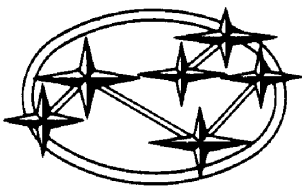


SUBARU  
1988

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## Pre-road Test Inspection

### 1. HOOD OPERATION

#### CHECK POINTS

1. Operation of hood release and lock
2. Condition of lock
3. Fitting of hood

1. Check the operation of hood release and lock.

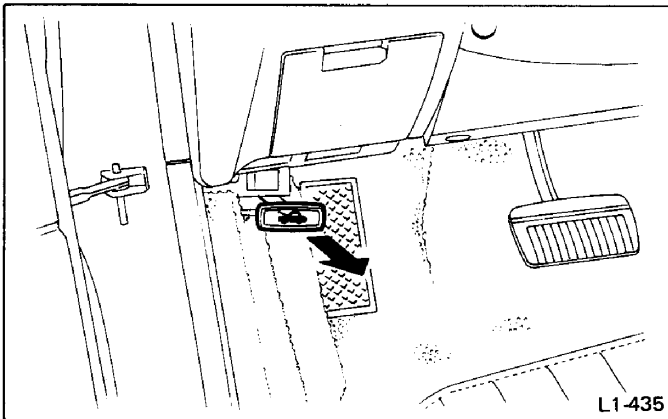


Fig. 1

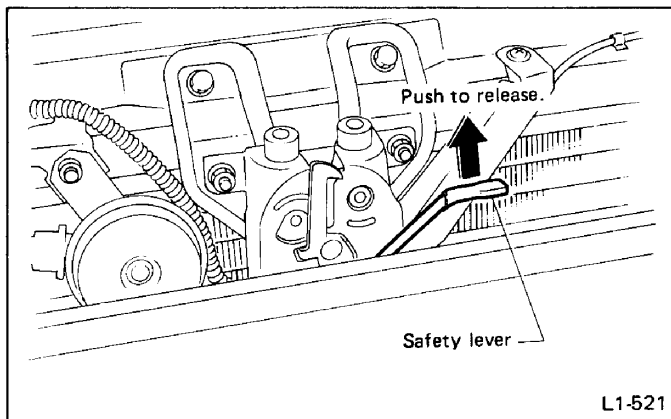


Fig. 2

2. Check the condition of lock and adjust if necessary.

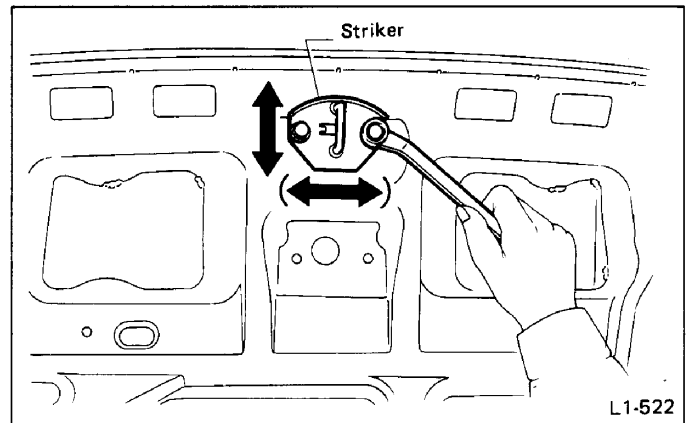


Fig. 3

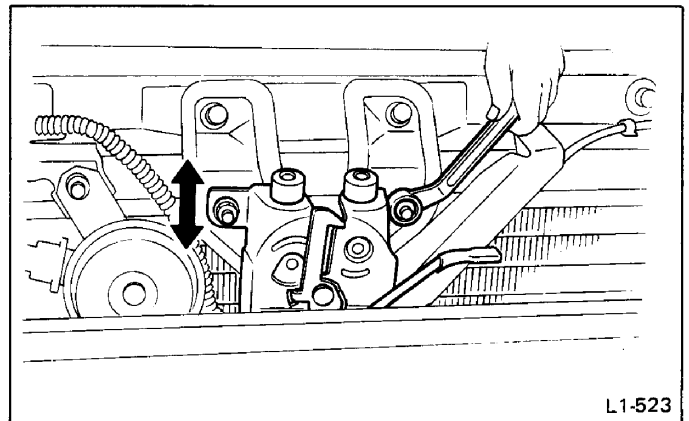


Fig. 4

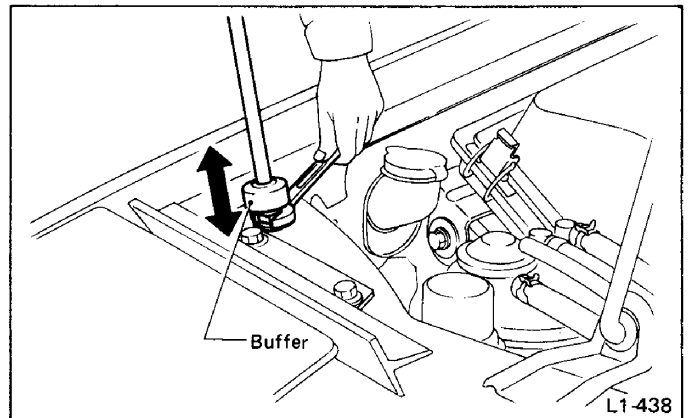


Fig. 5

3. Check the hood fitting and adjust if necessary.

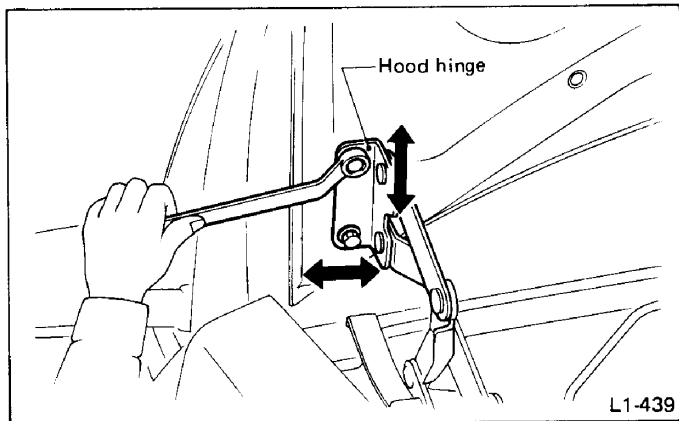


Fig. 6

6. Check the auto-door locking operation.

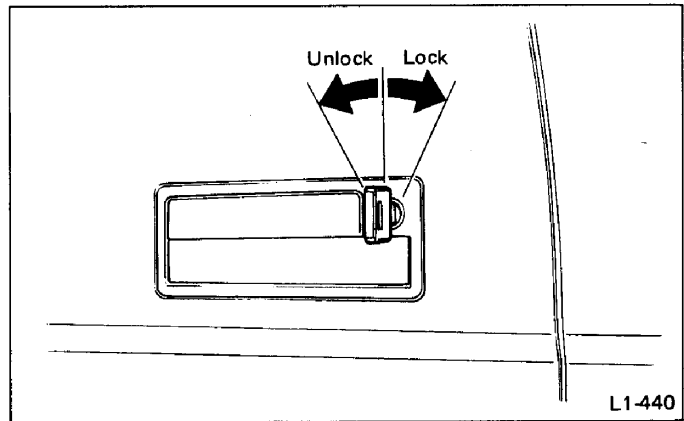


Fig. 8

## 2. DOOR OPERATION, DOOR LOCK AND REGULATOR

### CHECK POINTS

1. Door "open-close" operation
2. Operation of door release and lock
3. Loose or damaged parts
4. Regulator handle's operation
5. Position of door window glass
6. Auto-door locking operation

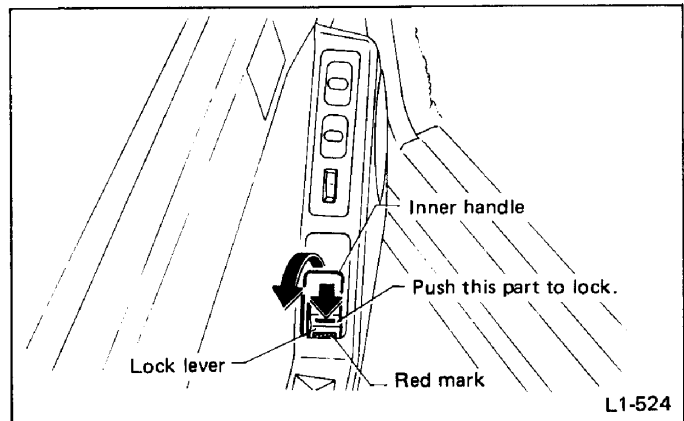


Fig. 9

2. Check the operation of door release and lock.

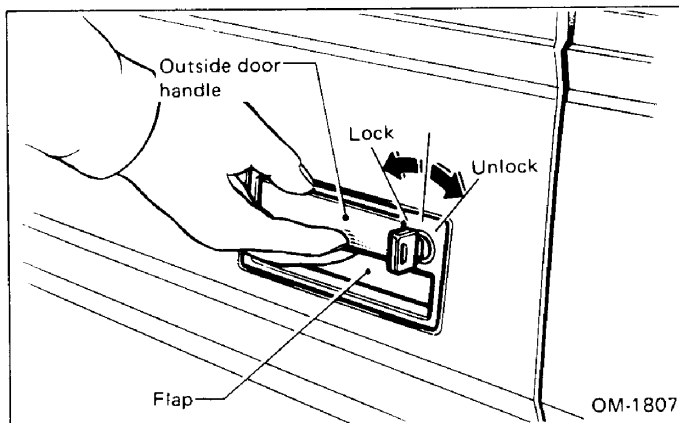


Fig. 7

- a. Do not use excessive force when pulling the outer handle.
- b. If the lock cylinder does not function properly, it must be replaced with a new one. However, if the door lock's operation is just unsmooth, it may be corrected by applying grease or oil to the sliding surfaces.

## 3. TRUNK LID, REAR GATE AND FUEL LID OPERATION

### CHECK POINTS

1. Trunk lid, rear gate and fuel lid "open-close" operation
2. Operation of trunk lid, rear gate and fuel lid release and lock
3. Fitting of trunk lid, rear gate and fuel lid

## 2. Check the operation of release and lock.

- Opener

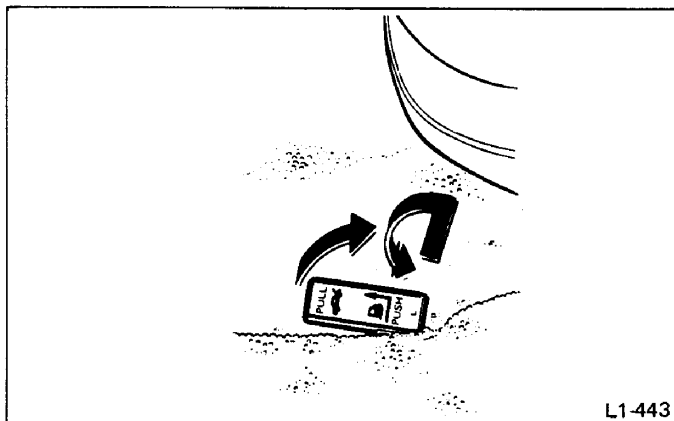


Fig. 10

- Trunk lid

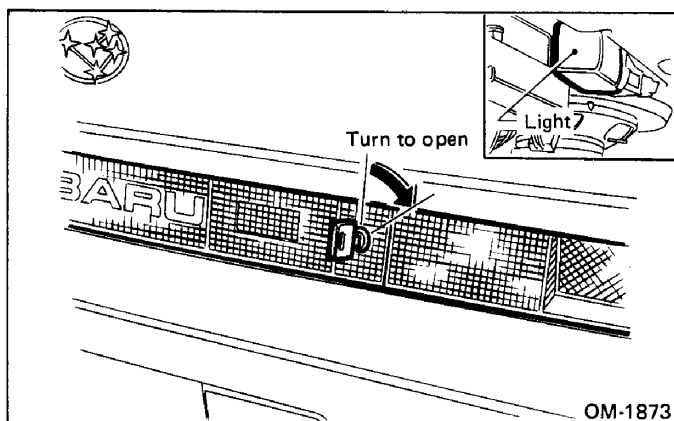


Fig. 11

- Models equipped with a trunk lid opener have an opener cancel lever. With the lever in the "ON" position, make sure that the opener lock cannot be released even if the opener lever is pulled from the inside of the passenger compartment. Also make sure that it can only be released from the outside with the key.

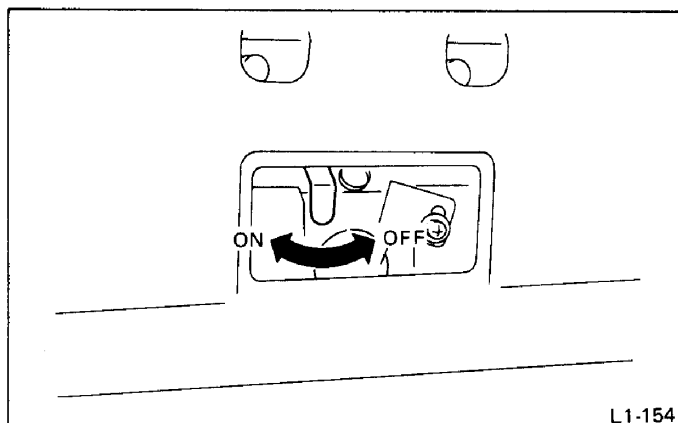


Fig. 12

## 4. BRAKE FLUID LEVEL AND BRAKE PIPING INSTALLATION

## CHECK POINTS

1. Fluid level in brake reserve tank
2. Wiring of fluid leveller and its operation
3. Brake booster, master cylinder, hill holder and pressure control valve for proper installation; brake pipe, brake hose and connectors for proper fitting
4. Leakage in any of the above

1. Inspect the fluid level and add if necessary.

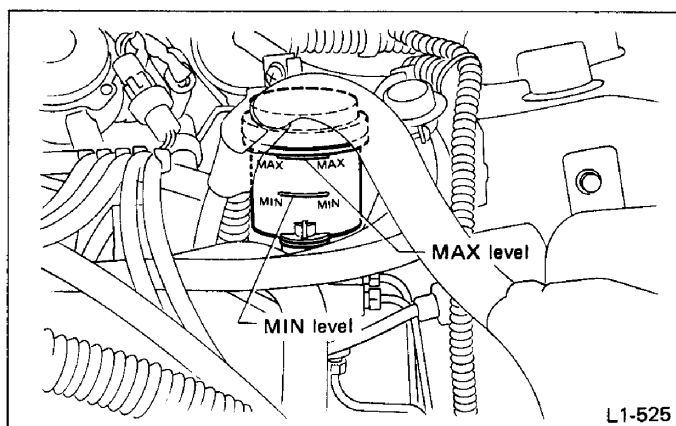


Fig. 13

- The fluid level must be kept at "MAX" level.

- Recommended brake fluid  
FMVSS No. 116, fresh DOT3 or 4 brake fluid

- a. Do not mix different brands of brake fluid.
- b. When adding brake fluid, be careful not to allow any dirt, water, or oil around the fluid tank to enter it.
- c. Never use engine oil, gear oil, or any mineral oil.
- d. Use extreme care not to allow any water to get into the fluid; water in the brake fluid will lower the fluid's boiling point and cause vapor-lock.
- e. Use special care not to spill any brake fluid on the vehicle's painted surfaces, because it will quickly erode them. In case of an accident, wipe it off as quickly and as cleanly as possible.
- f. If too much brake fluid is missing, check the brake line for possible leakage.
- g. After adding brake fluid, any excess must be stored in a tightly sealed container.

2. Check the wiring of fluid leveller and its operation.

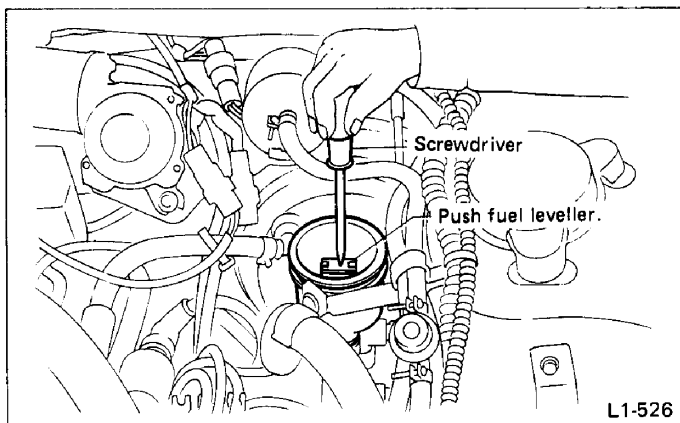


Fig. 14

When checking the operation of leveller, use clean screwdriver or the like and be careful not to allow dirt or dust to get into the tank.

## 5. BATTERY FLUID LEVEL AND BATTERY INSTALLATION

### CHECK POINTS

1. Battery indicator sign
2. Specific gravity
3. Battery terminals
4. Battery installation and wiring

1. Inspect indicator on battery.

Blue . . . . OK

White . . . Check electrolyte level.

- 1) If the level is anywhere between the upper and lower lines, recharge battery.
- 2) If the level is below the lower line, replace battery.

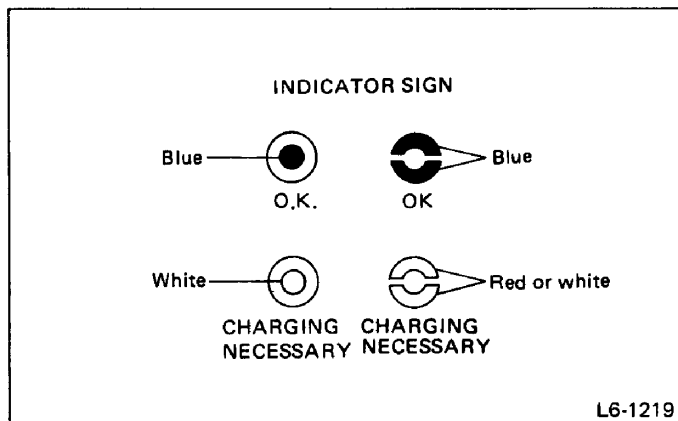


Fig. 15

2. Check the specific gravity and recharge if necessary.

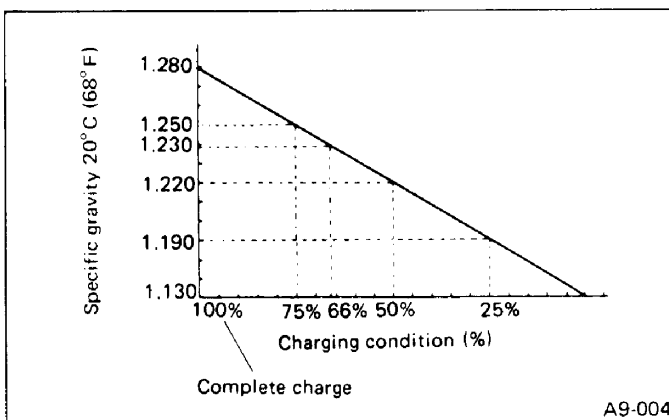


Fig. 16

- a. Electrolyte is toxic; be careful handling the fluid.
- b. Avoid contact with skin, eyes or clothing. Especially contact with eyes, flush with water for 15 minutes and get prompt medical attention.
- c. Batteries produce explosive gasses. Keep sparks, flame, cigarettes away.
- d. After adding distilled water, run the engine and recharge the battery to mix the additional water with the fluid. After recharging, measure the fluid's specific gravity.
- e. Be careful not to spill any battery fluid onto the vehicle.
- f. Ventilate when recharging or using in enclosed space.
- g. Prior to recharging, any corroded terminals should be cleaned with a brush and common baking soda solution.
- h. When recharging the battery without removing it from the vehicle, be sure to disconnect the cable from its negative terminal.
- i. The battery should not be recharged with 10 A or more.

## 6. COOLANT LEVEL AND COOLING FAN INSTALLATION

### CHECK POINTS

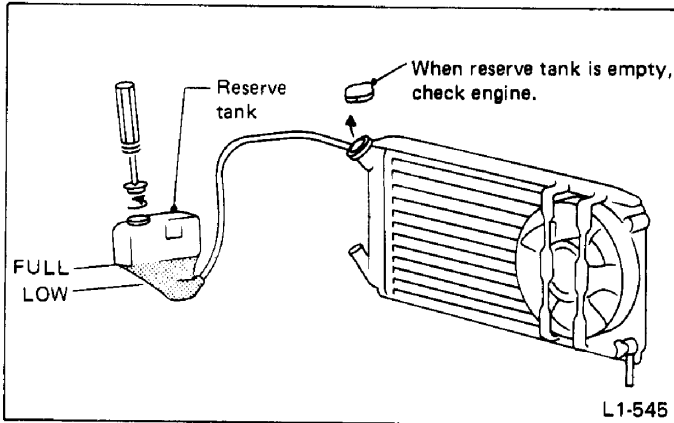
1. Coolant level
2. Cooling fan motor and wiring
3. Water leakage and hose damage

1. Inspect coolant level and add if necessary.
- Always inspect and add at reserve tank when engine is cold.

Reserve tank is equipped with dark green cap which can be removed with screwdriver.

- The level must be kept at "FULL" level.

- a. Use only genuine SUBARU Coolant (P/N000016218).
- b. Avoid using only water any coolant or other than this designated type to prevent corrosion.
- c. SUBARU's engine is aluminum alloy, and so special care is necessary.
- d. If reserve tank is empty, check coolant level in engine. Add coolant up to filler neck of engine, if necessary.
- e. The radiator is of the pressurized type. Never attempt to open the radiator cap when the coolant's temperature is high; otherwise boiling water will spurt out. Be sure to wait until the engine cools down before opening the radiator cap.



3. Inspect for water leakage and hose damage.

When retightening the hose clamps, be careful not to over-tighten them, as doing so could damage the hose.

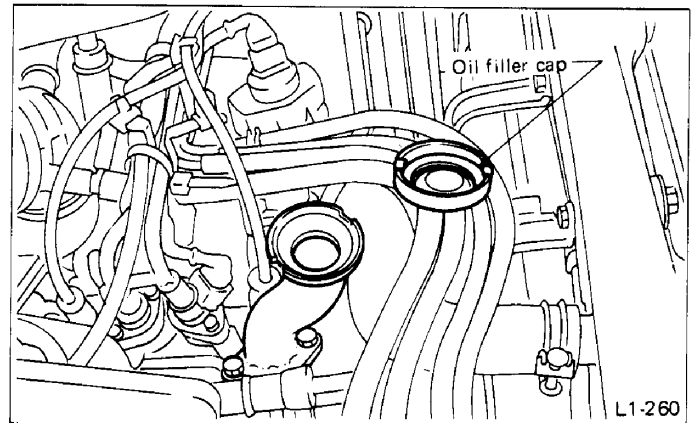
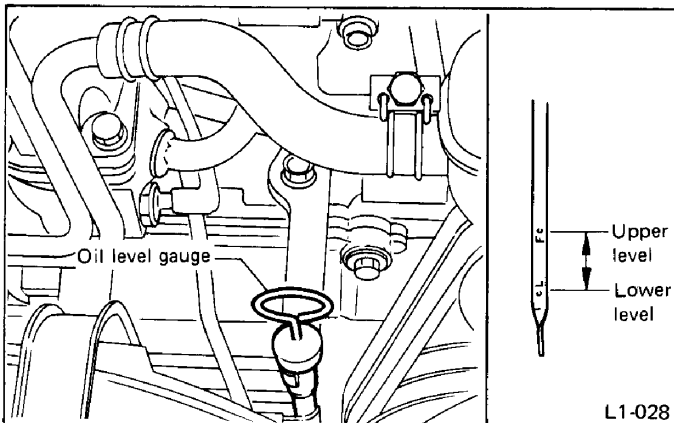
## 7. ENGINE OIL LEVEL

### CHECK POINTS

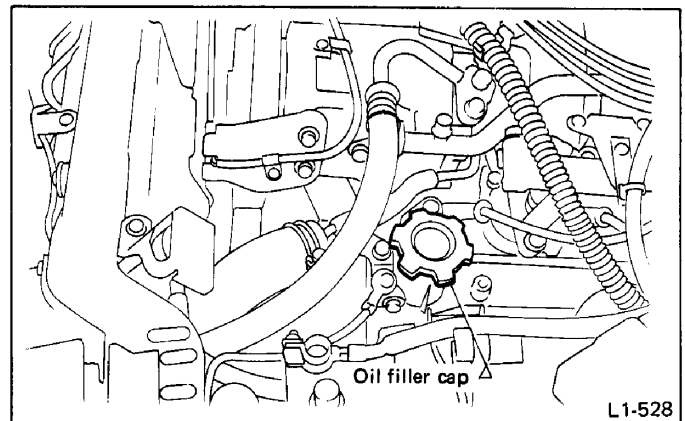
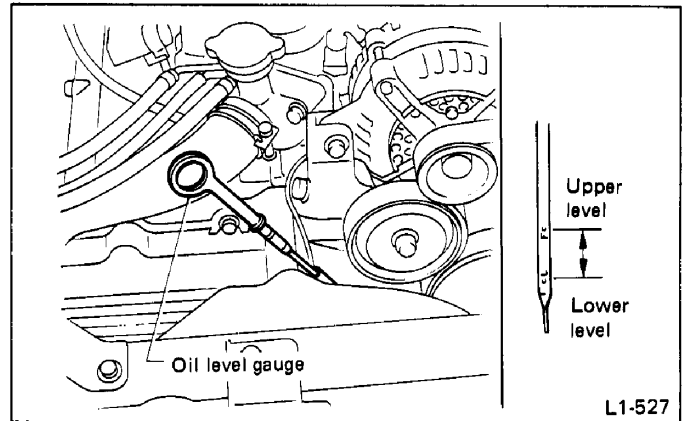
#### 1. Engine oil level

1. Inspect the engine oil level and add oil if necessary.

##### (1) Except XT6



##### (2) XT6



- The level should be within the specified range marked on the gauge.

Shut the engine off if it is running, and wait at least five minutes before checking the oil level.

- Recommended oil

ITEM	API Classification	SAE viscosity No. and Applicable Temperature					
		(°F)	-30	0	30	60	90
		(°C)	-34	-18	0	16	32
● Engine oil	SE	10W-30, 10W-40					
	SE	5W-30					

L1-445

Fig. 22

- SAE 5W-30 is not recommended for sustained high speed driving.
- If vehicle is used in desert areas or areas with very high temperatures or for other heavy dry application, the following viscosity oils may be used  
"30, 40, 10W-50, 20W-40, 20W-50"
- When replenishing oil, it does not matter if the oil to be added is a different brand from that in the engine, however, use oil having the API classification and SAE viscosity No. designated by SUBARU.

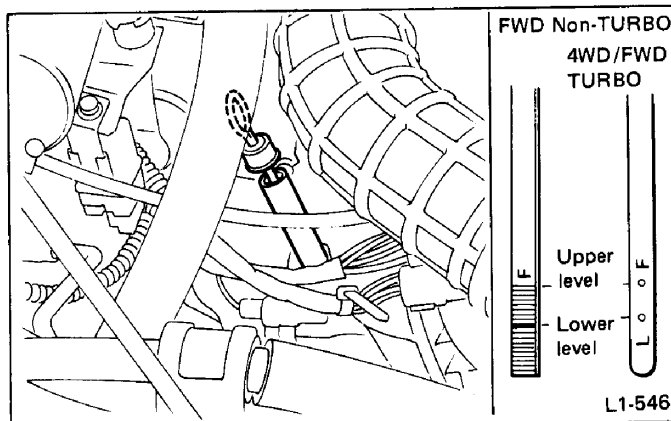
- Check the transmission gear oil level (MT) and add oil if necessary.

- The level should be within the specified range marked on the gauge.

## 8. TRANSMISSION AND DIFFERENTIAL GEAR OIL LEVEL

### CHECK POINTS

- Level of transmission gear oil for manual transmission
- Level of differential gear oil for automatic transmission
- Level of rear differential gear oil for 4WD model.



L1-546

Fig. 23



2. Check the differential gear oil level (AT) and add oil if necessary.
- The level should be within the specified range marked on the gauge.

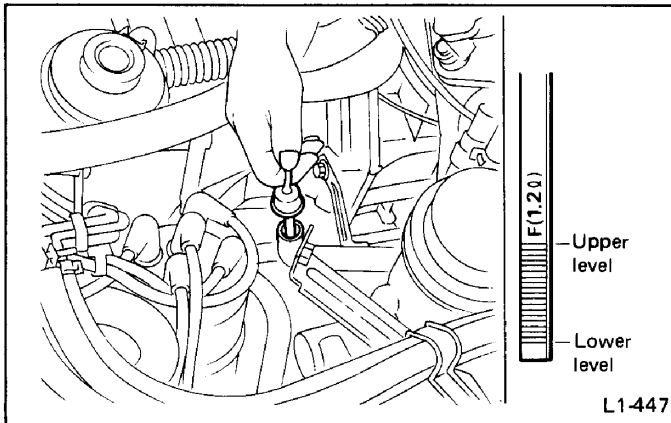


Fig. 24

- Recommended oil

ITEM	API Classification	SAE Viscosity No. and Applicable Temperature				
		(°F)	-30	0	30	60 90
<ul style="list-style-type: none"> <li>• Transmission and differential gear oil</li> <li>• 4WD rear differential gear oil</li> </ul>	GL-5	(°C)	-34	-18	0	16 32

L1-090

Fig. 26

- a. Each manufacturer uses different base oils and additives. Thus, do not mix brands.
- b. \*For differential gear oil (AT).

## 10. AIR CLEANER

### CHECK POINTS

1. Contamination of air cleaner element
2. Related parts

3. Check the rear differential gear oil level (4WD), and add oil if necessary.

- 1) Place the vehicle on level ground and check with the engine stopped.
- 2) Remove the filler plug of the differential.
- 3) Oil level should be kept at the bottom of the filler hole.
- 4) If the oil level is below the bottom edge of the hole, add oil up to the bottom edge.
- 5) After adding oil, securely tighten filler plug with aluminum gasket in place.

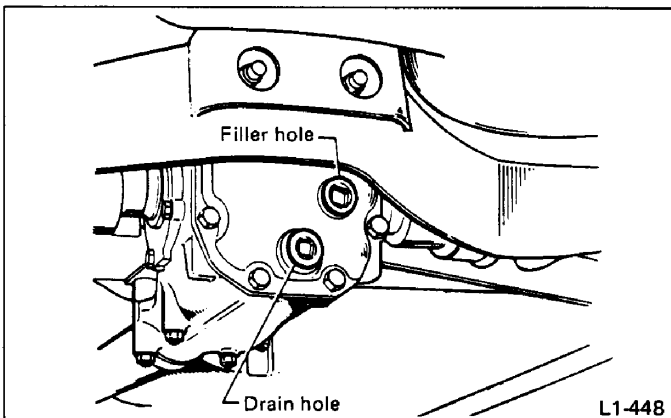


Fig. 25

1. Check the air cleaner element for contamination or the presence of foreign matter.

MPFI

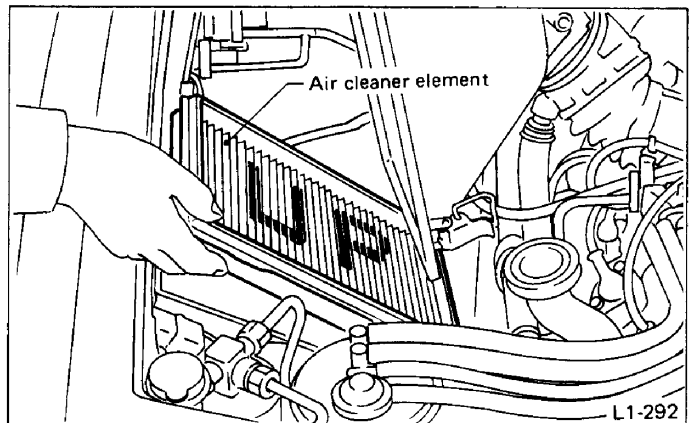


Fig. 27

- a. The air cleaner element is a viscous type, which should not be washed or cleaned.
- b. If the air cleaner element is broken or damaged, replace it with a new one.

## 11. JACK INSTALLATION

### CHECK POINTS

#### 1. Installed condition of jack

1. Check the installed condition of jack.

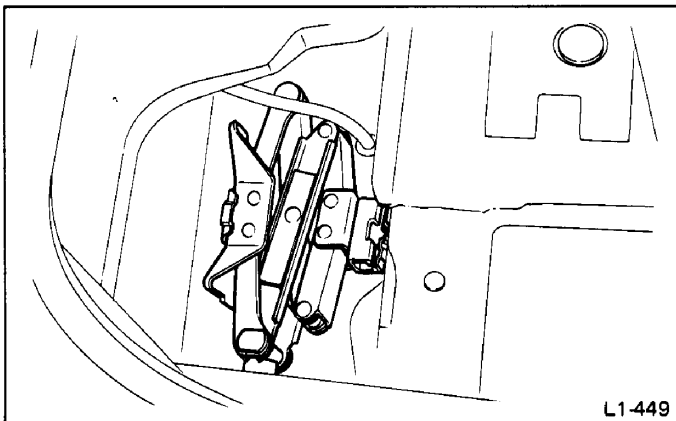


Fig. 28

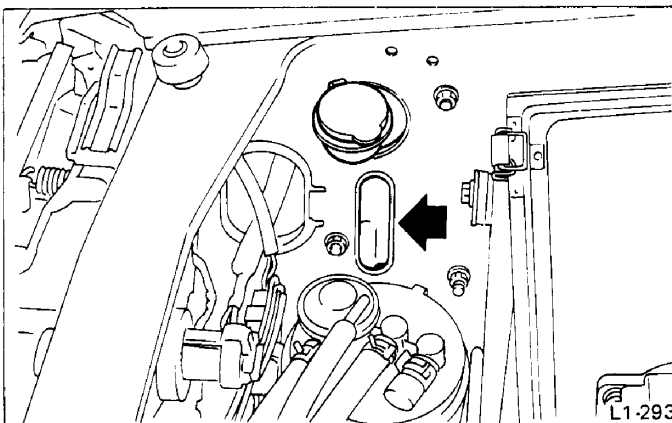


Fig. 29

2. Inspect the direction and quantity of windshield washer fluid sprayed.

- 1) If the quantity of washer fluid ejected is insufficient: Check the level of fluid in the reservoir, the nozzle for clogs and the hose for twists, or other deformities. If these are all normal, suspect motor failure.
- 2) If the position at which washer fluid is ejected is wrong: Using an eyelet or similar tool, adjust the direction of the nozzle, be careful not to damage the nozzle hole.
3. Check the operation of windshield wiper and washer.

## 12. WINDSHIELD WASHER AND WINDSHIELD WIPERS

### CHECK POINTS

1. Installation of windshield washer tank
2. Checking of fluid level
3. Direction and quantity of windshield washer fluid sprayed
4. Operation of windshield wiper and washer

1. Check the fluid level.

- If the level is not to the filler port level, add washer fluid to the filler port level.

In areas where water freezes in winter, use SUBARU windshield washer fluid (003406401) or an equivalent.

The relationship between fluid to water ratio and freezing point is as follows:

Fluid to water ratio (%)	Freezing point °C [°F]
30	-12 [10]
50	-20 [-4]
100	-45 [-49]

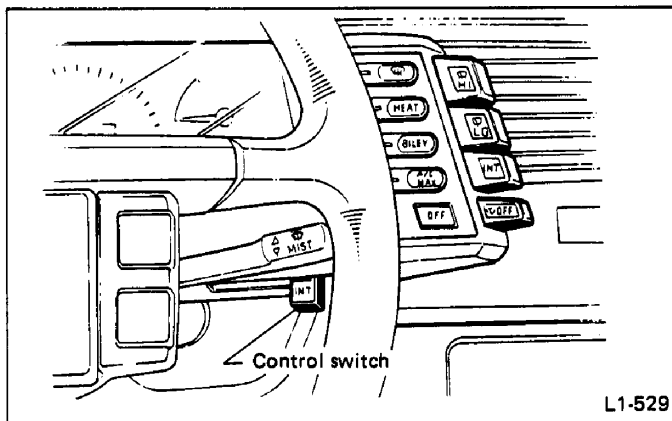


Fig. 30

- a. Before checking the windshield wiper, clean the windshield glass.
- b. Do not operate the windshield wiper when the reservoir is empty.
- c. Before operating the windshield wipers, be sure to eject windshield washer fluid onto the windshield. If the windshield is dry, the wipers' operating speed and angle of operation will be different from when it is wet.
- d. Do not operate the windshield washer continuously for more than 10 seconds at a time.

### 13. WHEEL NUTS FOR LOOSENESS AND TIRE INFLATION PRESSURE

#### CHECK POINTS

1. Wheel nut tightening torque
2. Tire inflation pressure and tire specification
3. Damage to tire and rim

1. Check the wheel nut tightening torque.

**Tightening torque:**

**78 – 98 N·m (8.0 – 10.0 kg-m, 58 – 72 ft-lb)**

**When checking the wheel nuts, be sure to use a torque wrench, and tighten the nuts to the specified torque.**

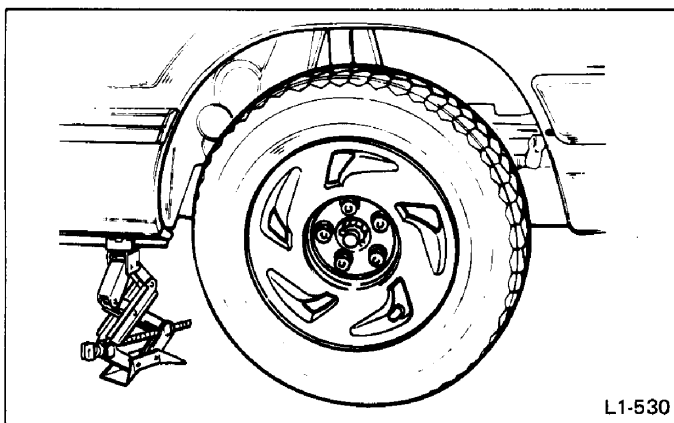


Fig. 31

2. Adjust tire inflation pressure and check tire specification.

**After inspecting and adjusting the tire pressure, be sure to replace the valve cap.**

2. Check front seat operation.
  - Sliding

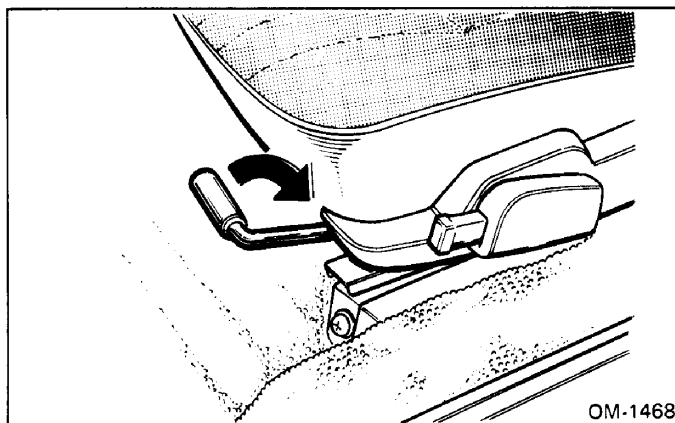


Fig. 32

- Reclining

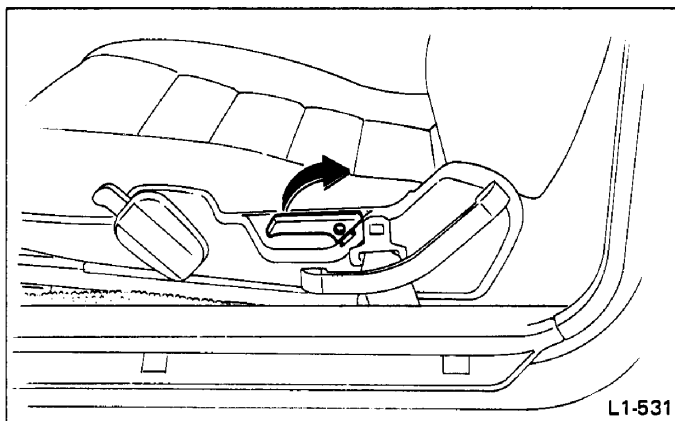


Fig. 33

### 14. SEAT ADJUSTER AND SEAT BELTS

#### CHECK POINTS

1. Front and rear seats, and their facing materials
2. Front seat operation
3. Rear seat folding operation
4. Seat belts and their fit

- Lumbar support

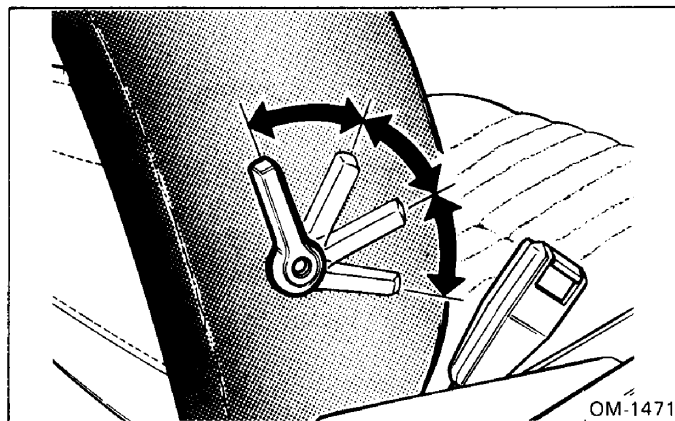


Fig. 34

- Lifter

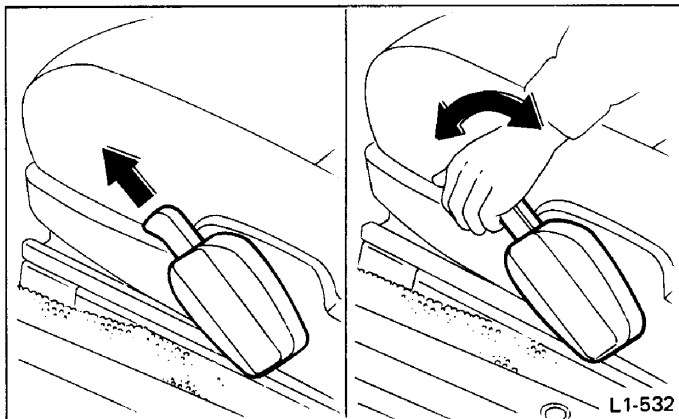


Fig. 35

- Getting in and out of the rear seat

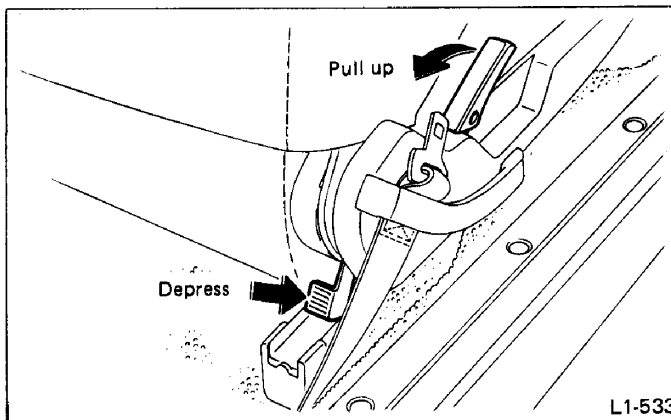


Fig. 38

- Head restraints  
Up-and-down

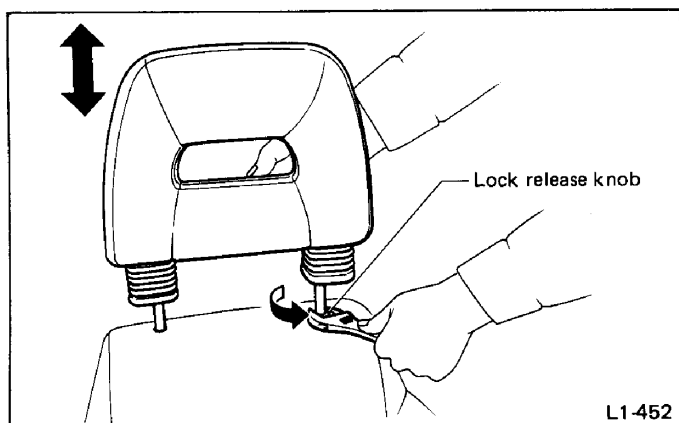


Fig. 36

- Fore-and-aft

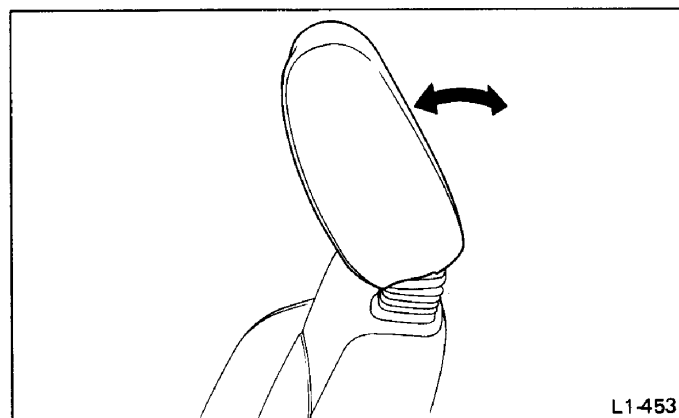


Fig. 37

## 3. Check rear seat folding operation.

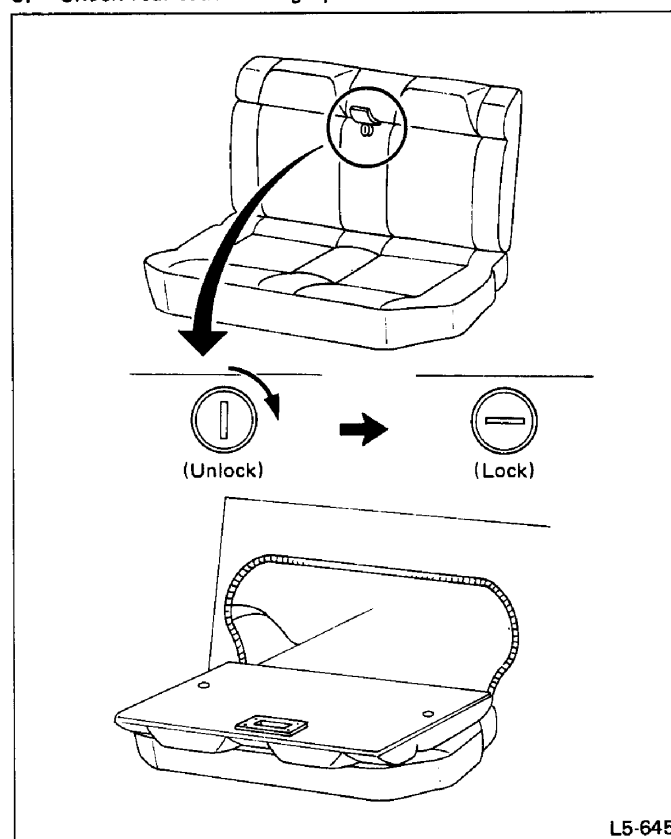


Fig. 39

## 4. Check seat belts and their fit.

The seat belt warning light on the instrument panel comes on for approximately six seconds with the ignition-starter switch "ON".

The warning chime sounds if the driver's lap belt is not fastened or the emergency release buckle of the automatic shoulder belt is released.

Make sure that the warning system works normally.

**Automatic Shoulder Belt**

- a. While inserting the shoulder belt into the emergency release buckle, open and close the corresponding door to check that the shoulder anchor moves smoothly without binding or play.
- b. Check that the tongue releases when the emergency release button is pressed, and that it latches properly with a click when inserted.

**15. FUSES****CHECK POINTS**

1. Fuse installation
2. Spare fuse

1. 2. Check fuse installation and spare fuse.

DON'T USE EXCEPT SPECIFIED FUSE					
LOAD				BATT	
20A	R.OEF	15A	CHARGE	15A	HEATER
15A	DR-LOCK	15A	BACK TURN	15A	HEATER
15A	PNEUMATIC SUS.	15A	IG-COIL FUEL EGI-IG	15A	STOP ROOM
15A	CRUISE CONT.	15A	FUEL GAUGE TEMP. GAUGE	15A	PARKING
		15A	RADIO	15A	HAZARD CLOCK HORN
15A	SPARE	15A	CIGAR MIRROR	15A	TAIL LICENSE
20A	SPARE	15A	RAD. FAN	15A	HEAD LH
	CATCHER	20A	WIPER	15A	HEAD RH

L1-241

Fig. 40

**16. LIGHTS AND SWITCHES****CHECK POINTS**

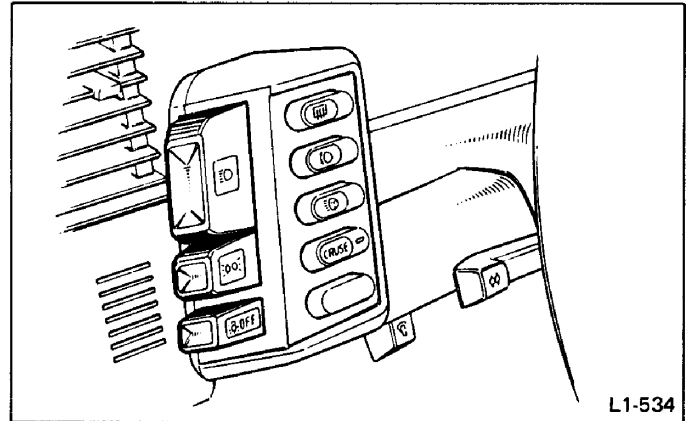
1. Visual inspection of lights (installation, damage, dirty lenses, water inside, etc.)
2. Operation of all lights and switches
3. Horn operation
4. Operation of heater and ventilator
5. Removing the clip for room light switch

2. Check the operation of all lights and switches.

**Light switch**

The light switch operates with the ignition switch turned "ON".

The headlights are raised or lowered and turned on or off using this switch.



L1-534

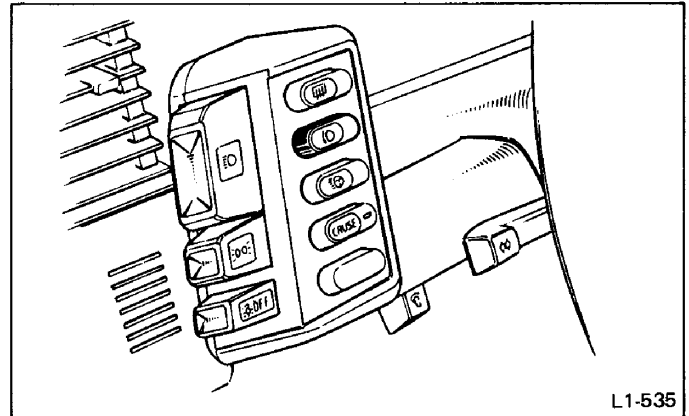
Fig. 41

**Retractable headlight switch**

This switch raises or lowers the headlights without the lights being turned on or off.

The switch when pressed, raises the headlights to the set position.



Pressing it again lowers the lights and stores them away.



L1-535

Fig. 42

### High/low beam switch

When the light switch "  " is turned ON, the headlights illuminate with high or low beam. Each time the lever is pulled until it clicks, high or low beam is selected alternately. When the headlights are on high beam, the indicator "  " illuminates.

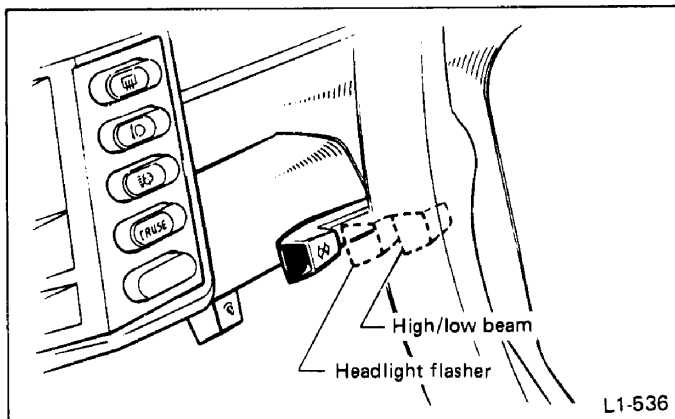


Fig. 43

### Turn signal switch

Move the lever up or down. Once the turn is completed, the turn signal lever automatically returns. After a slight turn the lever may not return and in this case, you should cancel it by hand.

For a lane change, move the lever part way, then hold it there. The lever will return to its original position when it is released.

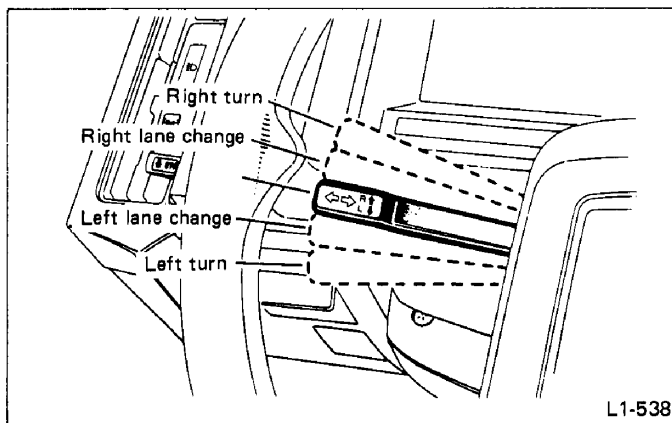


Fig. 45

### Headlight flasher switch

To flash the headlights.

1. Pull the lever lightly toward you and release it, and the lights are raised.

2. Pull the lever lightly again, and the high beam comes on.

The headlights lower automatically in about four seconds once the lever is released. If the lever is released after being kept pulled for four or more seconds, headlights immediately lower.

The lever will return automatically once it is released.

The headlight flasher works independently of the lights switch.

**Do not hold the lever for more than just a few seconds.**

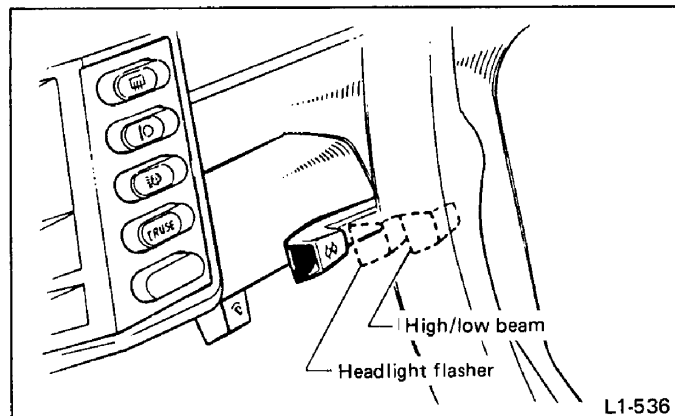




Fig. 44

### Illumination brightness control switch

When light switch "  " or "  " is ON, brightness of the instrument lights, for heater control, and lighting switch identification lights, wiper and washer switch, fan motor switch, etc., is adjusted by sliding the switch knob.

As the knob slides toward right side, brightness reduces.

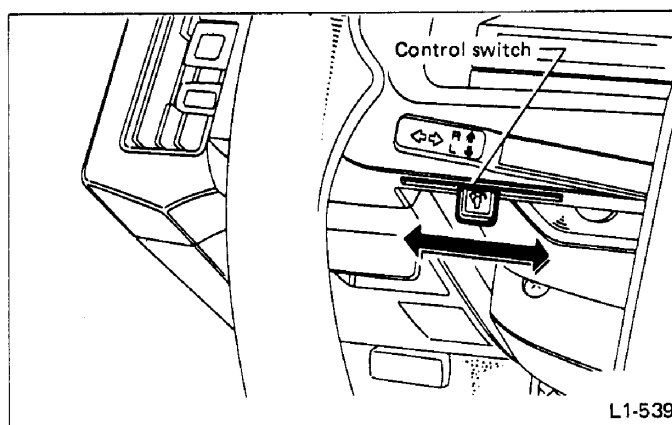


Fig. 46

**Hazard warning light switch**

When the switch knob is pushed, all turn-signal lights flash as a hazard warning regardless of the ignition switch position for use in an emergency stop with the ignition either off or on. To stop flashing, push the opposite knob.

Turn signals do not function when the hazard warning switch is on.

Avoid leaving the lights on for long time as it discharges the battery.

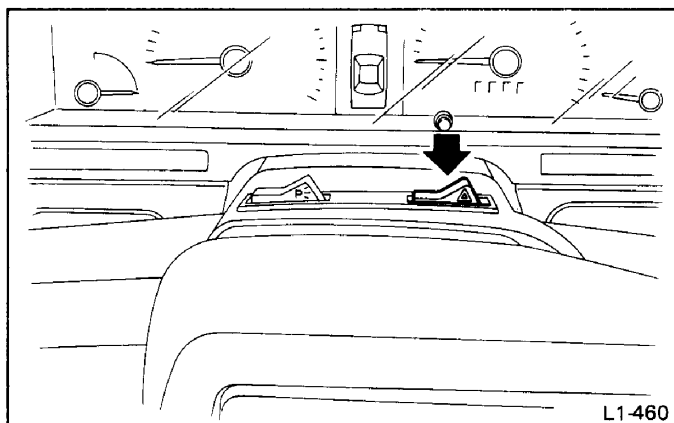


Fig. 47

**Parking light switch**

When the switch knob is pushed, the parking lights all go on regardless of the ignition switch position.

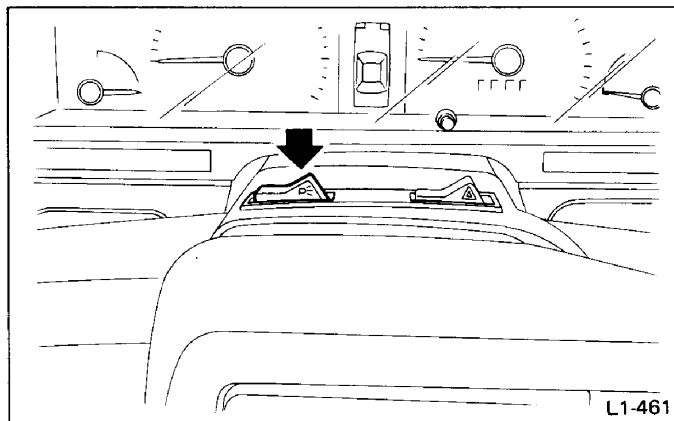


Fig. 48

**18. INSTALLATION OF STEERING COMPONENTS****CHECK POINTS**

1. Installation of universal joints
2. Steering gear box for looseness, play, or backlash, and boots for damage
3. Tie-rod and tie-rod end for proper installation, or damage

1. Check the universal joint for looseness.

Tightening torque:

21 – 26 N·m (2.1 – 2.7 kg·m, 15 – 20 ft·lb)

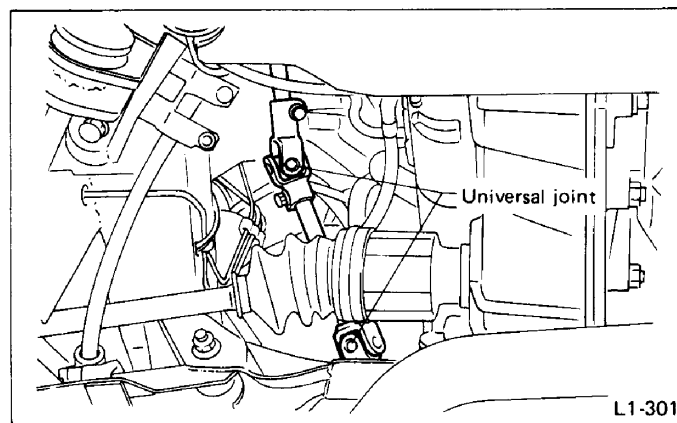


Fig. 49

When checking, turn IG switch to "ACC" position.

2. Check the gear box mounting bolt for looseness.

Tightening torque:

47 – 71 N·m (4.8 – 7.2 kg·m, 35 – 52 ft·lb)

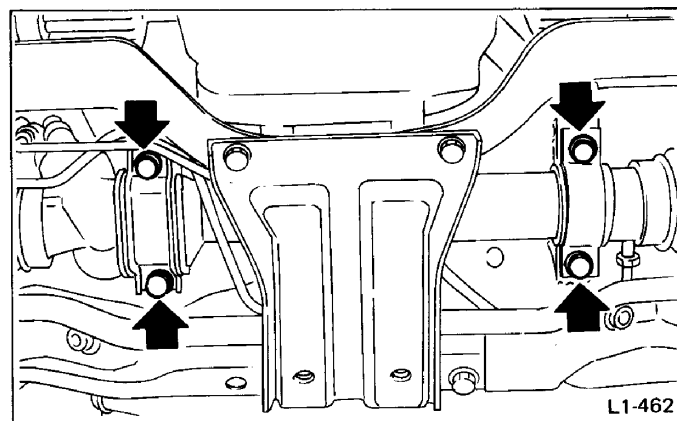


Fig. 50

Carefully check the root portion of the boots, and the condition of the clip.

3. Check the tie-rod end lock nut for looseness.

Tightening torque:

78 – 88 N·m (8.0 – 9.0 kg-m, 58 – 65 ft-lb)

## 19. EXHAUST PIPE AND MUFFLER

### CHECK POINTS

1. Exhaust system's installation
2. Exhaust gas leakage.

1. Check the exhaust system's installation for looseness, damage and possible interference with other parts.

When the engine is running, and for a short time after it is stopped, the exhaust system remains very hot; use extreme care and don't get burnt during this evolution.

Tightening torque:

Front exhaust pipe to engine

25 – 29 N·m (2.6 – 3.0 kg-m, 19 – 22 ft-lb)

Front exhaust pipe to rear exhaust pipe

13 – 23 N·m (1.3 – 2.3 kg-m, 9 – 17 ft-lb)

Rear exhaust pipe to muffler

42 – 52 N·m (4.3 – 5.3 kg-m, 31 – 38 ft-lb)

Front exhaust pipe to bracket

25 – 34 N·m (2.5 – 3.5 kg-m, 18 – 25 ft-lb)

Tail pipe cutter to muffler

29 – 39 N·m (3.0 – 4.0 kg-m, 22 – 29 ft-lb)

## 20. FUEL SYSTEM FOR LEAKAGE

### CHECK POINTS

1. Installation of fuel hose and pipe. And condition of clamps
2. Fuel system for leakage

1. Check the fuel and air breather pipes visually or by feeling with your fingers from the underside. Retighten the clamps if necessary.

- a. When retightening the clamps, do not tighten them excessively.  
b. When checking the fuel system, use extreme care to prevent accidental fires.

2. Without starting the engine, turn the ignition switch to the ON position, and operate the fuel pump to pressurize the fuel system. Then check the fuel system for leakage. Check the fuel hose's layout, and also search for interference with other parts, twists, or damage, check the condition of the clamps.



## 1. 1800 cc

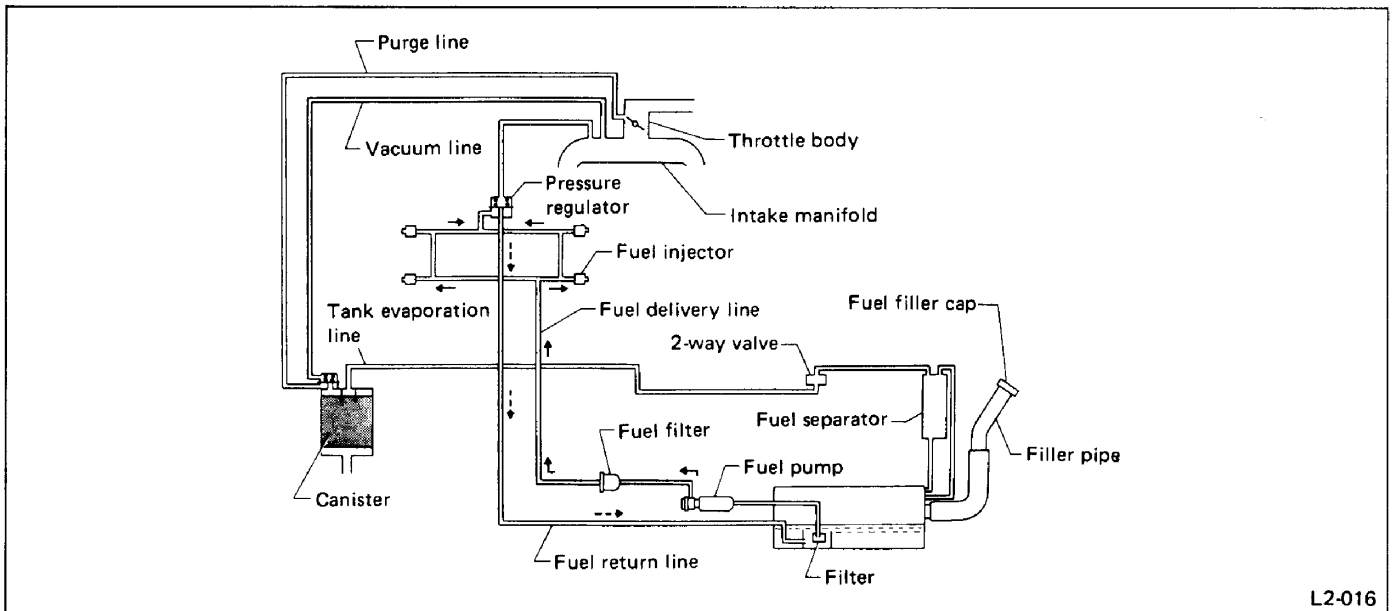


Fig. 51

## 2. 2700 cc

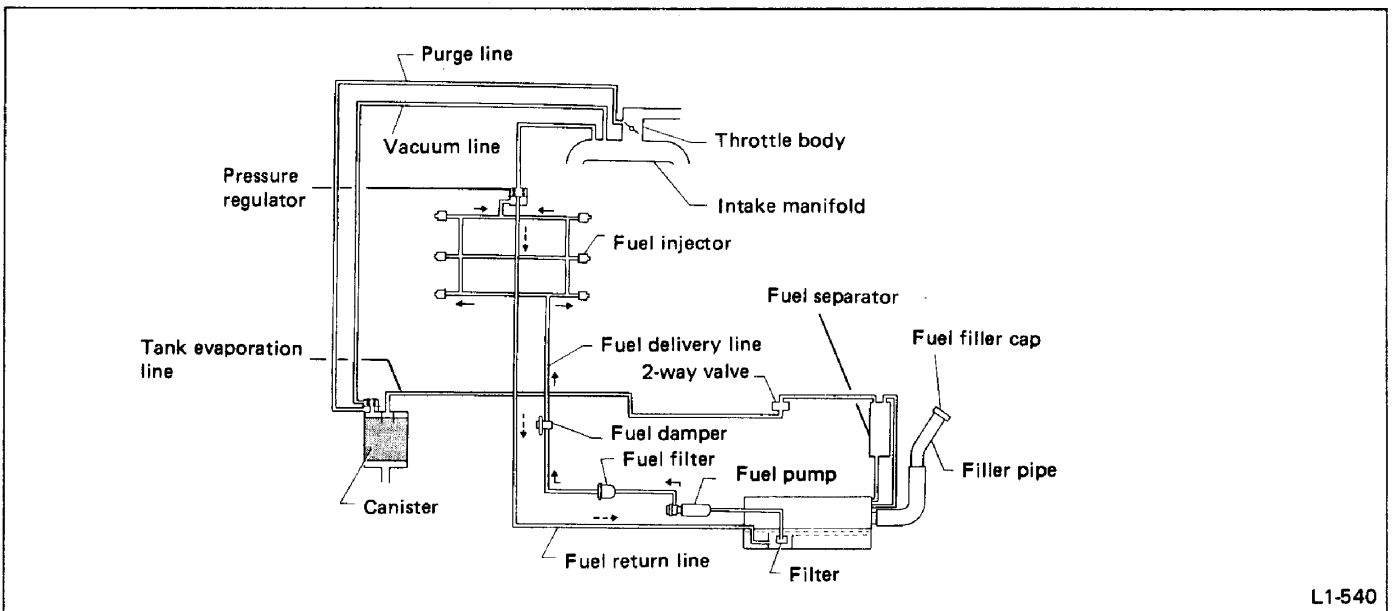


Fig. 52

## 21. HEIGHT CONTROL SYSTEM (Canada model) .....Air (Pneumatic) Suspension Vehicle

### CHECK POINTS

#### 1. Function of height control system (Manual control)

1. Check the function of height control changeover.
  - 1) Unload the car to establish "curb weight" condition.
  - 2) Start engine and turn height control switch to "NORMAL."

Ensure ground clearance is automatically set to the NORMAL value as indicated in Chapter 4-1.

  - 3) Check air suspension compressor to ensure it stops. If it still is in operation, wait until it stops.

The above procedure is required to determine whether or not, car height control is in good order and should not be omitted.

- 4) After compressor stops, set height control switch to "HIGH" and check the following:
  - a) Check if car attains the specified height within 30 seconds.
  - b) Check if the HIGH pilot lamp is on.
  - c) Check if compressor stops within 150 seconds after setting height control switch to "HIGH."
- 5) Set height control switch to "NORMAL" after compressor has stopped. Check if car returns to the specified NORMAL position within 30 seconds.
- 6) If abnormality is noted in steps 1) through 5) above, refer to Chapter 4-1 and repair as necessary.

## 22. TILT/TELESCOPIC STEERING COLUMN

### CHECK POINTS

1. Operation of tilt steering mechanism
2. Operation of telescopic steering mechanism
3. Operation of lift-up steering mechanism

1. Check the operation of tilt steering mechanism.
 

Unlock lever A and ensure steering wheel moves up and down smoothly for proper position adjustment.

Lock lever A to ensure steering wheel stays in place even when an external force is applied to it from above or below.

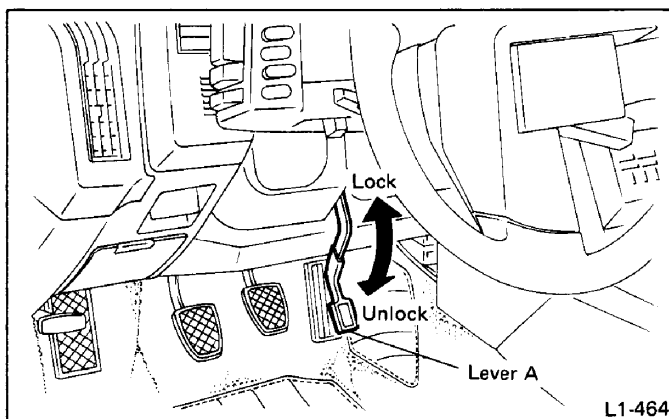


Fig. 53

2. Check the operation of telescopic steering mechanism.
 

Unlock lever B by turning it counterclockwise and check that steering wheel can be adjusted along the axial direction.

Lock lever B to ensure steering wheel is held in place.

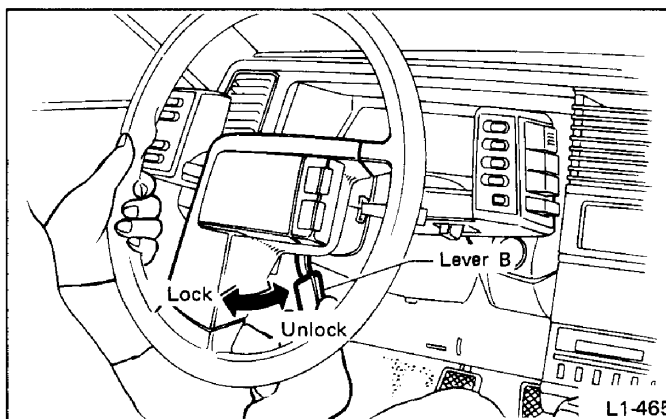


Fig. 54

3. Check the operation of lift-up steering mechanism.
 

Pull knob on instrument panel to check if steering wheel lifts up automatically. Push steering wheel down to check if it locks in the original position. Ensure there is no free play in the steering wheel.

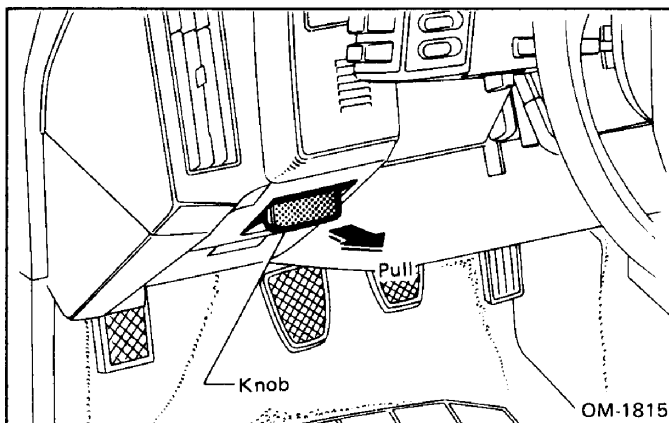


Fig. 55

## Road Test Inspection

### 1. OPERATION OF INDICATOR LIGHTS AND GAUGES

#### CHECK POINTS

1. Operation of indicator lights
2. Operation of gauges
3. Connecting the wiring harness connector for clock, etc. [1-pole white connector underneath the glove box]

#### 2. Check the operation of gauges.

Start the engine, and make sure that each gauge operates normally.

- Fuel gauge
- Temperature gauge
- Voltmeter
- Oil pressure gauge, etc.

a. Perform this inspection with the gear shift lever in the neutral position.

{For automatic transmission models: Set the select lever in the "P" position.}

b. Set the parking brake.

c. Do not race the engine excessively.

#### 1. Check the operation of indicator lights.

1) With the ignition switch turned to ON, make sure the charge indicator light, oil pressure indicator light, brake fluid level warning light, stop light failure warning light etc. illuminate. Start the engine, and make sure all of these lights go off.

The parking brake warning light should illuminate when the parking brake lever is pulled and the ignition switch is in the ON position.

It should go out when the parking brake lever is released.

2) Make sure that each indicator light operates normally and corresponds to its respective device.

- Headlight beam indicator light
- Hazard warning indicator light
- Door ajar warning lights
- Rear gate ajar warning light
- Four-wheel drive indicator light
- Rear window defogger indicator light
- Low fuel indicator light
- Door lock indicator light
- Upshift indicator light
- Height control "HI" indicator light
- AT oil temperature warning light
- CHECK ENGINE light, etc.
- Power steering failure warning light

- Analog meter

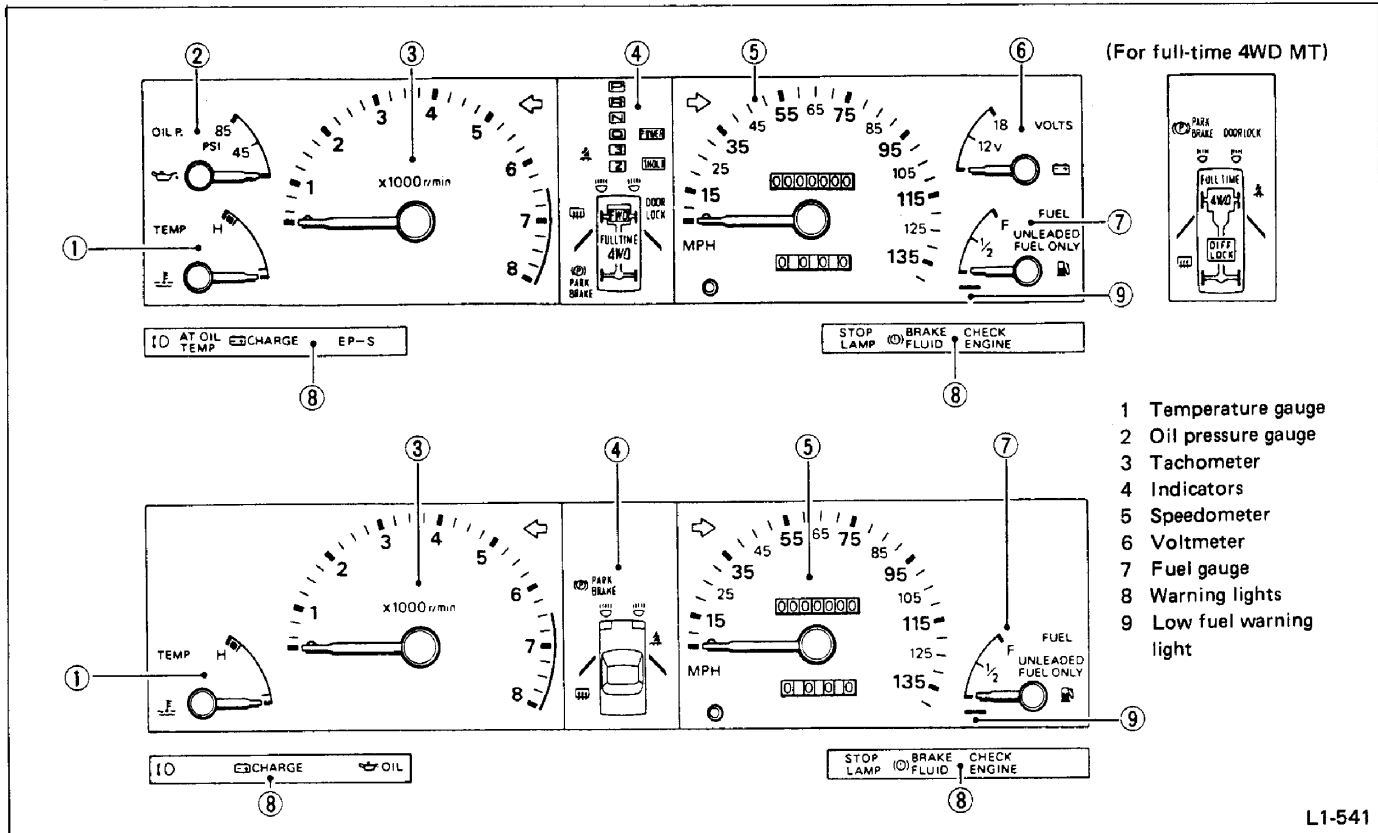


Fig. 56

## 2. TACHOMETER, RADIO, CLOCK, ETC.

## CHECK POINTS

## 1. Operation of tachometer, radio, digital clock, cigarette lighter, etc.

- Tachometer

Race the engine two or three times, and check the tachometer's operation.

**Do not race the engine more than necessary.**

- Radio

Check the operation according to "Owner's manual".

- Digital clock

Connect the wiring connector for the clock which is located at the back side of the fuse box.

Make sure the clock is operating normally.

- Cigarette lighter

To operate, push in the knob completely and wait for a moment. The lighter will click out of holder automatically when ready to use.

**CAUTION:**

a. To avoid the possibility of being burned, do not hold the cigarette lighter in by hand. This may also cause damage to the lighter heating element.

b. When replacing the knob, it is recommended that you use only a genuine part. If you use either non-genuine parts or any combination of parts different from original knob-and-socket combination, it may cause overheating due to a short circuit.

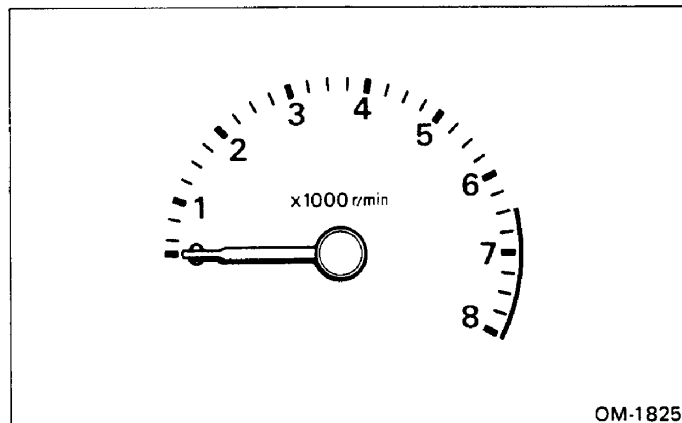


Fig. 57

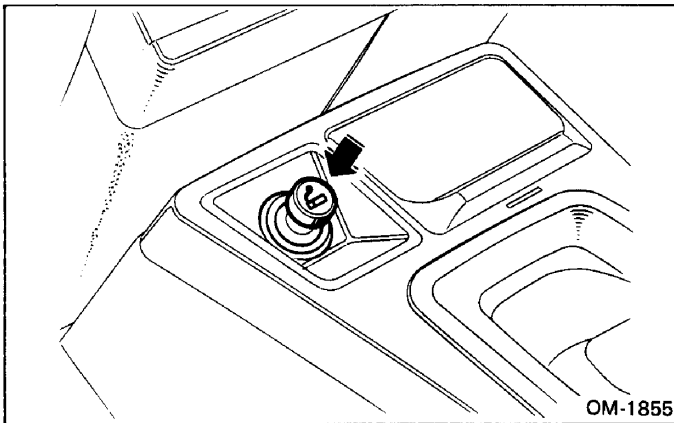


Fig. 58

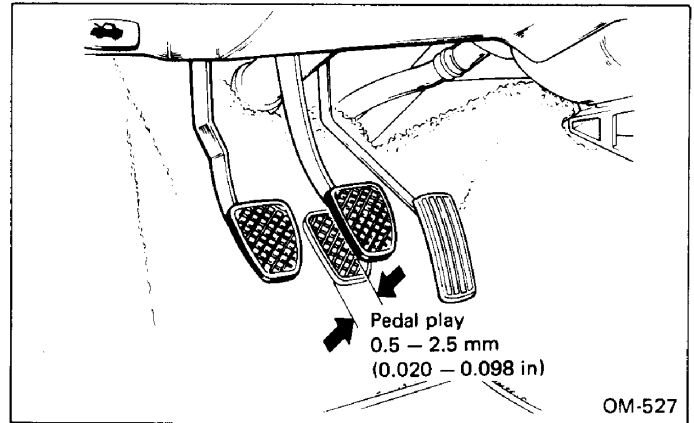


Fig. 59

### 3. DRIVING TEST

#### CHECK POINTS

1. Operation of foot brake and parking brake
2. Operation of hill holder
3. Operation of clutch and gear shift
4. Operation of selector lever (Automatic transmission models only)
5. Operation of 4WD selector lever (4WD models only)
6. Operation of steering and position of steering wheel
7. Operation of turn signal cancel cam
8. Operation of ventilation system and heater
9. Abnormal noises or vibration
10. Operation of cruise control
11. Function of automatic vehicle height control ..... Air (pneumatic) suspension vehicle

1. Check the foot and parking brakes' operation.

1) Drive on a dry, level, paved road, and apply normal braking. Look for uneven or improper operation, or pulling to one side.

**Be sure to perform this test in a safe area.**

2) Press the brake pedal in two or three times, and keep it fully depressed. Make sure that the brake can be kept that way for at least five seconds. Also check for air in the brake system, or brake fluid leakage.

**Brake pedal free play:**

**0.5 - 2.5 mm (0.020 - 0.098 in)**

- 3) Perform the adjustment of operating rod ASSY as follows:
  - (1) Be sure engine is off. (No vacuum is applied to brake booster.)
  - (2) There should be play between brake booster clevis and pin at brake pedal installing portion. (Depress brake pedal pad with a force of less than 10 N [1 kg, 2 lb] to a stroke of 0.5 to 2.5 mm [0.020 to 0.098 in].)

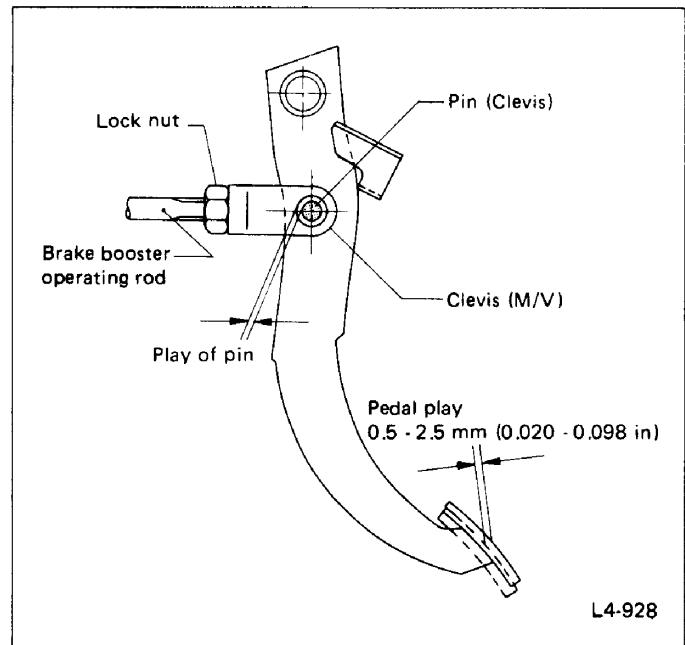


Fig. 60

(3) Depress the surface of brake pad by hand.

(4) If there is no free play between clevis pin and clevis, loosen lock nut for operating rod and adjust operating rod by turning in the direction that shortens it.

(5) After adjustment, make sure there is no brake dragging.

4) Pull the parking brake lever completely out, and check its operation. Also check the ratchet for normal functioning. Check the parking brake as follows: With the engine running, pull the parking brake lever completely out, and place the gear shift lever in 1st gear. Run the engine slightly faster than idle, and engage the clutch. The engine should stall. If the parking brake is functioning normally, the engine will stall; if not, the vehicle will continue to roll.

---

**Parking brake lever stroke:**

**Standard:**

3 – 4 notches/245 N (25 kg, 55 lb)

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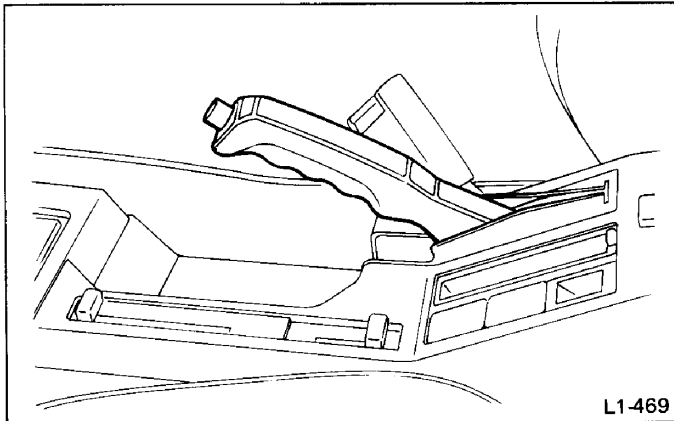


Fig. 61

- If the vehicle does not start properly, it should be corrected by following case A or case B.

Case A: When the hill holder releases after the clutch pedal is engaged (the engine tends to stall), loosen the adjusting nut gradually until smooth starting is possible.

Case B: When the hill holder releases before the clutch pedal engages (the vehicle slips down slightly), tighten the adjusting nut so that the hill holder releases after the clutch pedal engages (case A).

Then make adjustment as in case A.

Whenever turning the adjusting nut, prevent the pressure holding valve cable from revolving as shown in the figure.

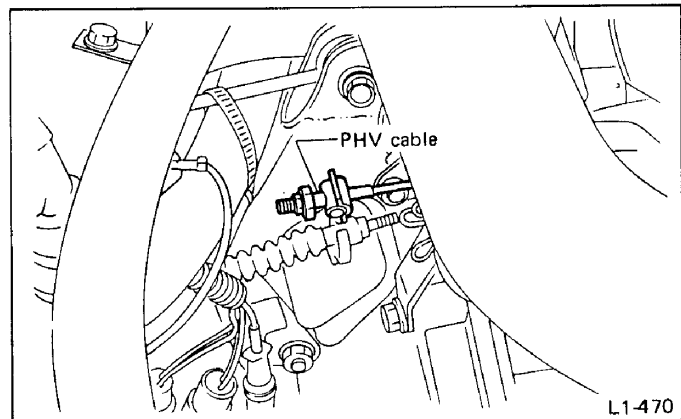


Fig. 62

2. Check the hill holder operation.

1) Inspect free play of clutch pedal by depressing the pedal by hand. If it is out of the specified value, adjust it by turning adjusting nut on engine side end of clutch cable at release fork.

---

**Standard of free play:**

**At clutch pedal**

10 – 20 mm (0.39 – 0.79 in)

**At center of cable on clutch release fork**

2 – 4 mm (0.08 – 0.16 in)

---

**Tightening torque (Adjusting nut):**

5.4 – 9.3 N·m (0.55 – 0.95 kg-m, 4.0 – 6.9 ft-lb)

---

2) Confirm stopping and starting performances by activating hill holder on an uphill road of 3° or higher inclination.

- If the vehicle does not stop, tighten adjusting nut of pressure holding valve (PHV) cable.

3. Check the operation of clutch and gear shifting.

1) With the engine idling and the shift lever in neutral, gradually depress the clutch pedal, to see if it generates any abnormal noise.

**Carefully compare a normal clutch's operating sounds to the clutch being tested.**

2) Pull the parking brake lever completely out, and place wheel chocks under the tires. Then depress the clutch pedal completely, and place the shift lever in 4th speed.

Raise engine rpms a little, gradually engage the clutch, and see if the engine stalls.

If the engine stalls, it means that the clutch is not slipping.

**a. Be sure to perform this test in a safe area.**

**b. Do not repeat this test.**

---

**Clutch pedal free play:**

10 – 20 mm (0.39 – 0.79 in)

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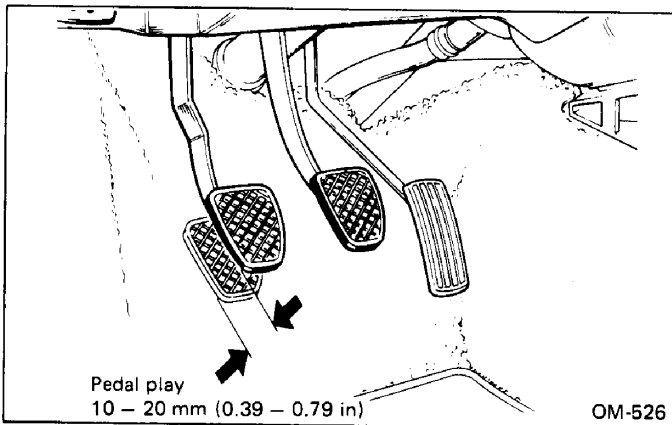


Fig. 63

3) Remove the wheel chocks, and return the shift lever to neutral, then check the gear shifting mechanism for excessive play.

4) Drive the car at various speeds. While depressing the clutch pedal completely, move the gear shift lever into each position, and check for any unusual play or unusual resistance.

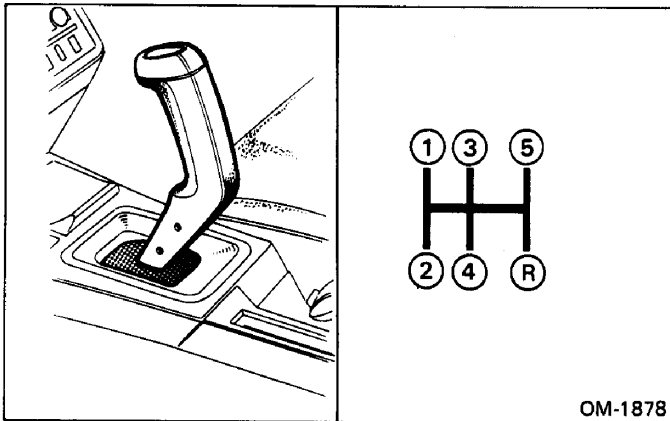


Fig. 64

4. Operation of drive selector lever (Automatic transmission models only).

Place the selector lever in each position, and make sure that the pointer indicates the position of each range correctly.

The 1st hold switch operates when it is pushed while the selector lever is at the 2nd range.

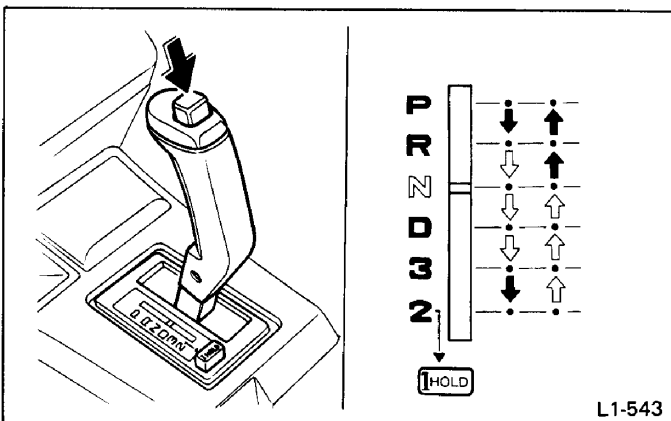


Fig. 65

- a. Perform this check by depressing the clutch completely while the vehicle is moving straight ahead.
- b. Do not shift the drive selector lever when the wheels are spinning or slipping.

5. Operation of steering and position of steering wheel.

- 1) Check the steering wheel for free play.

Steering wheel free play:

0 – 25 mm (0 – 0.98 in)

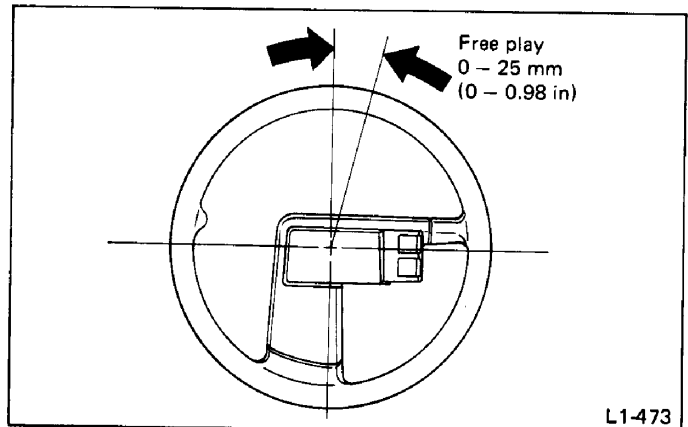


Fig. 66

2) With the car moving straight ahead, check for hard steering, shimmy, or other abnormalities.

3) Make a turn, and check for hard or heavy steering wheel operation, or poor stability.

4) Make a right or left turn with the turn signal on, and make sure that the turn signal switch returns automatically to the OFF position when the steering wheel is returned to the straight ahead position.

6. Operation of ventilation system and heater.

1) While driving, move the control lever into each position, and check the ventilation system's operation. Also check for unusual vibration or noises.

2) Turn the temperature control dial and fan motor switch, and make sure that warm air is discharged into the compartment.

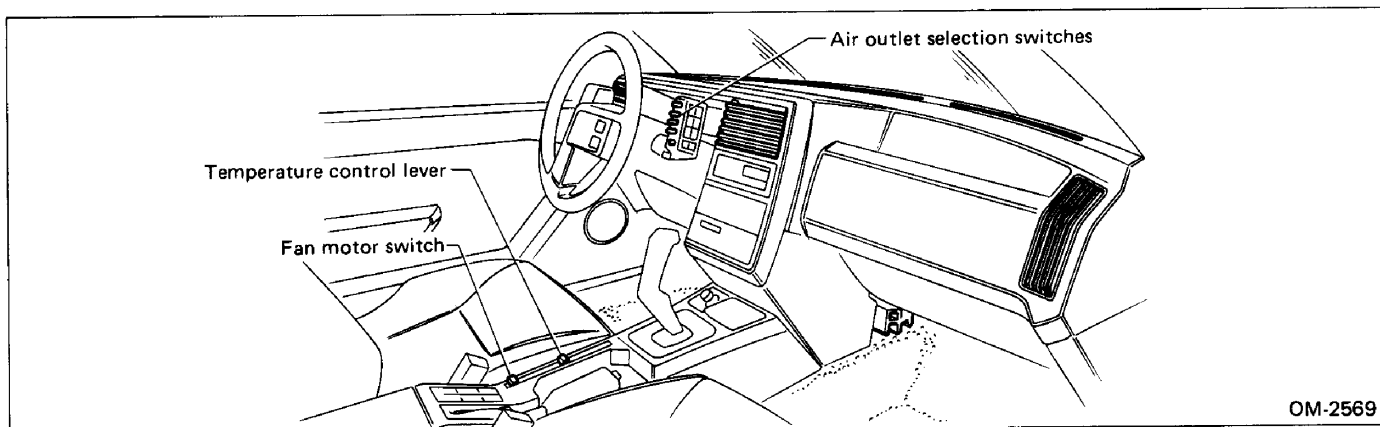


Fig. 67

#### 7. Abnormal noises or vibration.

1) When starting the engine, and while driving the vehicle, check the engine, transmission, body, suspension, and steering system for any unusual noises or vibration.

Do this when idling the engine, accelerating, decelerating, and running at low, middle and high speeds.

2) Depress the accelerator pedal, and make sure that the engine rpms increase smoothly and that the vehicle accelerates smoothly.

3) While driving, turn the steering wheel right and left to test the vehicle's stability and response.

**Be sure to perform this test in a safe area.**

8. Check the operation of the cruise control according to "Owner's manual".

9. Check the function of automatic vehicle height resumption.

(1) Move height control switch to "HIGH" while operating car below 80 km/h (50 MPH) to see if HIGH pilot lamp comes on.

(2) Operate car at speed higher than 95 km/h (60 MPH) for at least five seconds to check if NORMAL pilot lamp instead of HIGH pilot lamp comes on.

(3) Operate car at speed lower than 55 km/h (35 MPH) for at least five seconds to check if HIGH pilot lamp instead of "NORMAL" pilot lamp comes on again.

(4) Stop car and move height control switch to "NORMAL." Check if car is set to the NORMAL height position.

(5) If abnormality is noted in steps (1) through (4) above, refer to Chapter 4-1 and repair as necessary.

**Be sure to conduct driving tests using a chassis dynamometer with front wheels set in operation (FF drive), or test on an authorized race course or similar place.**

## Post-road Test Inspection

### 1. AUTOMATIC TRANSMISSION FLUID (ATF) LEVEL

#### CHECK POINTS

##### ● Level of ATF

The ATF should be maintained at the proper level as follows:

1) Drive the car several miles to bring the transmission to the normal operating temperature. 60 to 80°C (140 to 176°F) is normal.

2) Park the car on a level surface.

3) Place selector lever in the "P" position and idle the engine.

4) Remove the level gauge and wipe it clean.

5) Reinsert the level gauge completely.

6) Remove it again and note its reading.

If the fluid level is at the lower mark or below, add enough recommended automatic transmission fluid to bring the level to the high mark. ATF is added through the fluid level gauge hole.

**Do not fill above the high mark level.**

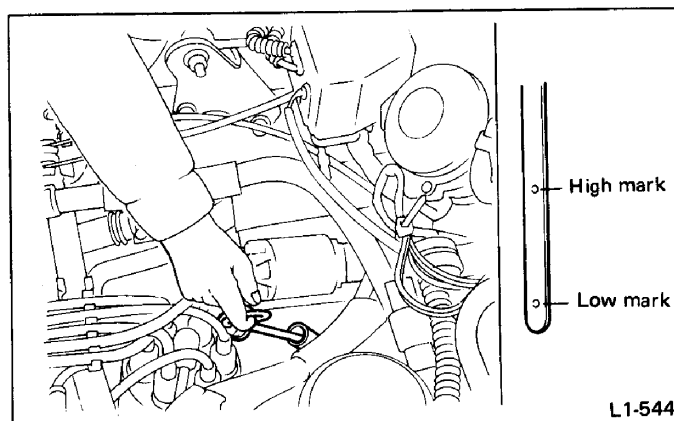


Fig. 68



## 2. POWER STEERING FLUID LEVEL

### CHECK POINTS

- Level of power steering fluid

The power steering fluid should be maintained at a proper level.

Check level as follows:

- 1) Drive the car several miles or kilometers to bring power steering system up to the normal operating temperature of about 60°C (140°F).
  - 2) Park the car on a level surface and stop the engine.
  - 3) Remove the level gauge and wipe it clean.
  - 4) Reinstall the level gauge firmly.
  - 5) Remove it again and read the level on the "HOT" side.
- If the fluid level is at the lower level or below it, add recommended power steering fluid up to the high level.

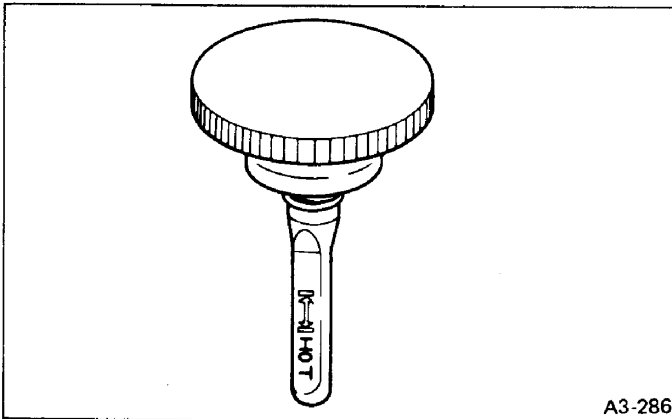


Fig. 69

When the fluid level is to be checked without warming up the power steering system [at approximately 21°C (70°F)], read the fluid level at the "COLD" position of the level gauge.

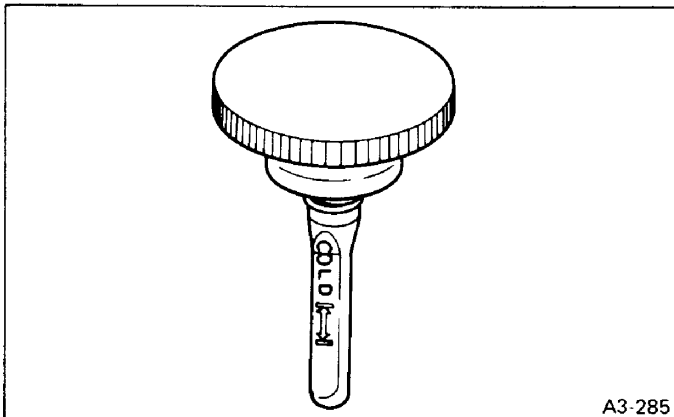


Fig. 70

- a. The available power steering fluid is the same as the automatic transmission fluid. (Except XT6)  
The available CYBRID POWER steering fluid is "SPECIAL POWER STEERING FLUID". (XT6)  
Be sure to use the recommended fluid.
- b. When power steering fluid is added, be careful not to allow any dust into the tank.

## 3. TOE

### CHECK POINTS

- Toe of front wheels

- 1) To check the toe, make sure that the vehicle has a full fuel tank and that the spare tire, floor mats and service tool are in place. No other weight should be present.
- 2) Place the vehicle on a flat, level surface, and set the front wheels in the straight ahead position.
- 3) Mark a line at the center of the tread surface on each tire, and then mark the front and rear end positions of both front tires on the ground. Measure the distance between the right and left tires at both the front and rear ends, and then check the toe by using the following equation:

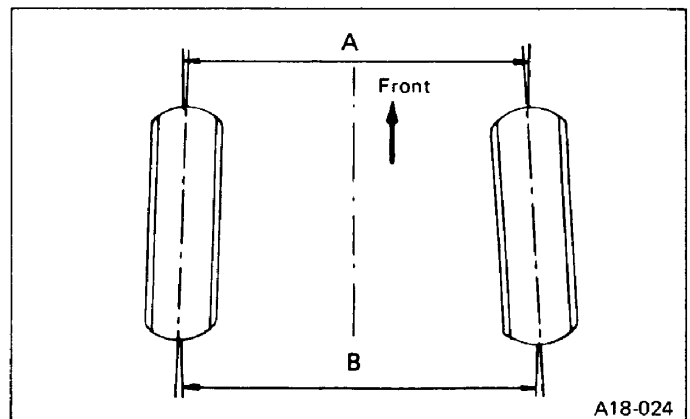


Fig. 71

Toe L = B-A (In case of "L" being positive: L = toe-in)  
(In case of "L" being negative: L = toe-out)

Toe			FWD			4WD		
			Normal	Minimum	Maximum	Normal	Minimum	Maximum
	Service limit	mm (in)	0 (0)	3 (0.12) IN	3 (0.12) OUT	5 (0.20) OUT	2 (0.08) OUT	8 (0.31) OUT
		Degree: per wheel	0°	0°09' IN	0°09' OUT	0°15' OUT	0°06' OUT	0°24' OUT
	*Service standard	mm (in)	0 (0)	1 (0.04) IN	1 (0.04) OUT	5 (0.20) OUT	4 (0.16) OUT	6 (0.24) OUT
		Degree: per wheel	0°	0°03' IN	0°03' OUT	0°15' OUT	0°12' OUT	0°18' OUT
Side-slip with one occupant	Service limit	m/km (ft/mile)	IN 5 – OUT 5 (IN 26 – OUT 26)					
	*Service standard	m/km (ft/mile)	IN 3 – OUT 3 (IN 16 – OUT 16)					

\* If the toe data is out of "SERVICE LIMIT", readjust it within "SERVICE STANDARD".

a. Before checking front wheel alignment with a sideslip tester, check the following:

- (1) Left and right tires are the same type and size.
- (2) Tires are inflated to specified pressure.

b. When driving over the sideslip tester, be sure to drive the vehicle slowly with the steering wheel fixed in the straight ahead position.

4) If the measured toe or sideslip value is not within the standard range, adjust it as follows:

- (1) Loosen the lock nut on the right and left tie-rod ends, and adjust the right and left tie-rods simultaneously.

**Turn both tie-rods equally to make the adjustment.**

- (2) Measure the amount of toe or sideslip, and if the measured value is within the specified range, tighten the tie-rod end lock nuts.

**Tightening torque (lock nut):**

**78 – 88 N·m (8.0 – 9.0 kg-m, 58 – 65 ft-lb)**

After completing the toe adjustment, check the steering wheel for levelness when the vehicle is in the straight ahead position.

## 4. UNDERSIDE

### CHECK POINTS

1. Leakage of engine oil, transmission gear oil, differential gear oil, etc.
2. Leakage of coolant
3. Leakage of brake fluid
4. Loose suspension mountings or steering mounting

Raise the vehicle body and perform these checks from the underside by referring to the "Preparatory Steps for Underside Inspection" instructions.

1. Visually check for any signs of engine oil, transmission gear oil, differential gear oil, etc. leakage.
2. Visually check for any sign of coolant leakage.
3. Visually check for any sign of brake fluid leakage.
4. Check the suspension mounting and steering mounting for any loose or unconnected parts.

## 5. WATER LEAKAGE

### CHECK POINTS

#### ● Water leakage by pouring water

- 1) Before performing the water leakage test, remove anything that may obstruct the operation or which must be kept dry.
- 2) Close all of the windows completely, and then close all of the doors tightly. Close the hood and trunk lid before starting the test.
- 3) Connect a hose to a tap, and spray water on the vehicle. The rate of water discharge must be approx. 20 to 25 liters (5.3 to 6.6 US gal, 4.4 to 5.5 Imp gal) per minute. When spraying water on areas adjacent to the floor and wheel house, increase the pressure.

When directing water on areas other than the floor portion and wheel house, decrease the pressure. But the force of water must be made strong occasionally by pressing the end of the hose.

**Be sure to keep the hose at least 10 cm (3.9 in) from the vehicle.**

- 4) Check the following areas:
  - (1) Front window and body framework mating portion
  - (2) Door mating portions
  - (3) Glass mating portions
  - (4) Rear quarter windows mating portions
  - (5) Rear window and body framework mating portion
  - (6) Trunk lid mating portion
  - (7) Around roof drips

**If any dampness in the compartments is discovered after the water has been applied, check all areas that may have possibly contributed to the leak carefully.**

## 6. EXTERNAL APPEARANCE AND EQUIPMENT

### CHECK POINTS

1. Paint
2. Scratches or damage to glass
3. Rust formation
4. Contamination of interior parts
5. Installation of equipment

1. Check the paint after removing the paint protective agent and washing the vehicle.

**Before removing the protective agent, be sure to wash the vehicle, because the painted surface may be scratched if the surface is rubbed with sand or other hard particles which may be attached to the protective agent.**

- Check the whole vehicle body for stains, flaking, damage caused by transportation, rust, dirt, cracks, or blistering.

**a. It is better to determine an inspection pattern in order to avoid missing an area.**

**b. It is desirable not to make corrections to the body paint unless absolutely needed. However, if any corrections are required to remove scratches or rust, the area to be corrected must be limited as much as possible. Re-painting and spray painting must be avoided whenever possible.**

2. Carefully check each window glass for scratches. Slight damage may be removed by polishing with cerium oxide. (Half-fill a cup with cerium oxide, and add warm water to it. Then agitate the contents until it turns to wax. Apply this wax to a soft cloth, and polish the glass.)

3. Check each portion of the vehicle body and underside components for the formation of rust. If rust is discovered, remove it with #80 – #180 emery paper, and treat the surface with rust preventive. After this treatment is completed, flush the portion thoroughly, and prepare the surface for repair painting.

**Care should be taken not to apply paint, undercoating agent, anti-corrosive wax, etc. to the following parts of air-suspension equipped models while refinishing the undercarriage.**

- (1) Diaphragm and rolling surfaces
- (2) Air suspension compressor and dryer ASSY

- Check each portion of the body and all of the chrome parts for deformation or distortion. Also check each lamp lens for cracks.
4. Check the following interior parts for contamination.
    - 1) Instrument panel and meter glass
    - 2) Glove box
    - 3) Sun visor
    - 4) Room mirror
    - 5) Assist rail
    - 6) Roof trim
    - 7) Door trim
    - 8) Inner trim
    - 9) Front and rear seats
    - 10) Luggage shelf
    - 11) Floor mat
    - 12) Others

**If the meter glass is contaminated, wipe it gently with a clean soft cloth that has been dampened with water. Do not rub the meter glass hard; otherwise, the transparent resin plate on it may become cloudy due to the formation of scratches.**

5. Check the interior and exterior equipment to make sure that they are installed securely. Also make sure that the equipment conforms to the vehicle's specifications.

Make sure that the spare tire, jack, spare key, tools, owner's manual, warranty & service booklet, etc. are all present.