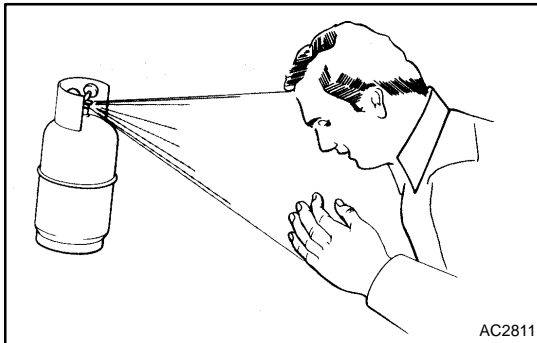


AC2810

AIR CONDITIONING SYSTEM PRECAUTION

AC0W6-01

1. **DO NOT HANDLE REFRIGERANT IN AN ENCLOSED AREA OR NEAR AN OPEN FLAME**
2. **ALWAYS WEAR EYE PROTECTION**



AC2811

3. **BE CAREFUL NOT TO GET LIQUID REFRIGERANT IN YOUR EYES OR ON YOUR SKIN**

If liquid refrigerant gets in your eyes or on your skin.

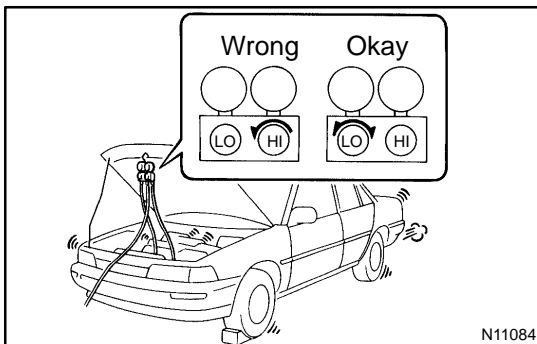
- (a) Wash the area with lots of cool water.

CAUTION:

Do not rub your eyes or skin.

- (b) Apply clean petroleum jelly to the skin.
- (c) Go immediately to a physician or hospital for professional treatment.

4. **NEVER HEAT CONTAINER OR EXPOSE IT TO NAKED FLAME**
5. **BE CAREFUL NOT TO DROP CONTAINER AND NOT TO APPLY PHYSICAL SHOCKS TO IT**



N11084

6. **DO NOT OPERATE COMPRESSOR WITHOUT ENOUGH REFRIGERANT IN REFRIGERANT SYSTEM**

If there is not enough refrigerant in the refrigerant system oil lubrication will be insufficient and compressor burnout may occur, so take care to avoid this, necessary care should be taken.

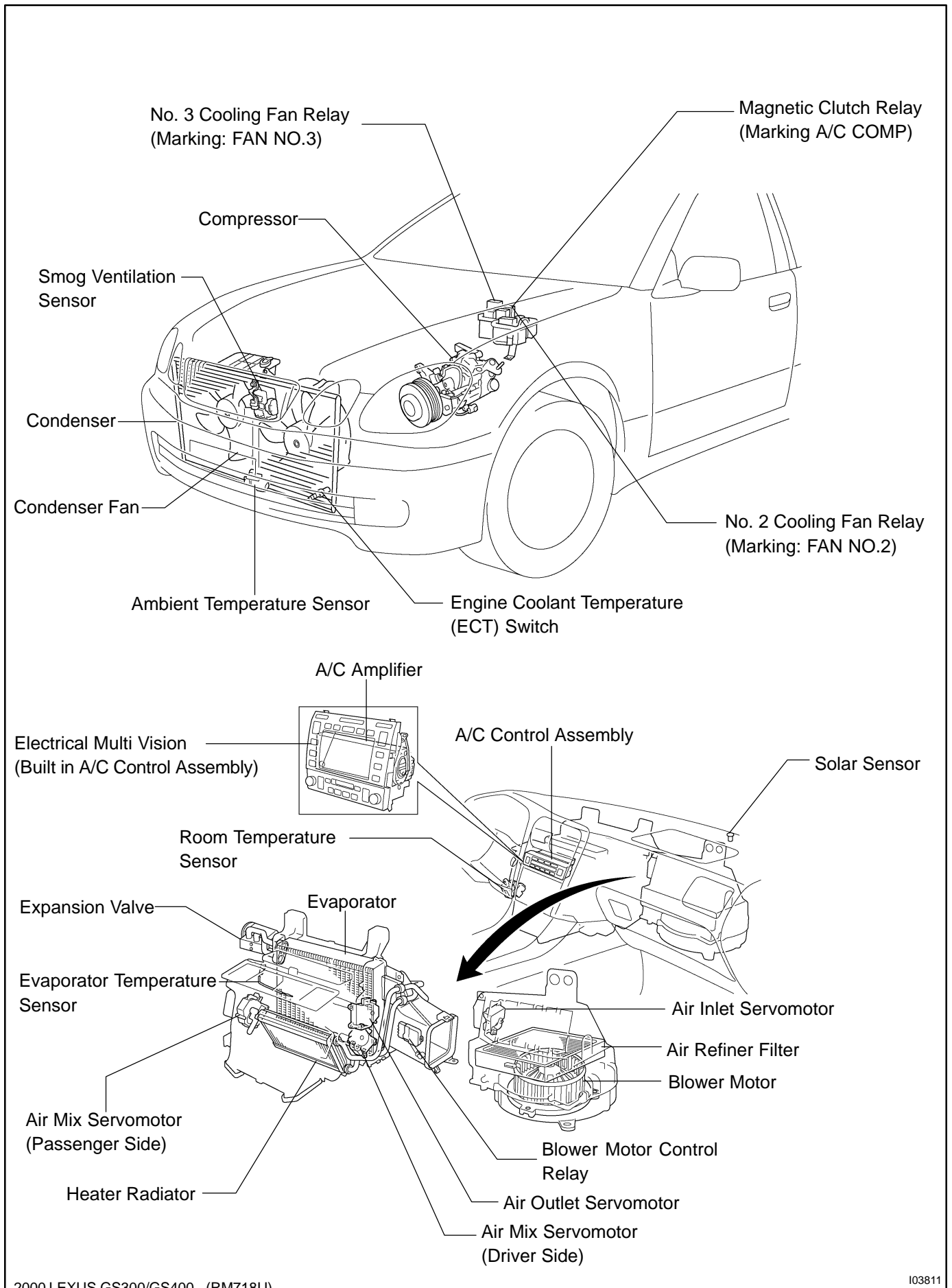
7. **DO NOT OPEN HIGH PRESSURE MANIFOLD VALVE WHILE COMPRESSOR IS OPERATING**

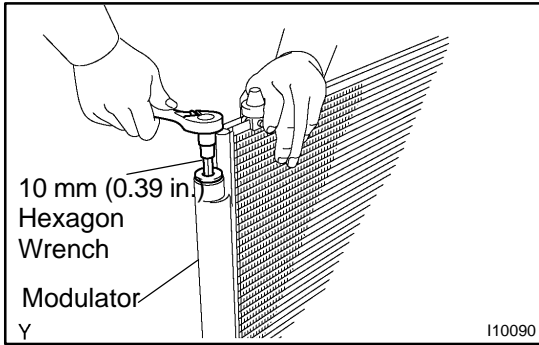
If the high pressure valves opened, refrigerant flows in the reverse direction and could cause the charging cylinder to rupture, so open and close the only low pressure valve.

8. **BE CAREFUL NOT TO OVERCHARGE SYSTEM WITH REFRIGERANT**

If refrigerant is overcharged, it causes problems such as insufficient cooling, poor fuel economy, engine overheating etc.

LOCATION

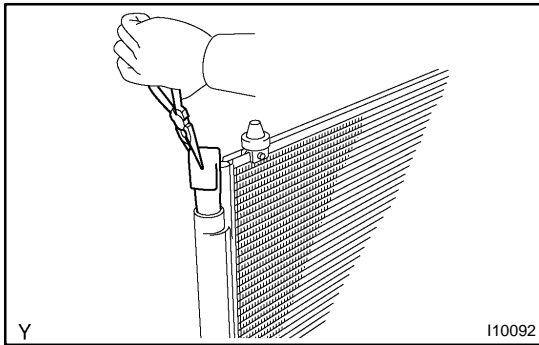




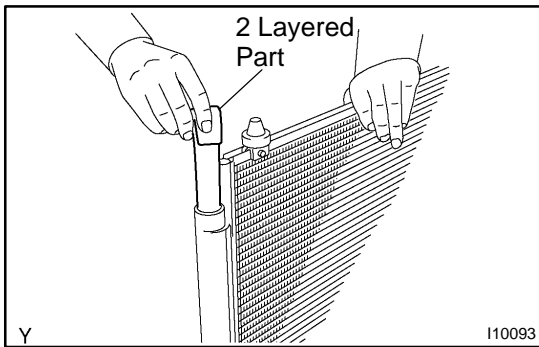
REPLACEMENT

REPLACE DRYER FROM MODULATOR

- (a) Using a hexagon wrench (10 mm, 0.39 in.), remove the cap from the modulator.
- (b) Remove the filter from the modulator.



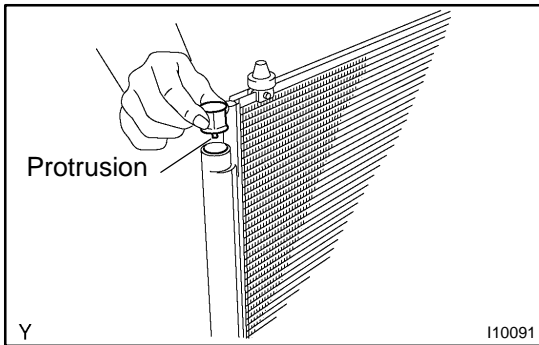
- (c) Using pliers, remove the dryer.



- (d) Insert a new dryer into the modulator.

NOTICE:

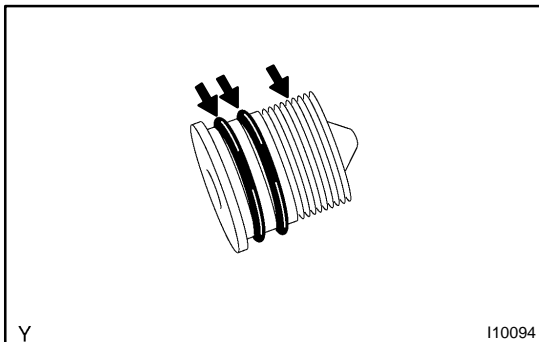
- Do not remove the dryer from a vinyl bag until inserting it into the modulator.
- Install the dryer with its 2 layered part faced upward to the modulator.



- (e) Insert the filter into the modulator.

NOTICE:

Install the filter with its protrusion faced downward to the modulator.



- (f) Install the cap to the modulator.
 - (1) Apply compressor oil to the o-rings and screw part of the cap.

Compressor oil: ND-OIL 8 or equivalent

- (2) Using a hexagon wrench (10 mm, 0.39 in.), install the caps.

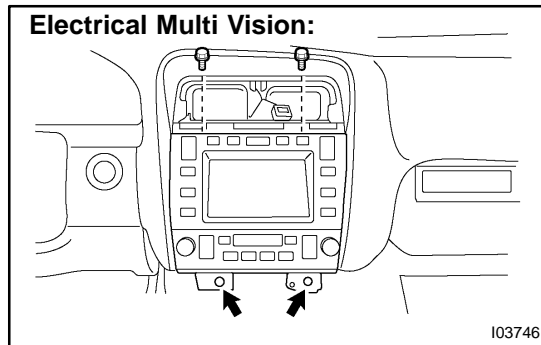
Torque: 12.3 N·m (125 kgf·cm, 9 ft·lbf)

AIR CONDITIONING CONTROL ASSEMBLY REMOVAL

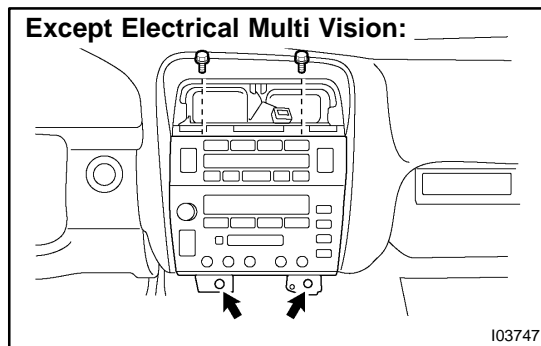
AC0XR-01

1. REMOVE THESE PARTS:

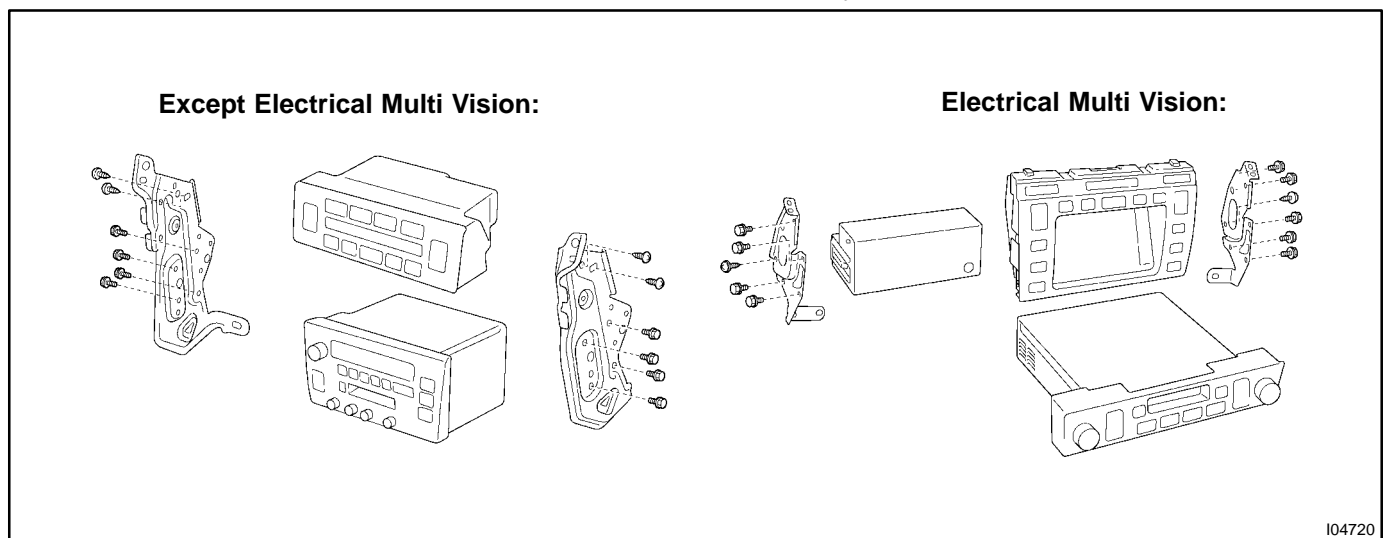
- (a) No.2 register
- (b) Cluster finish panel
(See page [BO-91](#))



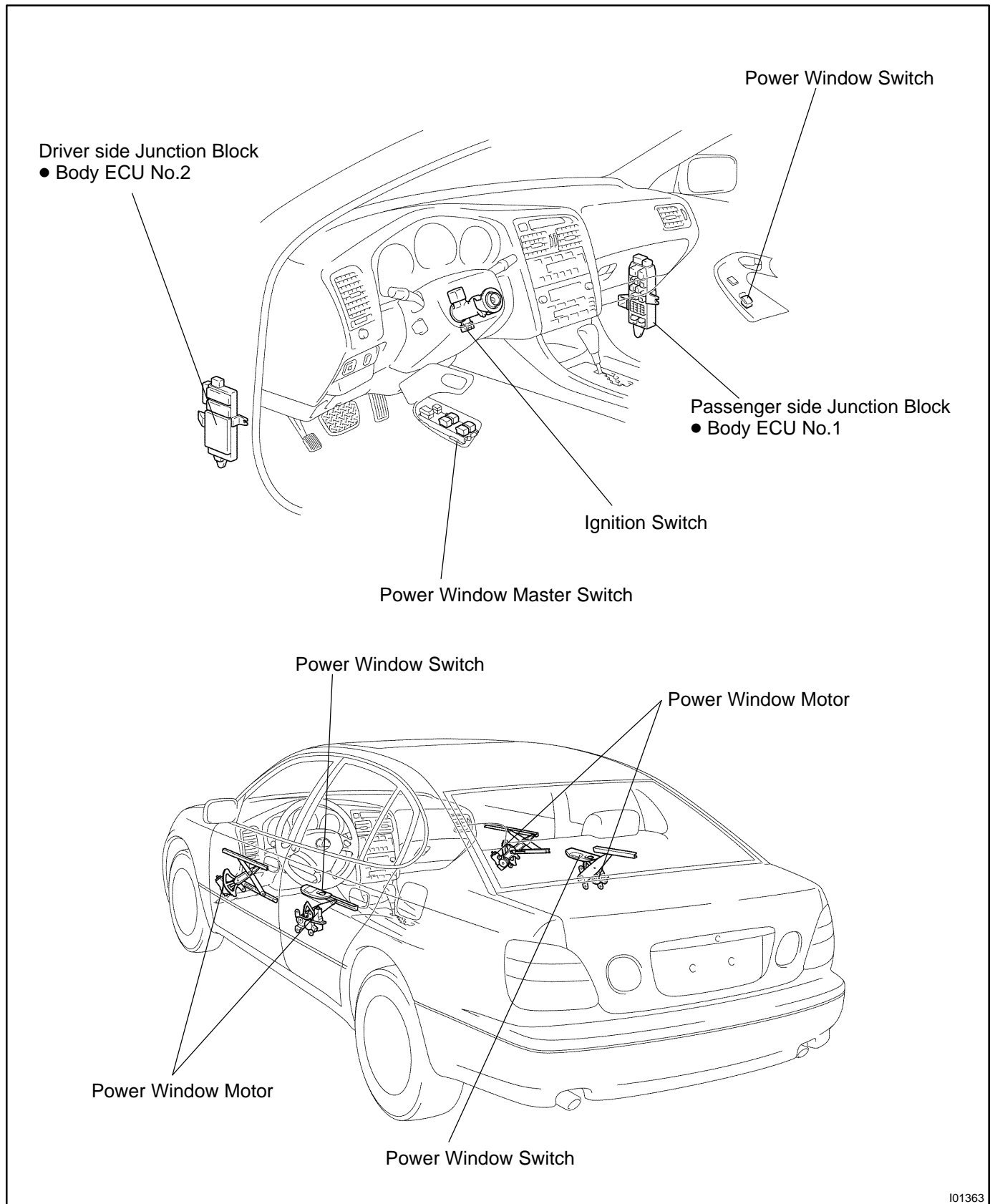
- ## 2. REMOVE A/C CONTROL ASSEMBLY WITH RADIO
- Remove the 4 bolts and pull out the A/C control assembly, then disconnect the connectors.



- ## 3. REMOVE A/C CONTROL ASSEMBLY FROM RADIO
- Remove the 8 bolts, 2 screw and 2 brackets, then remove the A/C control assembly.



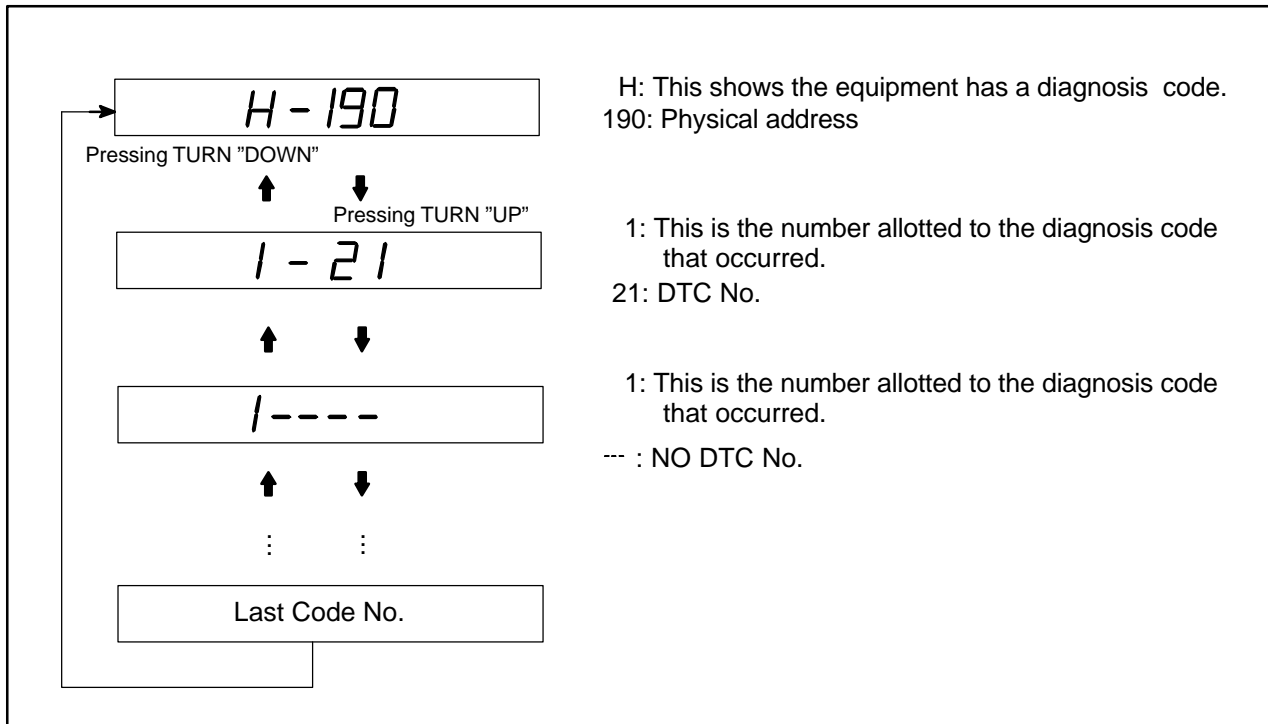
LOCATION



101363

HINT:

- It sometimes takes approx. 40 secs. till the system inspection is completed.
- The chart below is an example of when diagnosis code "21" appears on the physical address (190) equipment. (ROM error occurs on the radio receiver.)
- The smaller code numbers (physical address) are displayed in order (code No., diagnosis code, support code of diagnosis code (object equipment)).
- When no error is detected in the system, "00" is displayed.
- When an error code is detected, up to 6 codes per one system are displayed. Pressing TUNE "UP" or "DOWN" switches the display.
- In the system check mode, when pressing "6" of PRESET switch the mode returns to LAN check mode.

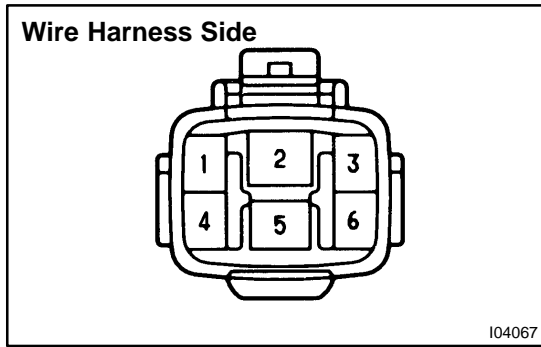


(d) Diagnosis memory

- (1) In LAN check mode, when pressing "2" of PRESET switch the mode turns to the diagnosis memory mode. ("CODE" is displayed.)
The results of self diagnosis performed over tuner and connected equipment are memorized and displayed.
- (2) Perform the operation shown in the following illustration, then read the result of the inspection.

HINT:

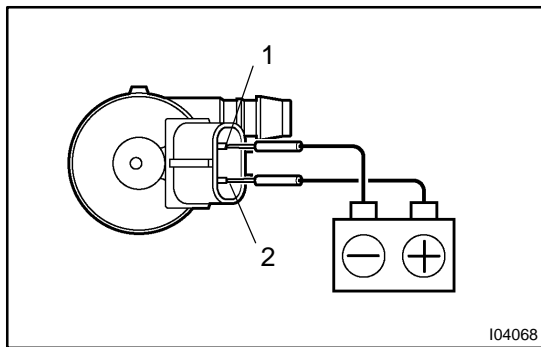
- The smaller code numbers (physical address) are displayed in order (code No. , periodic communication number when error occurs, diagnosis code, and support code of diagnosis code (object equipment)).
- When no error is detected in the system, "00" is displayed. When an error code is detected, up to 6 codes per one system are displayed. Pressing TUNE "UP" or "DOWN" switches the display. Each diagnosis code is same as code in the system check mode.
- When pressing "6" of PRESET switch, the mode returns to LAN check mode.
- The following illustration below is an example of when diagnosis code "D1" appears on the code (190) and (240 or 360) equipment. (Communication error occurs between the radio receiver and CD changer.)



4. INSPECT HEADLIGHT CLEANER RELAY CIRCUIT
 Disconnect the connector from the relay and inspect the connector on wire harness side, as shown.

Tester connection	Condition	Specified condition
2 - Ground 3 - Ground	Constant	Continuity
4 - Ground	Ignition switch ON, light control switch in HEAD and cleaner switch OFF	No continuity
4 - Ground	Ignition switch ON, light control switch in HEAD and cleaner switch ON or daytime running light system operating	Continuity
1 - Ground	Ignition switch OFF or ACC	No voltage
1 - Ground	Ignition switch ON	Battery positive voltage
5 - Ground	Constant	Battery positive voltage

If circuit is not as specified, inspect the circuits connected to other parts.



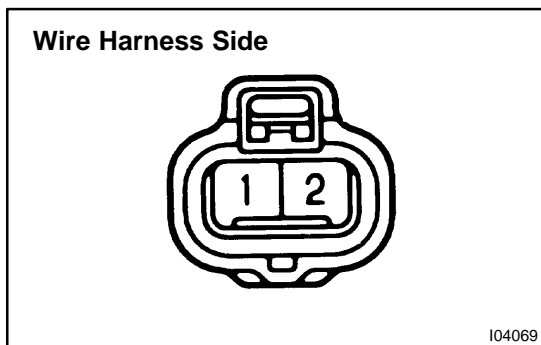
5. INSPECT HEADLIGHT CLEANER MOTOR OPERATION

Connect the positive (+) lead from the battery to terminal 2 and the negative (-) lead to terminal 1, check that the motor operates.

NOTICE:

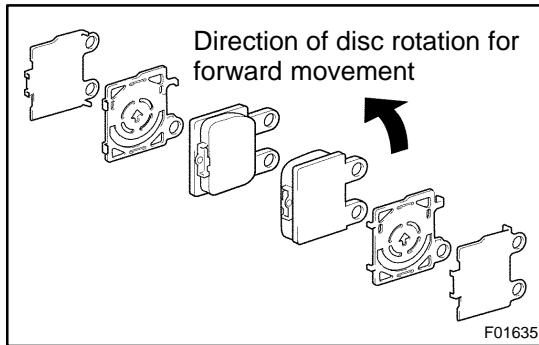
These tests must be performed quickly (within 20 seconds) to prevent the coil from burning out.

If operation is not as specified, replace the motor.



6. INSPECT HEADLIGHT CLEANER MOTOR CIRCUIT

Disconnect the connector from the cleaner motor and inspect the connector on wire harness side, as shown.

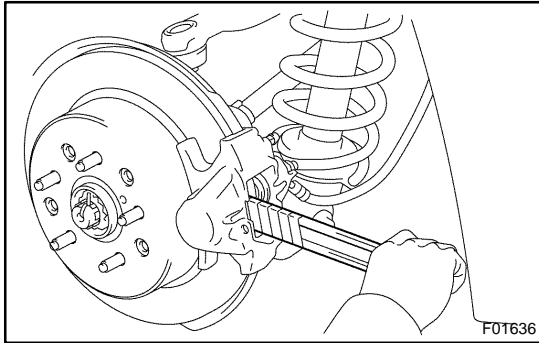


- (b) Install the 2 anti-squeal shims on each pad.

HINT:

Make sure the arrows on the inner anti-squeal shims facing to the direction of disc rotation as shown in the illustration.

- (c) Draw out a small amount of brake fluid from the reservoir.



- (d) Press in the pistons with a monkey wrench handle or equivalent.

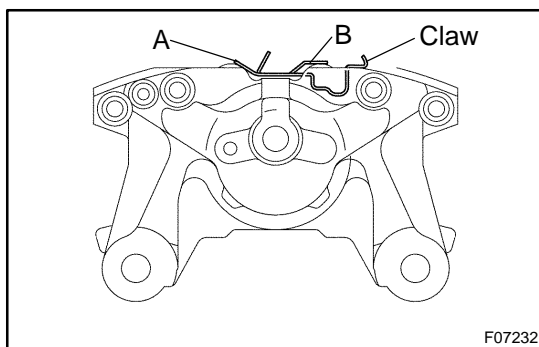
HINT:

- Tape the monkey wrench handle before use.
- If the piston is difficult to push in, loosen the bleeder plug and push in the piston while letting some brake fluid escape.

- (e) Install the 2 pads.

7. INSTALL PAD GUIDE PIN AND ANTI-SQUEAL SPRING

- (a) Install the pad guide pin and clip.



- (b) Install the anti-squeal spring.

HINT:

- Ensure that the claw of the anti-squeal spring is raised up on the caliper securely.
- Ensure that there is no gap between the pad guide pin and anti-squeal spring.
- Ensure that "A" and "B" portions of anti-squeal spring are attached to the pad.

8. INSTALL FRONT WHEEL

Torque: 103 N·m (1,050 kgf·cm, 76 ft·lbf)

9. DEPRESS BRAKE PEDAL SEVERAL TIMES

10. CHECK THAT FLUID LEVEL IS AT MAX LINE

CHARGING SYSTEM

ON-VEHICLE INSPECTION

CH043-01

CAUTION:

- Check that the battery cables are connected to the correct terminals.
- Disconnect the battery cables when the battery is given a quick charge.
- Do not do tests with a high voltage insulation resistance tester.
- Never disconnect the battery while the engine is running.

1. CHECK BATTERY ELECTROLYTE LEVEL

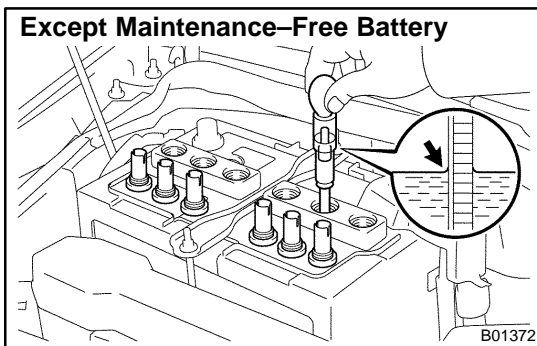
Check the electrolyte quantity of each cell.

Maintenance-Free Battery:

If under the lower level, replace the battery (or add distilled water if possible). Check the charging system.

Except Maintenance-Free Battery:

If under the lower level, add distilled water.

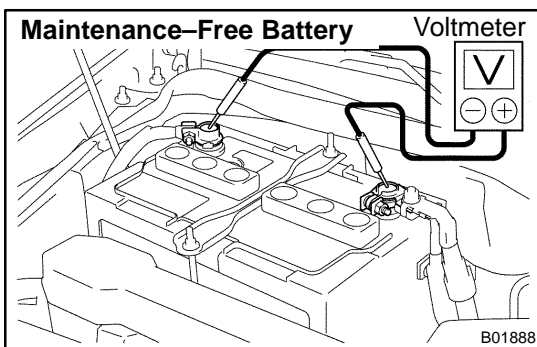


2. Except Maintenance-Free Battery: CHECK BATTERY SPECIFIC GRAVITY

Check the specific gravity of each cell.

Standard specific gravity: 1.25 – 1.29 at 20°C (68°F)

If the specific gravity is less than specification, charge the battery.



3. Maintenance-Free Battery: CHECK BATTERY POSITIVE VOLTAGE

- After having driven the vehicle and in the case that 20 minutes have not passed after having stopped the engine, turn the ignition switch ON and turn on the electrical system (headlight, blower motor, rear defogger etc.) for 60 seconds to remove the surface charge.
- Turn the ignition switch OFF and turn off the electrical systems.
- Measure the battery positive voltage between the negative (-) and positive (+) terminals of the battery.

Standard voltage: 12.5 – 12.9 V at 20°C (68°F)

If the voltage is less than specification, charge the battery.

4. CHECK BATTERY TERMINALS AND FUSES

- Check that the battery terminals are not loose or corroded.

If the terminals are corroded, clean the terminals.

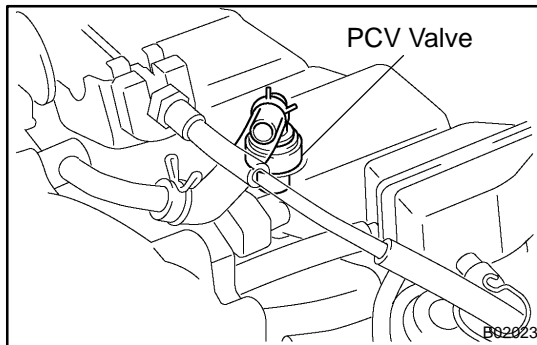
- Check the fusible link and fuses for continuity.

POSITIVE CRANKCASE VENTILATION (PCV) SYSTEM INSPECTION

EC04X-05

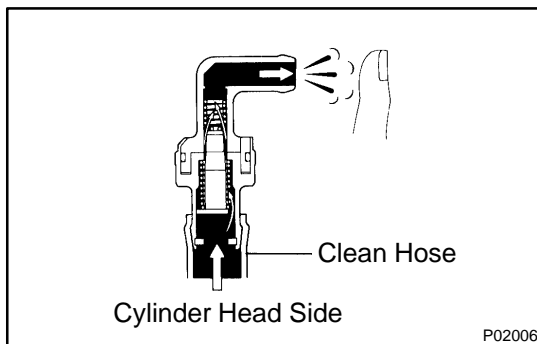
1. REMOVE ENGINE COVER

Remove 4 nuts and engine cover.



2. REMOVE PCV VALVE

- (a) Disconnect the PCV hose from the PCV valve.
- (b) Remove the PCV valve.



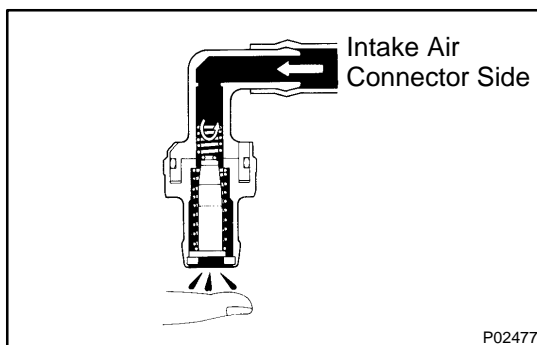
3. INSTALL CLEAN HOSE TO PCV VALVE

4. INSPECT PCV VALVE OPERATION

- (a) Blow air into the cylinder head side, and check that air passes through easily.

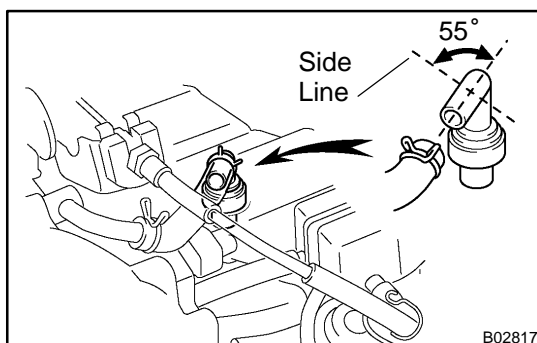
CAUTION:

- Do not suck air through the valve.
- Petroleum substances inside the valve are harmful.



- (b) Blow air into the intake air connector side, and check that air passes through with difficulty.

If operation is not as specified, replace the PCV valve.

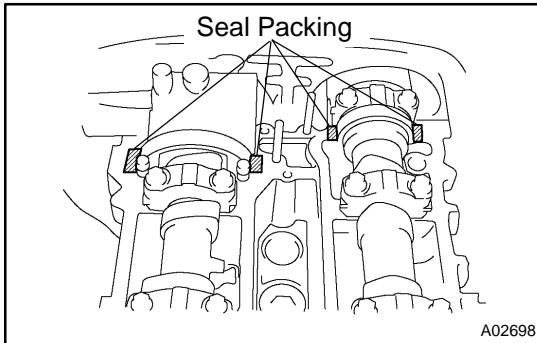


5. REMOVE CLEAN HOSE FROM PCV VALVE

6. REINSTALL PCV VALVE

The port faces in the direction indicated in the illustration.

- (b) Install the VV-i (intake camshaft timing) pulley.
(See page [EM-23](#))
7. **CONNECT TIMING BELT TO CAMSHAFT TIMING PULLEYS** (See page [EM-23](#))

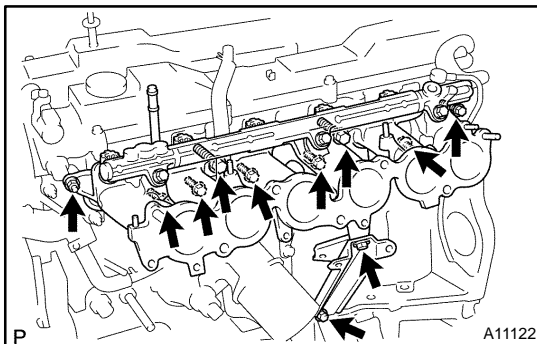


8. **INSTALL NO.1 AND NO.2 CYLINDER HEAD COVERS**
- (a) Remove the any old packing (FIPG) material.
(b) Apply seal packing to the cylinder head as shown in the illustration.

Seal packing: Part No. 08826-00080 or equivalent

- (c) Install the gaskets to the cylinder head covers.
(d) Install the cylinder head covers with the 12 bolts and 4 nuts.

Torque: 8.5 N·m (85 kgf·cm, 75 in.-lbf)



9. **INSTALL INTAKE MANIFOLD ASSEMBLY**

- (a) Install a new gasket and the intake manifold and delivery pipe assembly with the 7 bolts and 2 nuts.

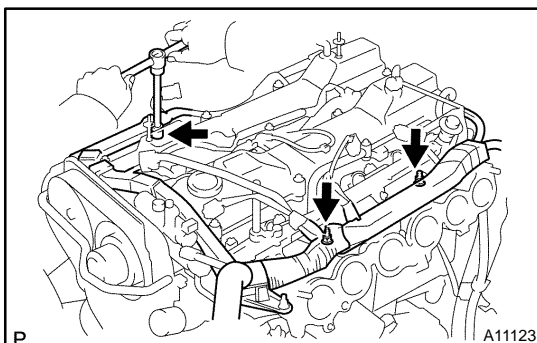
Torque: 28 N·m (280 kgf·cm, 21 ft-lbf)

- (b) Pass the water bypass hose between the No.2, No.3 intake ports of the manifold and delivery pipe.
(c) Install the manifold stay with the 2 bolts.

Torque: 40 N·m (400 kgf·cm, 30 ft-lbf)

- (d) Install the starter wire to the manifold stay.

10. **INSTALL FUEL PRESSURE PULSATION DAMPER**
(See page [SF-27](#))



11. **CONNECT ENGINE WIRE TO CYLINDER HEAD**

- (a) Install the engine wire protector with the 3 nuts.
(b) Using a 5 mm hexagon wrench, install the bolt holding the engine wire protector to the No.2 cylinder head cover.
(c) Connect the 6 injector connectors.

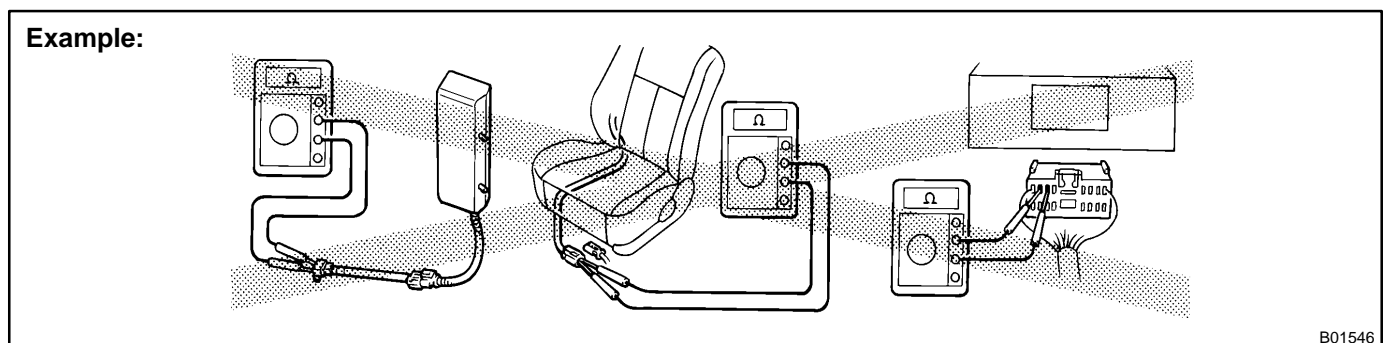
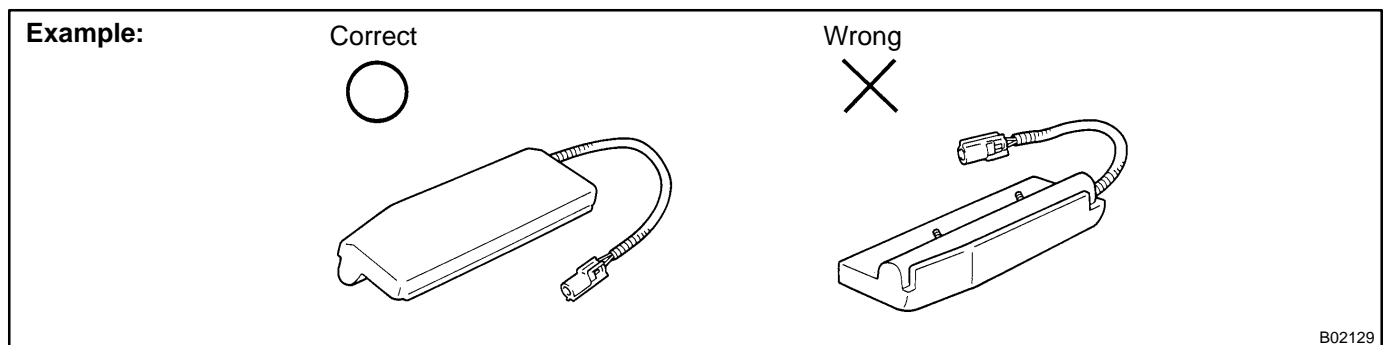
HINT:

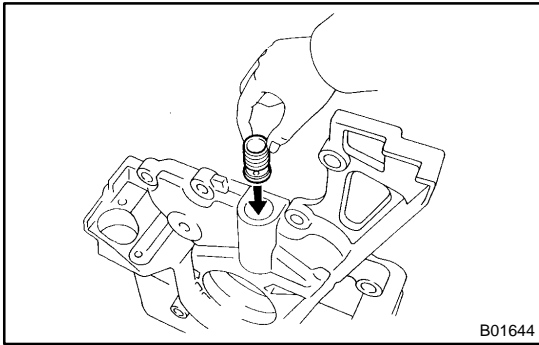
The Nos.1, 3, 5 injector connectors and dark gray, and the Nos.2, 4, 6 injector connectors are brown.

- (d) Connect the camshaft timing oil control valve connector.
(e) Connect the camshaft position sensor connector.
(f) Connect the ECT sensor connector.

(f) SIDE AIRBAG ASSEMBLY

- (1) Always store a removed or new side airbag assembly with the airbag deployment direction facing up. Storing the airbag assembly with the airbag deployment direction facing down could cause a serious accident if the airbag deploys.
- (2) Never measure the resistance of the airbag squib. (This may cause the airbag to deploy, which is very dangerous.)
- (3) Grease should not be applied to the side airbag assembly and the surface should not be cleaned with detergents of any kind.
- (4) Store the airbag assembly where the ambient temperature remains below 93°C (200°F), without high humidity and away from electrical noise.
- (5) When using electric welding, first disconnect the airbag connector (yellow color and 2 pins) under the seat before starting work.
- (6) When disposing of a vehicle or the side airbag assembly alone, the airbag should be deployed using an SST before disposal (See page RS-43). Perform the operation in a safe place away from electrical noise.

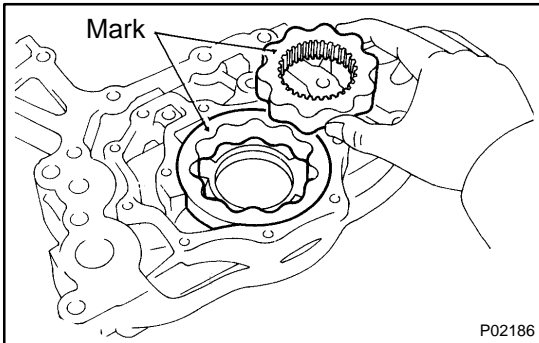




INSPECTION

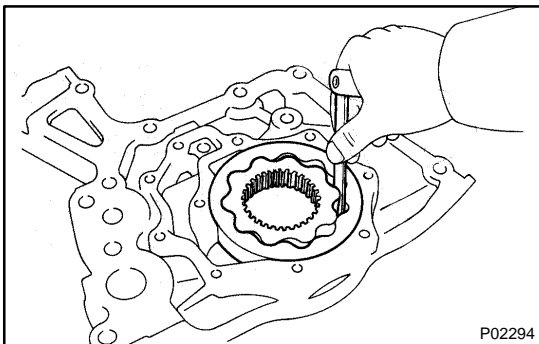
1. INSPECT RELIEF VALVE

Coat the valve with engine oil and check that it falls smoothly into the valve hole under its own weight. If it doesn't, replace the relief valve. If necessary, replace the oil pump assembly.



2. PLACE DRIVE AND DRIVEN ROTORS INTO OIL PUMP BODY

The marks on the rotors must face up.



3. INSPECT ROTOR TIP CLEARANCE

Using a feeler gauge, measure the clearance between the drive and driven rotors.

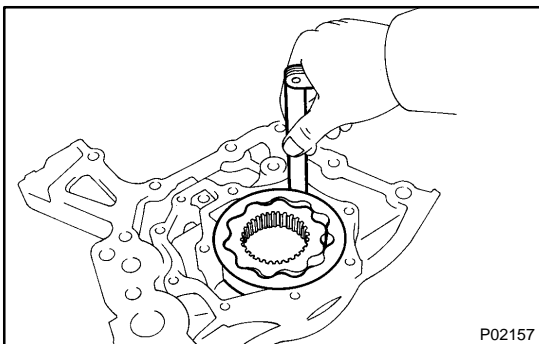
Standard tip clearance:

0.060 – 0.240 mm (0.0024 – 0.0094 in.)

Maximum tip clearance:

0.30 mm (0.0118 in.)

If the tip clearance is greater than maximum, replace the rotors as a set.



4. INSPECT ROTOR BODY CLEARANCE

Using a feeler gauge, measure the clearance between the driven rotor and pump body.

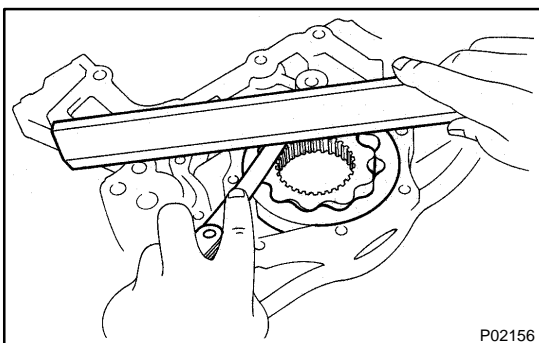
Standard body clearance:

0.100 – 0.175 mm (0.0039 – 0.0069 in.)

Maximum body clearance:

0.20 mm (0.0079 in.)

If the body clearance is greater than maximum, replace the rotors as a set. If necessary, replace the oil pump assembly.



5. INSPECT ROTOR SIDE CLEARANCE

Using a feeler gauge and precision straight edge, measure the clearance between the rotors and precision straight edge.

Standard side clearance:

0.030 – 0.090 mm (0.0012 – 0.0035 in.)

Maximum side clearance:

0.12 mm (0.0047 in.)

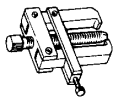
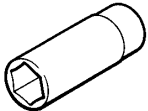

If the side clearance is greater than maximum, replace the rotors as a set. If necessary, replace the oil pump assembly.

6. REMOVE DRIVE AND DRIVEN ROTORS

STARTING (2JZ-GE)

SST (Special Service Tools)




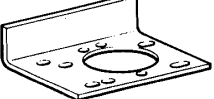


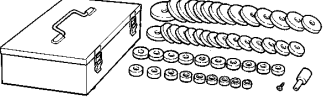


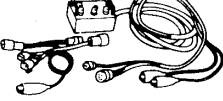

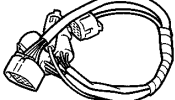
PP0TV-01

	09286-46011	Injection Pump Spline Shaft Puller	Armature bearing
	09810-38140	Starter Magnet Switch Nut Wrench 14	Terminal nut
	09820-00030	Alternator Rear Bearing Replacer	Armature rear bearing

BRAKE

SST (Special Service Tools)

PP123-01

	<p>09023-00100 Union Nut Wrench 10 mm</p>	
	<p>09318-12010 Transfer Bearing Adjusting Nut Wrench</p>	
	<p>09630-00014 Power Steering Gear Housing Overhaul Tool Set</p>	
	<p>(09631-00142) Overhaul Stand</p>	
	<p>09709-29018 LSPV Gauge Set</p>	
	<p>09843-18020 Diagnosis Check Wire</p>	
	<p>09950-60010 Replacer Set</p>	
	<p>(09951-00180) Replacer 18</p>	
	<p>(09951-00190) Replacer 19</p>	
	<p>09990-00150 ABS Actuator Checker and Sub-harness</p>	
	<p>09990-00240 ABS Actuator Checker Sheet "G"</p>	
	<p>09990-00480 ABS Actuator Checker Sub-harness "S"</p>	