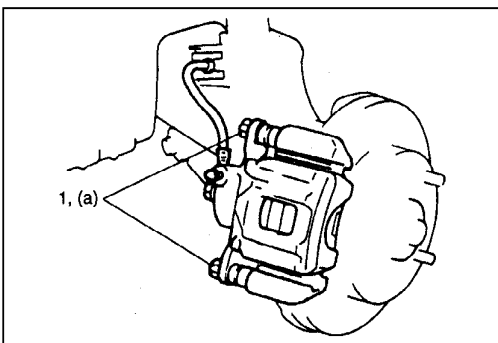


INSTALLATION

CAUTION:

Observe CAUTION at the beginning of this section.

1) Install pad springs (1) and pads (2).



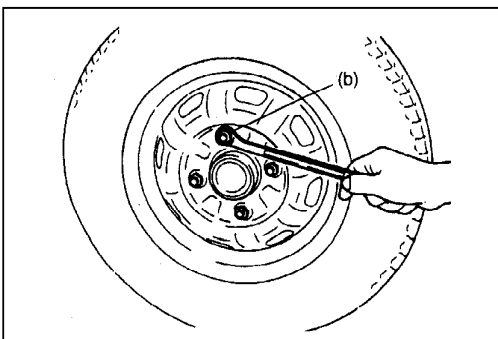
2) Install caliper and tighten caliper pin bolts (1) to specified torque.

NOTE:

Make sure that boots are fit into groove securely.

Tightening Torque

(a): 27 N-m (2.7 kg-m, 19.5 lb-ft)



3) Tighten front wheel nuts to specified torque.

Tightening Torque

(b): 85 N-m (8.5 kg-m, 61.5 lb-ft)

4) Upon completion of installation, perform brake test.

Scan Tool Data

As the data values given below are standard values estimated on the basis of values obtained from the normally operating vehicles by using a scan tool, use them as reference values. Even when the vehicle is in good condition, there may be cases where the checked value does not fall within each specified data range. Therefore, judgment as abnormal should not be made by checking with these data alone.

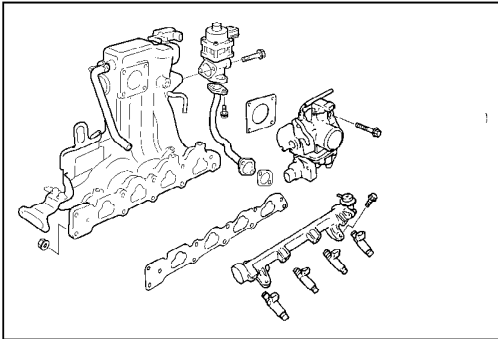
Also, conditions in the below table that can be checked by the scan tool are those detected by ECM (PCM) and output from ECM (PCM) as commands and there may be cases where the engine or actuator is not operating (in the condition) as indicated by the scan tool. Be sure to use the timing light to check the ignition timing.

NOTE:

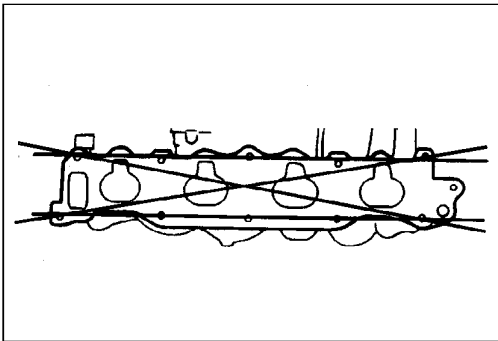
- With the generic scan tool, only star (*) marked data in the table below can be read.
- When checking the data with the engine running at idle or racing, be sure to shift M/T gear to the neutral gear position and A/T gear to the “Park” position and pull the parking brake fully. Also, if nothing or “no load” is indicated, turn OFF A/C, all electric loads, P/S and all the other necessary switches.

	SCAN TOOL DATA	VEHICLE CONDITION	NORMAL CONDITION/ REFERENCE VALUES
*	FUEL SYSTEM B1 (FUEL SYSTEM STATUS)	At specified idle speed after warming up	CLOSED (closed loop)
*	CALC LOAD (CALCULATED LOAD VALUE)	At specified idle speed with no load after warming up	3 – 9%
		At 2500 r/min with no load after warming up	12 – 17%
*	COOLANT TEMP. (ENGINE COOLANT TEMP.)	At specified idle speed after warming up	80 – 100°C, 185 – 212°F
*	SHORT FT B1 (SHORT TERM FUEL TRIM)	At specified idle speed after warming up	– 20 – +20%
*	LONG FT B1 (LONG TERM FUEL TRIM)	At specified idle speed after warming up	– 20 – +20%
*	MAP (INTAKE MANIFOLD ABSO- LUTE PRESSURE)	At specified idle speed with no load after warming up	21 – 40 kPa, 160 – 300 mmHg
*	ENGINE SPEED	At idling with no load after warming up	Desired idle speed ±50 r/min
*	VEHICLE SPEED	At stop	0 km/h, 0 MPH
*	IGNITION ADVANCE (IGNI- TION TIMING ADVANCE FOR NO.1 CYLINDER)	At specified idle speed with no load after warming up	5 - 15° BTDC
*	INTAKE AIR TEMP.	At specified idle speed after warming up	Ambient temp. : +63°C (113°F) –9°C (–16°F)
*	MAF (MASS AIR FLOW RATE)	At specified idle speed with no load after warming up	1 – 4 gm/sec
		At 2500 r/min with no load after warming up	3 – 9 gm/sec
*	THROTTLE POS (ABSOLUTE THROTTLE POSITION)	Ignition switch	Throttle valve fully closed
		ON/engine stopped	Throttle valve fully open
			0 – 18%
			70 – 90%
*	O2S B1 S1 (HEATED OXYGEN SENSOR- 1)	At specified idle speed after warming up	0.05 – 0.95 V

- 6) Disconnect harness clamps from intake manifold and engine hook.
- 7) Disconnect accelerator cable from throttle body.
- 8) Disconnect following hoses:
 - Brake booster hose from intake manifold
 - Canister purge hose from EVAP canister purge valve
 - Coolant hoses from idle air control valve
 - PCV hose from PCV valve
 - Fuel feed hose and return hose from each pipe
 - A/T vacuum hose (if equipped)



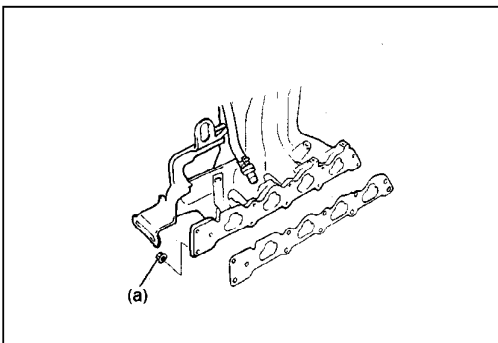
- 9) Remove intake manifold stiffeners.
- 10) Remove drive belt adjusting bolt.
- 11) Remove intake manifold with throttle body from cylinder head, and then its gasket.



INSPECTION

- Using a straight edge and thickness gauge, check surface contacting cylinder head for distortion. If distortion limit, given below, is exceeded, correct gasketed surface or replace intake manifold.

Limit of distortion: 0.05 mm (0.002 in.)



INSTALLATION

Reverse removal procedure for installation noting the followings.

- Use new intake manifold gasket.
- Tighten nuts to specified torque.

Tightening Torque

(a): 11 N-m (1.1 kg-m, 8.0 lb-ft)

- Adjust accelerator cable play, referring to SECTION 6E1.
- Check to ensure that all removed parts are back in place. Reinstall any necessary parts which have not been reinstalled.
- Refill cooling system, referring to SECTION 6B.
- Adjust water pump drive belt tension, referring to SECTION 6B (6H).
- Upon completion of installation, turn ignition switch ON but engine OFF and check for fuel leaks.
- Finally, start engine and check for engine coolant leaks.

DIAGNOSIS

DIAGNOSIS CHART

Refer to SECTION 6.

ON-VEHICLE SERVICE

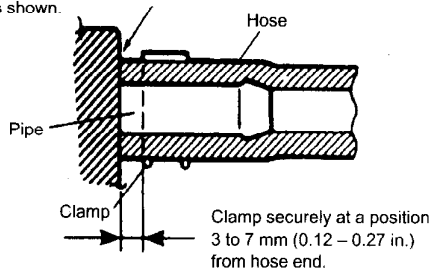
PRECAUTIONS

WARNING:

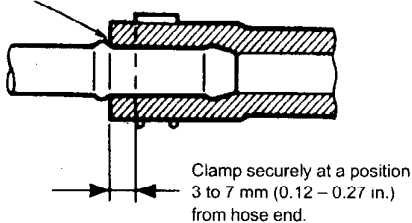
Before attempting service of any type on fuel system, the followings should be always observed in order to reduce the risk of fire and personal injury.

- Disconnect negative cable at battery.
- Do not smoke, and place no smoking signs near work area.
- Be sure to have CO₂ fire extinguisher handy.
- Be sure to perform work in a well-ventilated area and away from any open flames (such as gas hot heater).
- Wear safety glasses.
- To relieve fuel vapor pressure in fuel tank, remove fuel filler cap from fuel filler neck and then reinstall it.
- As fuel feed line is still under high fuel pressure even after engine was stopped, loosening or disconnecting fuel feed line directly may cause dangerous spout of fuel to occur where loosened or disconnected. Before loosening or disconnecting fuel feed line, make sure to relieve fuel pressure "FUEL PRESSURE RELIEF PROCEDURE" in SECTION 6.
- A small amount of fuel may be released after the fuel line is disconnected.
In order to reduce the chance of personal injury, cover the fitting to be disconnected with a shop cloth. Be sure to put that cloth in an approved container when disconnection is completed.
- Note that fuel hose connection varies with each type of pipe. Be sure to connect and clamp each hose correctly referring to the figure.

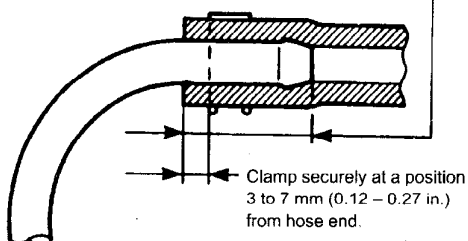
With short pipe, fit hose as far as it reaches pipe joint as shown.



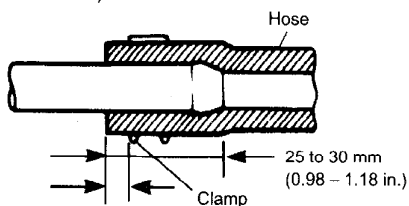
With following type pipe, fit hose as far as its peripheral projection as shown.



With bent pipe, fit hose as far its bent part as shown or till pipe is about 25 to 30 mm (0.98 - 1.18 in.) into the hose.

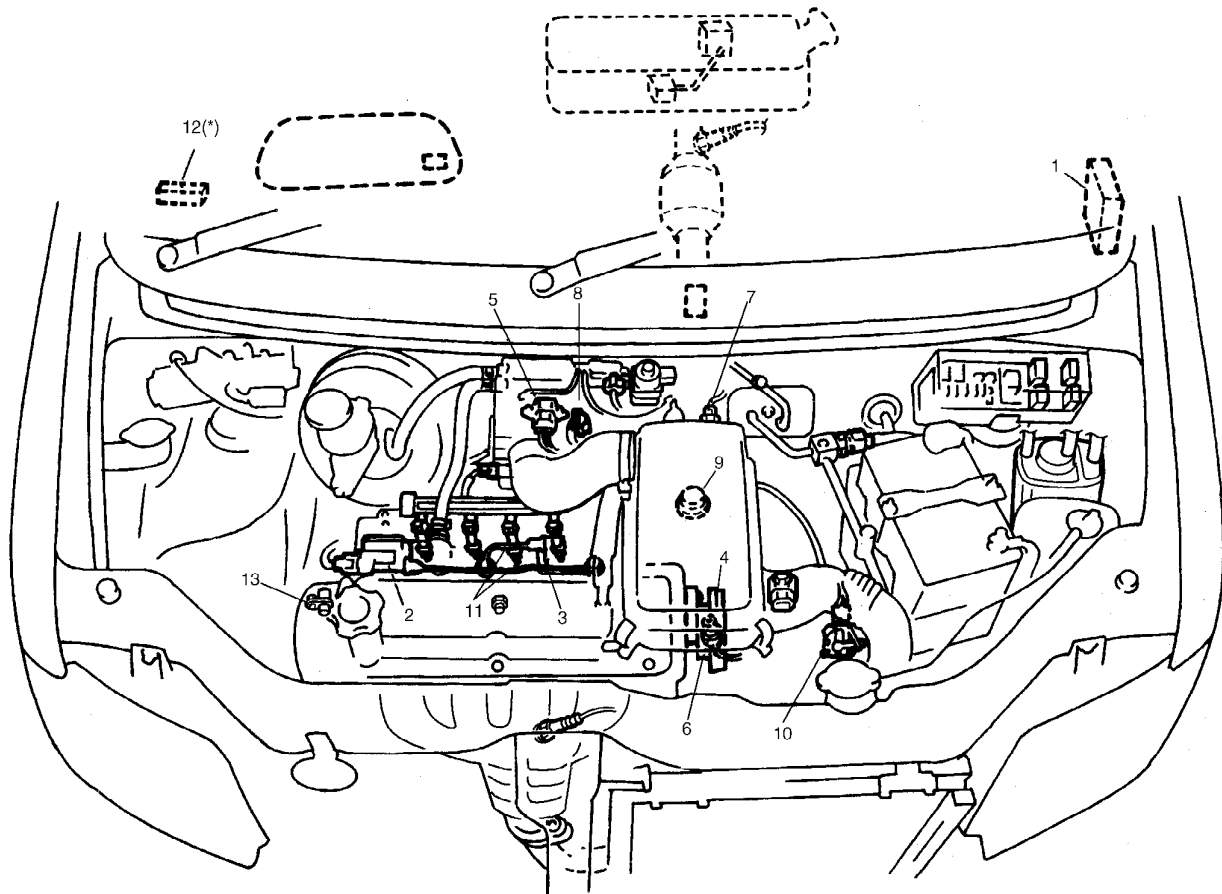


With straight pipe, fit hose till pipe is about 25 to 30 mm (0.98 - 1.18 in.) in the hose.



Clamp securely at a position 3 to 7 mm (0.12 - 0.27 in.) from hose end.

SYSTEM COMPONENTS



1. ECM	4. CMP sensor	9. VSS
2. Ignition coil assembly for No.1 and No.4 spark plugs	5. MAP sensor	10. Transmission range switch (AT)
3. Ignition coil assembly for No.2 and No.3 spark plugs	6. ECT sensor	11. High-tension cords
	7. IAT sensor	12. DLC
	8. TP sensor	13. CKP sensor

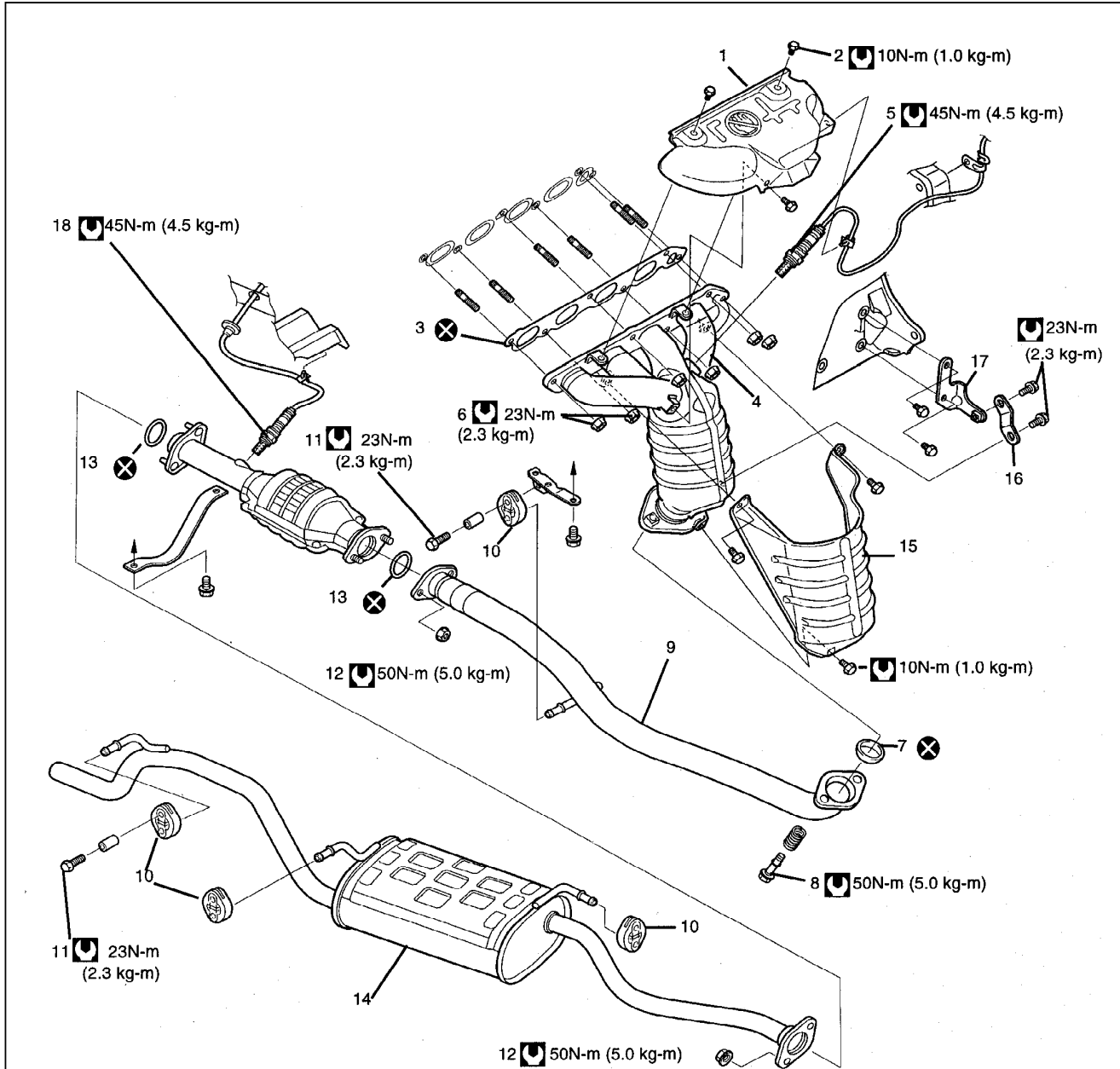
NOTE:

Figure shows right-hand steering vehicle. For left-hand steering vehicle, parts with (*) are installed at symmetrical position.

GENERAL DESCRIPTION

The exhaust system consists of an exhaust manifold, exhaust pipes, a muffler and seals, gasket etc., and then the three-way catalytic converter (TWC).

The three-way catalytic converter is an emission control device added to the exhaust system to lower the levels of Hydrocarbon (HC), Carbon Monoxide (CO), and Oxides of Nitrogen (NOx) pollutants in the exhaust gas.



1. Exhaust manifold cover	11. Mounting bolt
2. Exhaust manifold cover bolt	12. Exhaust pipe nut
3. Gasket	13. Gasket
4. Exhaust manifold	14. Muffler
5. Oxygen Sensor No. 1	15. Catalyst cover
6. Exhaust Manifold mounting nut	16. Exhaust manifold bracket No. 2
7. Seal ring	17. Exhaust manifold bracket No. 1
8. Exhaust pipe bolt	18. Oxygen sensor No.2
9. Exhaust pipe	☑ : Tightening torque
10. Rubber mounting	⊗ : Do not reuse

General Description

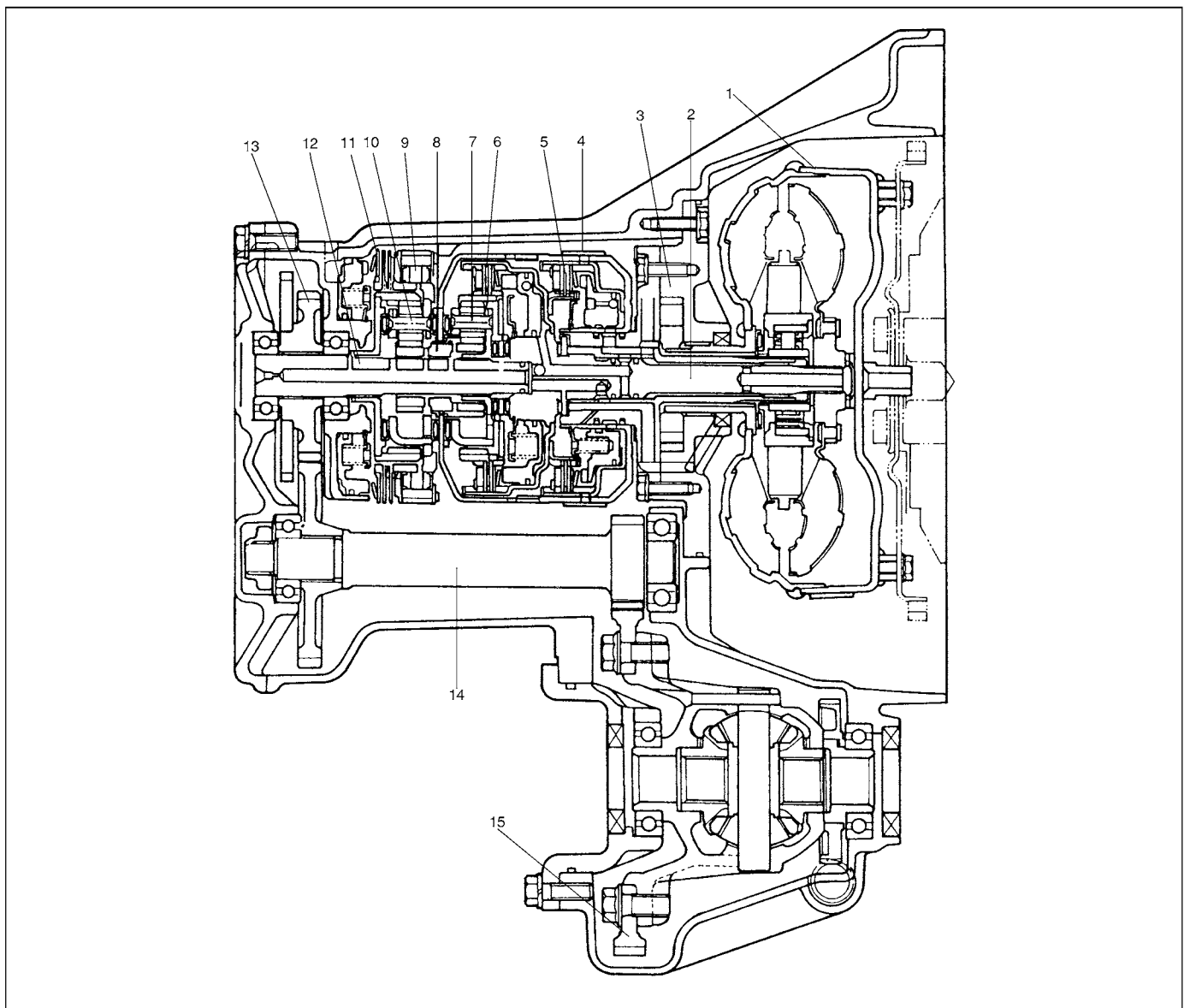
The automatic transmission consists of the hydraulic torque converter, electronically controlled 3-speed automatic transmission, counter shaft and differential.

The transmission consists of 2 planetary gears, 2 disk clutches, 1 band brake, 1 disk brake and 1 one-way clutch. Its operation is controlled by selecting a position from 6 positions (P, R, N, D, 2 and L ranges) manually by means of the select lever installed on the compartment floor.

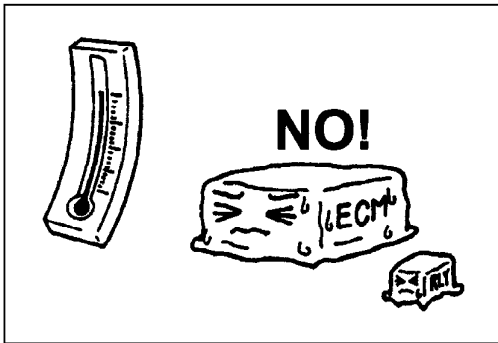
In the D or 2 range, the gear ratio is changed for the 1st, 2nd or 3rd speed (D range only) automatically by power train control module (PCM) (electronic control).

For the automatic transmission fluid, DEXRON®-III, DEXRON®-IIE or its equivalent must be used. Lubrication in the automatic transmission is provided by the oil pump which is operated by the engine revolution. Therefore, the engine should not be stopped even during coasting to obtain proper lubrication.

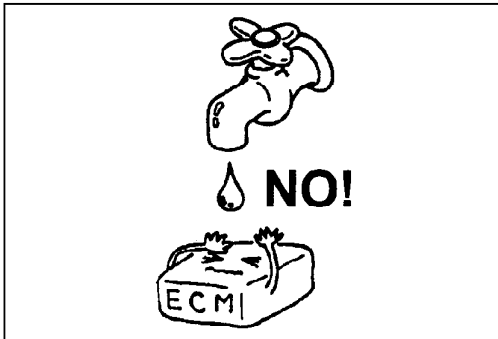
When it becomes necessary to be towed, front wheels must be raised so as not to roll them.



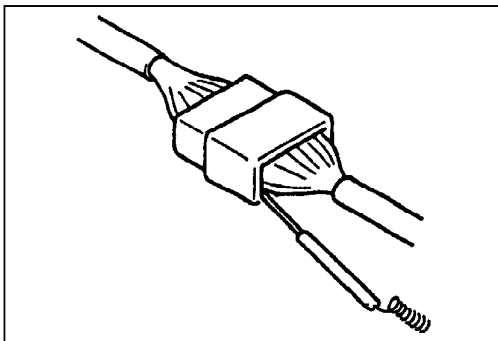
1. Torque converter	6. Forward clutch	11. 1st reverse brake
2. Input shaft	7. Front planetary gear	12. Output shaft
3. Oil pump	8. Planetary sun gear	13. Reduction drive gear
4. Second brake band	9. One-way clutch	14. Counter shaft
5. Direct clutch	10. Rear planetary gear	15. Differential



- When performing a work that produces a heat exceeding 80°C in the vicinity of the electrical parts, remove the heat sensitive electrical part(s) beforehand.



- Use care not to expose connectors and electrical parts to water which will be a cause of a trouble.

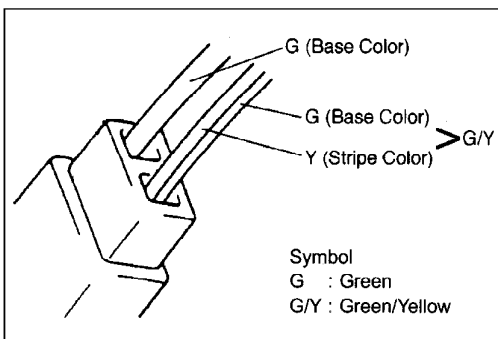


- When using a tester for checking continuity or measuring voltage, be sure to insert the tester probe from the wire harness side if possible.

WIRE COLOR SYMBOLS

The wire color is abbreviated to the first (or first two) alphabet(s) of each color.

Symbol	Wire Color	Symbol	Wire Color
B	Black	Or	Orange
Bl	Blue	R	Red
Br	Brown	W	White
G	Green	Y	Yellow
Gr	Gray	P	Pink
Lbl	Light blue	V	Violet
Lg	Light green		



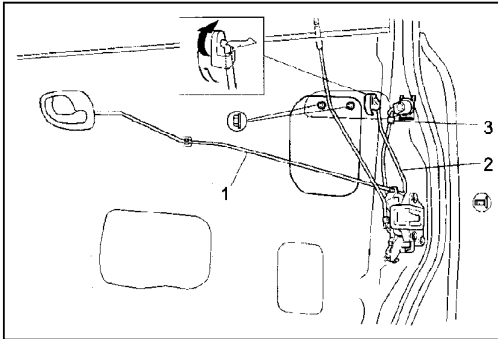
There are two kinds of colored wire used in this vehicle. One is single-colored wire and the other is dual-colored (striped) wire. The single-colored wire uses only one color symbol (i.e. "G"). The dual-colored wire uses two color symbols (i.e. "G/Y"). The first symbol represents the base color of the wire ("G" in the figure) and the second symbol represents the color of the stripe ("Y" in the figure).

SECURITY AND LOCKS

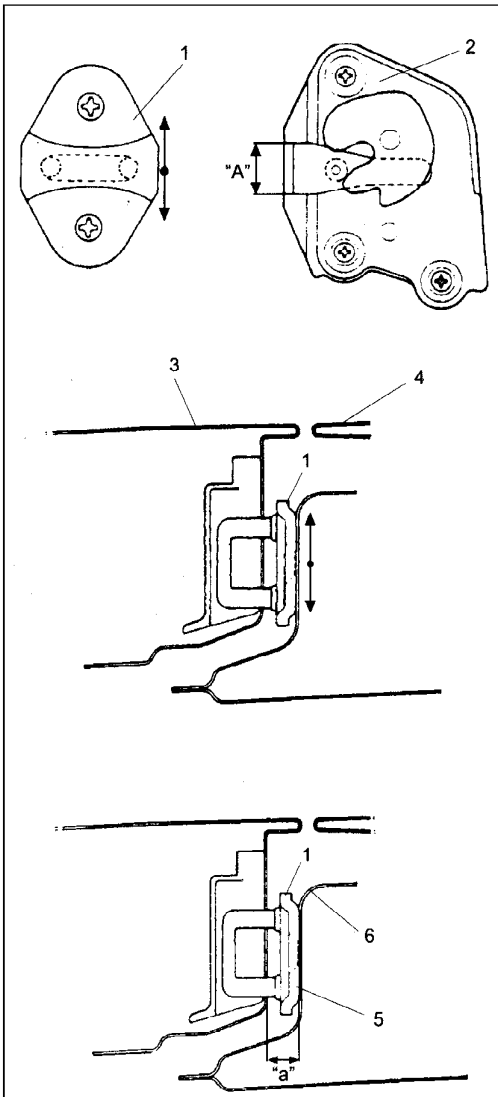
FRONT DOOR LOCK ASSEMBLY

REMOVAL

- 1) Raise window all the way up.
- 2) Remove door trim and door sealing cover, refer to step 1) to 7) of "FRONT DOOR GLASS REMOVAL" in this section.
- 3) Disconnect door lock motor coupler and remove door sash (if equipped with power door lock)



- 4) Remove door opening control rod (1).
- 5) Disconnect push lever (2).
- 6) Disconnect key cylinder rod (3).
- 7) Remove lock assembly.



INSTALLATION

To install front door lock, reverse removal procedure, noting the followings points.

- Door latch striker.
Move door latch striker (1) up or down so its center aligns with the center of groove "A" on the door, as shown.

NOTE:

Striker (1) should be moved vertically and placed level. Do not adjust door lock (2).

- Move door latch striker (1) sideways to adjust door surface (3) flush with body surface (4), as shown.
In order to correctly obtain door latch (1) position in the fore-and-aft direction, increase or decrease number of shims (5) inserted between body (6) and striker (1) to adjust it.

Dimension "a": 12.0 – 14.0 mm (0.47 – 0.55 in.)