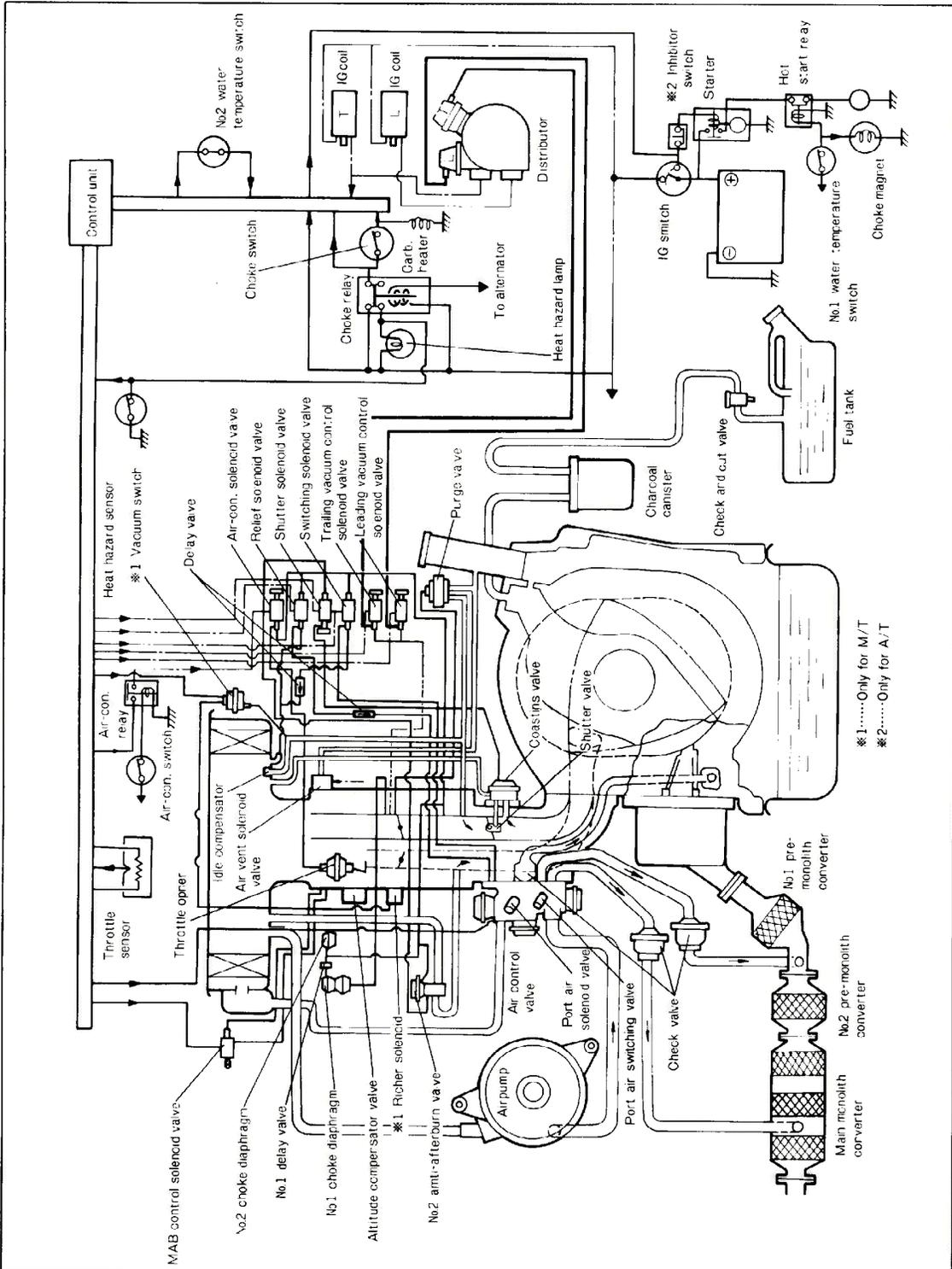


FUEL AND EMISSION CONTROL SYSTEM (12A ENGINE)

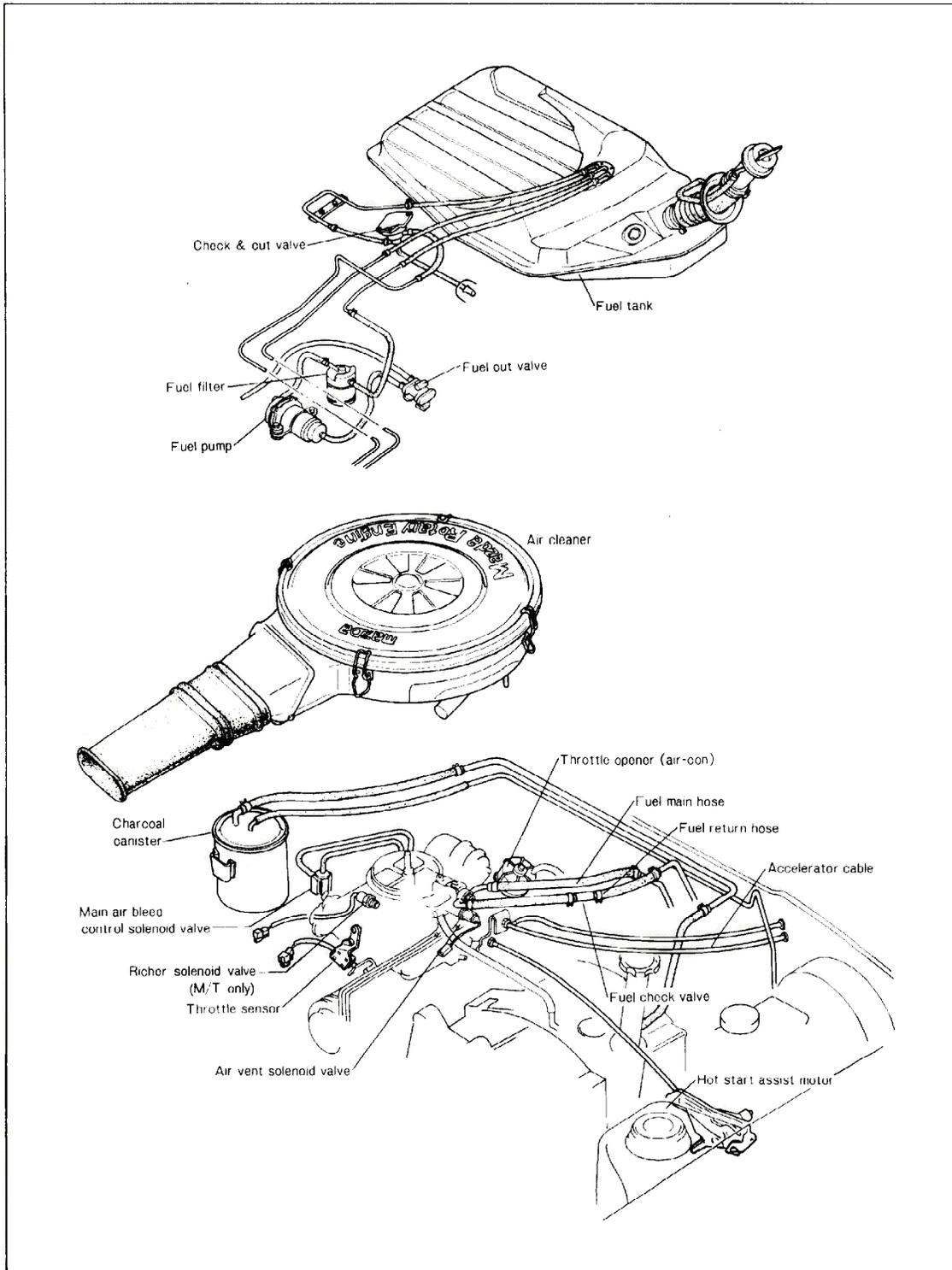
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SYSTEM DIAGRAM



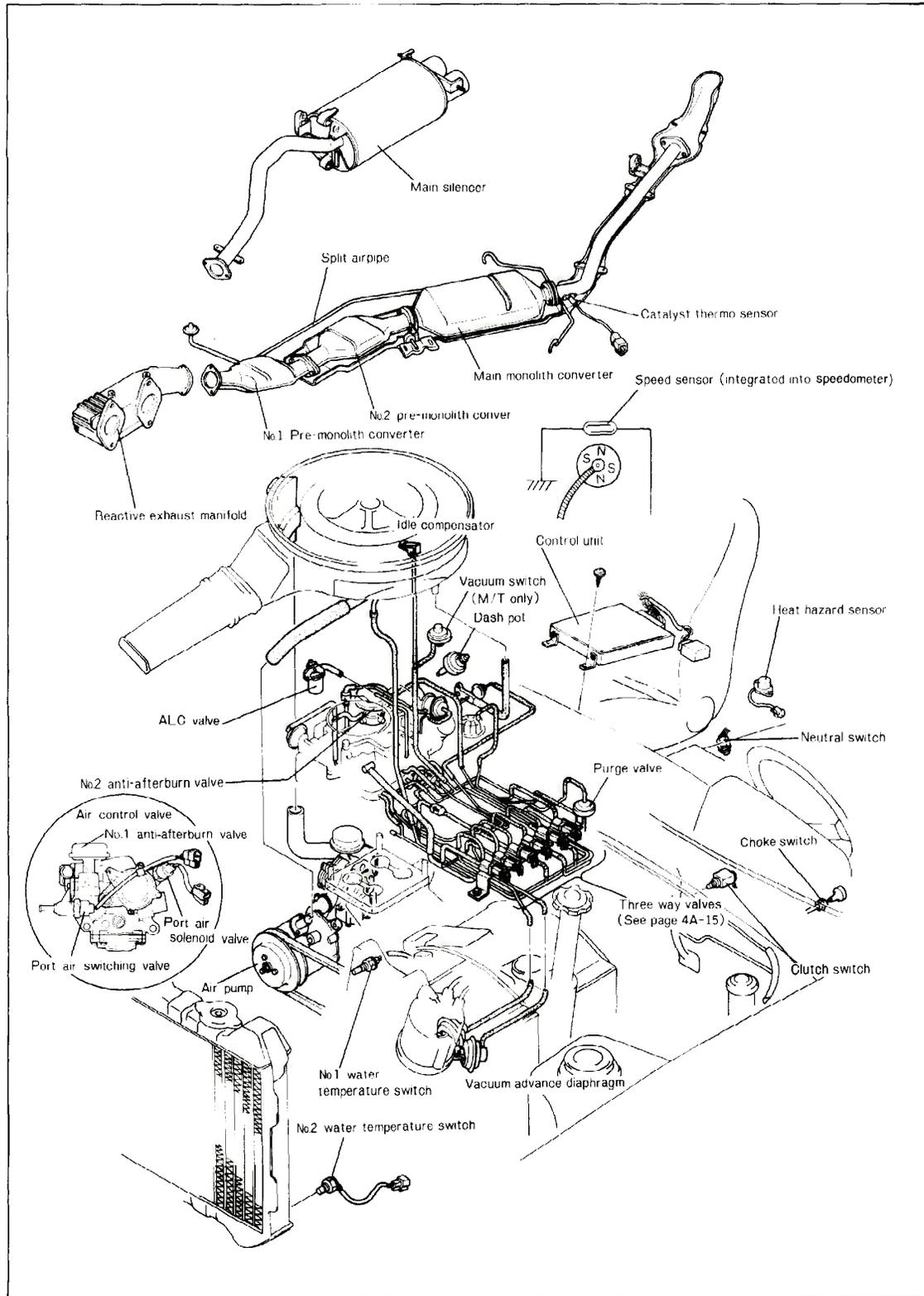
57U04A-502

EMISSION CONTROL SCHEMATIC DIAGRAM



47U04A-503

4A EMISSION CONTROL SCHEMATIC DIAGRAM



47U04A-504

COMPONENT DESCRIPTIONS

Component	Function	Remarks
1. Anti-Afterburn Valve (No. 1)	Supplies fresh air into the front primary port during deceleration	Included in air control valve; vacuum operated
2. Anti-Afterburn Valve (No. 2)	Supplies fresh air into the rear secondary port during deceleration	Vacuum operated
3. A/C Solenoid Valve	Applies vacuum to the throttle opener when A/C switch is turned on	White
4. Air Cleaner	Filters air into carburetor	
5. Air Control Valve (ACV)	Directs air to one of three locations: Exhaust port, 3-bed catalyst or back to the air cleaner	Consists of 3 valves: Air relief valve Air switching valve No. 1 AAV
6. Air Pump	Supplies secondary air to ACV	
7. Air Vent Solenoid Valve	Vents float chamber to the canister while the engine stops	When the engine is started, the fumes are drawn into the intake manifold through purge valve
8. ALC Valve	Leans the mixture at high altitude	Adds air to carburetor air bleeds
9. Canister	Stores gas tank and carburetor fumes when engine stops	Vented to atmosphere through charcoal and filter
10. Catalyst Thermo Sensor	Detects exhaust gas temperature; sends signal to control unit	Rear exhaust pipe of rear catalyst opens when: 770°C (1418°F) . . . M/T 740°C (1364°F) . . . A/T
11. Check and Cut Valve	Releases excessive pressure or vacuum in the fuel tank to atmosphere Prevents fuel loss if the vehicle is overturned	

57U04A-505

4A COMPONENT DESCRIPTIONS

Component	Function	Remarks
12. Choke Bimetal Heater	Gradually opens the choke valve after engine is started	ON: after engine is started with choke OFF: when choke returns to off position
13. Choke Diaphragm (No. 1)	Pulls choke valve partially open after delay valve opens or when accelerating (ported vacuum)	2 diaphragms, connected to choke bimetal
14. Choke Diaphragm (No. 2)	Forces the choke valve to open a little after engine is started	1 diaphragm connected to choke valve
15. Choke Switch	Applies power to choke heater, controls secondary air injection and distributor vacuum advance through control unit	Pull knob out above 10 mm (0.4 in): closed
16. Clutch Switch and Neutral Switch (only for MT/)	Detect in-gear condition	Closes when clutch pedal is depressed; opens when clutch pedal is released Closes in neutral; opens in all other ranges
17. Coasting valve	Supplies fresh air into the rear primary port when decelerating to prevent excessive vacuum	
18. Control Unit	<p>Detects the following:</p> <ol style="list-style-type: none"> 1 Engine speed 2 Radiator coolant temperature 3 Throttle opening 4 Choke condition 5 Floor temperature 6 Air conditioner ON/OFF condition 7 Exhaust gas temperature 8 Vehicle speed <p>Controls operation of the following:</p> <ol style="list-style-type: none"> 1 Vacuum control solenoid valve (T) 2 Vacuum control solenoid valve (L) 3 Switching solenoid valve 4 Shutter solenoid valve 5 Relief solenoid valve 6 Air con. solenoid valve 7 Port air solenoid valve 8 Main air bleed control solenoid valve 9 Richer solenoid valve 10 Fuel pump cut relay 	<ol style="list-style-type: none"> 1 Ignition coil - terminal 2 No. 2 water temperature switch 3 Throttle sensor 4 Choke switch 5 Heat hazard sensor 6 Air con. switch 7 Thermo sensor 8 Speed sensor

47U04A-506

COMPONENT DESCRIPTIONS **4A**

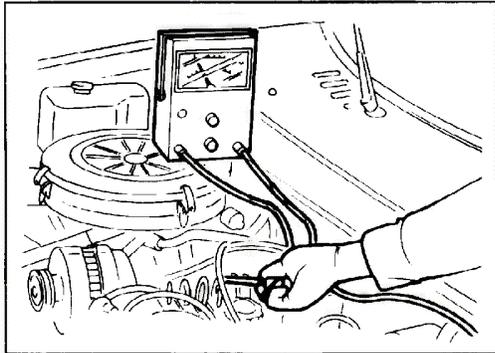
Component	Function	Remarks
19. Dash Pot	Gradually closes throttle during deceleration	Contacts at 3,800 ~ 4,200 rpm (in neutral)
20. Delay Valve	Delays switching valve operation from port air to split air	Delay time: 0.8 ~ 1.5 sec.
21. Delay Valve	Delays relief valve operation from relief air to injection air	Delay time: 0.8 ~ 1.5 sec.
22. Heat Hazard Sensor	Detects floor temperature and sends signal to control unit	Closes above 130°C (266°F) When heat-hazard sensor is closed; relieves secondary air
23. Idle Compensator	Keeps idle constant with temperature change	Operation temperature: 65°C (149°F)
24. Main Air Bleed Control Solenoid Valve	Opens air passage and leans the mixture during acceleration at a certain speed	Adds air to primary main air bleed Opens air passage when; Engine speed: 3,000 ~ 4,000 rpm Vehicle speed: above 50 MPH
25. No. 1 Pre-monolith Converter	Reduces HC and CO	Oxidizing catalyst
26. No. 2 Pre-monolith Converter	Reduces HC, CO and NO x	3 Way catalyst
27. Port Air Solenoid Valve (Located on ACV)	Closes port air by-pass passage during acceleration at a certain speed (Secondary air is injected into exhaust port)	Closes port air by-pass passage when; Engine speed: 3,000 ~ 4,000 rpm Vehicle speed: above 50 MPH
28. Port Air Switching Valve (Located on ACV)	Opens port air by-pass passage during acceleration at a certain speed (Secondary air is injected to back of No. 1 per-monolith converter)	Opens port air by-pass passage when; Engine speed: 3,000 ~ 4,000 rpm Vehicle speed: above 50 MPH
29. Purge Valve	Carries evaporative fumes from gas tank and canister to intake manifold	During open throttle
30. Relief Solenoid Valve	Relieves secondary air to air cleaner when unnecessary	Blue
31. Richer Solenoid Valve (only for M/T)	Opens primary fuel passage after decelerating	Operates for 30 seconds when the engine speed becomes 1,100 rpm or less

4A COMPONENT DESCRIPTIONS

Component	Function	Remarks
32. Shutter Solenoid Valve	Operates coasting valve during deceleration above 1,100 rpm Operates shutter valve at the same time	Yellow
33. Shutter Valve	Shuts off the rear primary port during deceleration	
34. Speed Sensor	Detects vehicle speed	Reed switch; integrated into speedometer
35. Split Air Injection Pipe	Secondary air injected into main converter between center monolith and rear monolith Above 1,100 rpm with open throttle and choke off	
36. Switching Solenoid Valve	Switches the secondary air to exhaust port or rear catalyst	Gray
37. Throttle Opener	Pulls the throttle valve partially open when A/C switch is turned on	Compensates for load of compressor During air con. operation; 1,200 rpm (neutral)
38. Throttle Sensor	Detects the throttle opening angle	
39. Vacuum Advance Diaphragm	Controlled by solenoid valve	
40. Vacuum Control Solenoid Valve	Cut vacuum to distributor during deceleration, etc.	Leading: Brown Trailing: Green
41. Vacuum Switch (only for M/T)	Detects intake manifold vacuum	Opens at intake manifold vacuum of 0 ~ 120 mmHg (0 ~ 4.7 inHg)
42. Water Temperature Switch (No. 1)	Holds choke on below 70°C Operates hot start motor above 70°C	On the water pump body Below 70°C (158°F): closed
43. Water Temperature Switch (No. 2)	Detects radiator coolant temperature; sends signal to control unit	Above 15°C (59°F): closed
44. 3-bed Monolith Converter	Further reduces HC, CO and NO _x	3 Way catalyst (Main converter)

57U04A-508

EMISSION CHECKING PROCEDURE



47U04A-001

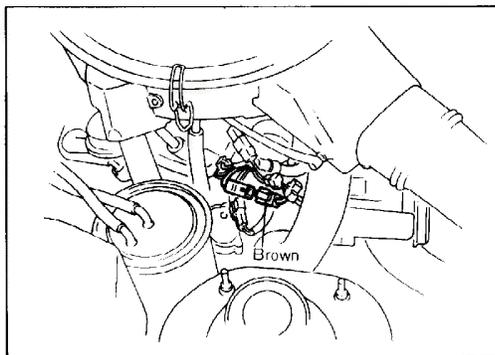
CHECK/ADJUST IDLE SPEED

1. Warm up the engine and run it at idling speed.
2. Connect a tachometer to the engine.
3. Adjust the idling speed to 750 rpm by turning the throttle adjust screw.

Idling speed:

750 rpm in neutral (M/T)

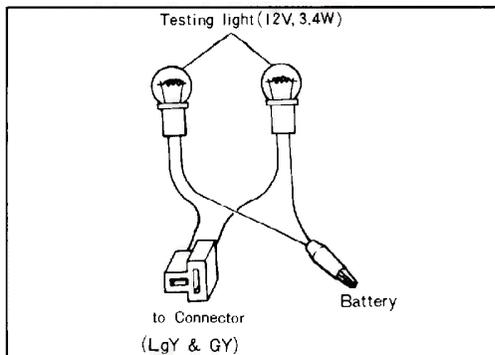
750 rpm in "D" position (A/T)



47U04A-002

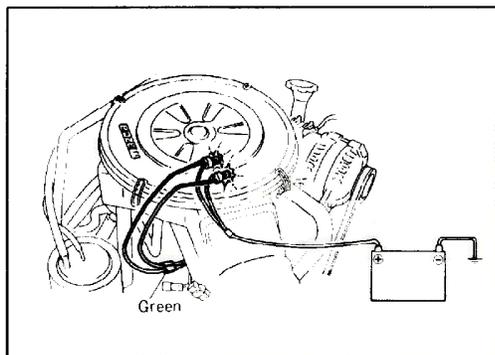
CHECK/ADJUST THROTTLE SENSOR

4. Inspect and adjust the throttle sensor as follows:
 - 1) Disconnect the connector (brown).



47U04A-003

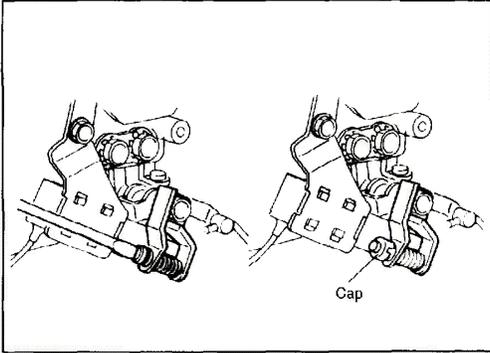
- 2) Connect the testing lights to the checking connector (Green) and battery.



47U04A-004

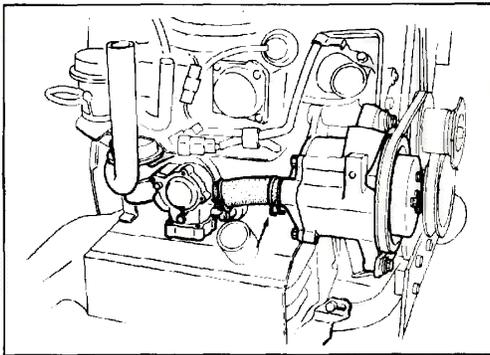
- 3) Quickly decelerate the engine speed from 3,000 rpm to idling speed and make sure that the both testing lights illuminate simultaneously.

4A EMISSION CHECKING PROCEDURE



47U04A-005

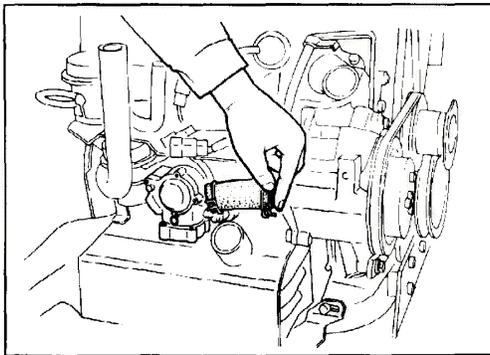
- 4) If the both testing lights do not illuminate simultaneously, remove the cap from the throttle sensor adjusting screw and turn the adjusting screw clockwise or counterclockwise. Repeat steps 3) and 4) until the both testing lights illuminate simultaneously.
- 5) After adjusting, install the cap onto the adjusting screw.
- 6) Disconnect the testing lights
- 7) Connect the connector (Brown).



47U04A-006

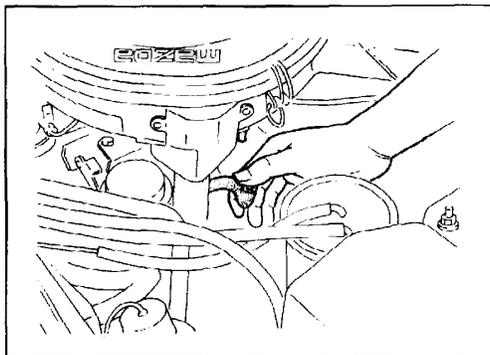
CHECKING No. 1 AAV

5. Disconnect the air hose (air pump ~ air control valve) at the air pump and place a finger over the air hose opening.



47U04A-007

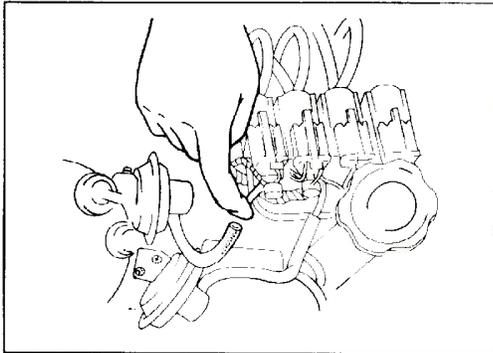
6. Increase the engine speed more than 3,000 rpm then decrease the engine speed rapidly.
7. Make sure that air is sucked into the air hose for a few seconds while decelerating.
8. Reconnect the air hose to the air pump.



47U04A-008

CHECKING No. 2 AAV

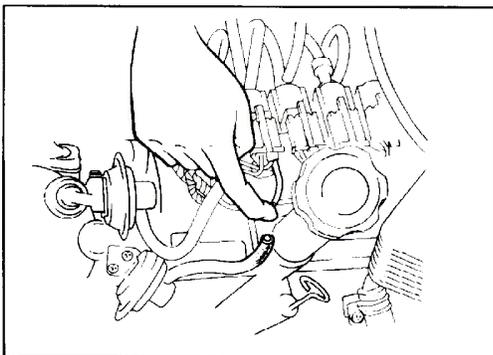
9. Disconnect the air hose (air cleaner ~ No. 2 anti-afterburn valve) at the air cleaner and place a finger over the air hose opening.
10. Increase the engine speed more than 3,000 rpm then decrease the engine speed rapidly.
11. Make sure that air is sucked into the air hose for a few seconds while decelerating.
12. Connect the air hose to the air cleaner.



47U04A-009

CHECKING LEADING VACUUM ADVANCE SOLENOID VALVE

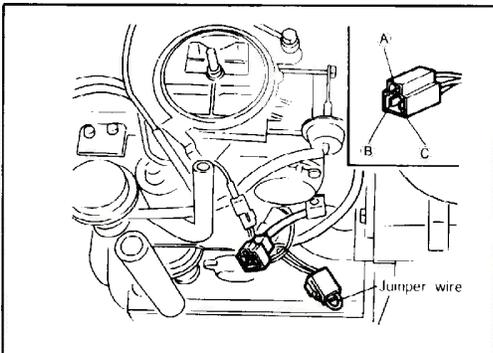
13. Disconnect the vacuum sensing tube (vacuum advance diaphragm leading ~ pipe) at the pipe.
14. Place a finger over the pipe opening and make sure that air is not sucked into the pipe.
15. Gradually increase the engine speed and make sure that air is sucked into the pipe when the engine speed is 1,000 ~ 1,200 rpm or higher. Decrease the engine speed from 4,000 rpm rapidly and make sure that air is not sucked into the pipe while decelerating.
16. Reconnect the vacuum sensing tube.



57U04A-010

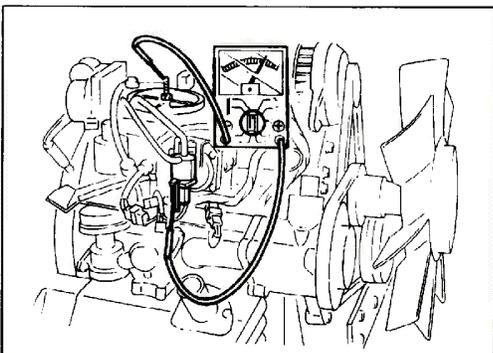
CHECKING TRAILING VACUUM ADVANCE SOLENOID VALVE

17. Disconnect the vacuum sensing tube (vacuum advance diaphragm trailing ~ pipe) at the pipe.
18. Place a finger over the pipe opening and make sure that air is not sucked into the pipe.
19. Increase the engine speed and make sure that air is sucked into the pipe when the engine speed is 2,900 ~ 3,100 rpm or higher. Decrease the engine speed from 4,000 rpm rapidly and make sure that air is not sucked into the pipe while decelerating.
20. Reconnect the vacuum sensing tube.



47U04A-011

21. Disconnect the connector from the throttle sensor and connect a jumper wire to A and C terminals of the connector.

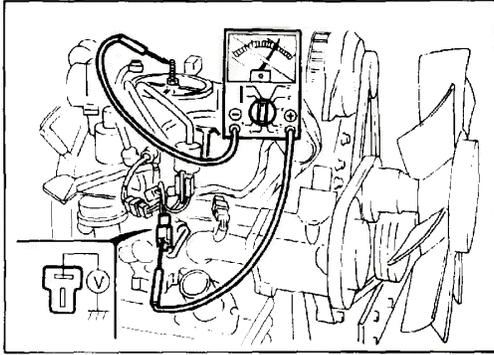


47U04A-012

CHECKING MAIN AIR BLEED SOLENOID VALVE

22. Connect the voltmeter to the main air bleed control solenoid (Br) terminal and ground.
23. Increase the engine speed and observe the voltmeter reading.

Engine speed (rpm)	Voltage (V)
Idling speed ~ 3,000	approx. 12
3,000 ~ 4,000	below 2
more than 4,000	approx. 12



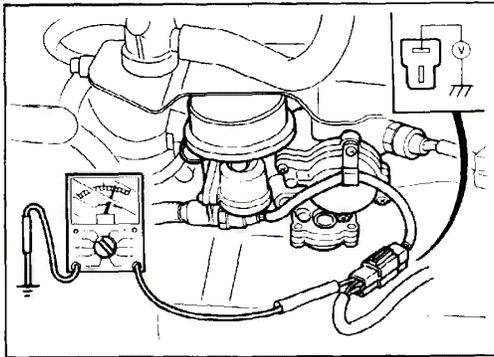
47U04A-013

CHECKING PORT AIR SOLENOID VALVE

24. Disconnect the voltmeter from main air bleed control solenoid then connect it to the port air solenoid (GB) terminal and ground.
25. Increase the engine speed and observe the voltmeter reading.

Engine speed (rpm)	Voltage (V)
Idling speed ~ 3,000	below 2
3,000 ~ 4,000	approx. 12
more than 4,000	below 2

26. Disconnect the voltmeter from the port air solenoid.



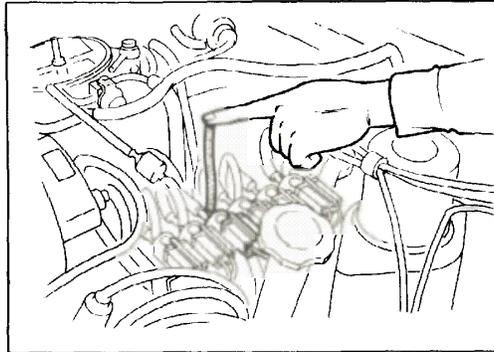
57U04A-001

CHECKING PORT AIR SWITCHING VALVE

27. Connect the voltmeter to the port air switching valve (R) terminal and ground.
28. Increase the engine speed and observe the voltmeter reading.

Engine speed (rpm)	Voltage (V)
Idling speed ~ 3,000	approx. 12
3,000 ~ 4,000	below 2
more than 4,000	approx. 12

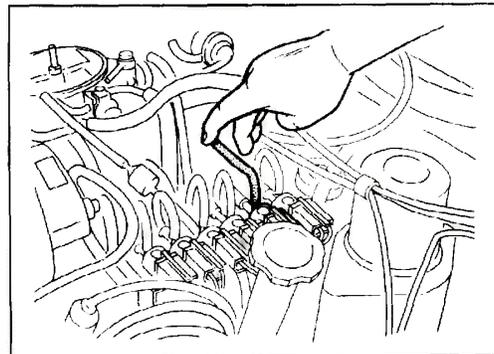
29. Disconnect the voltmeter from the port air switching valve.



57U04A-014

CHECKING SWITCHING SOLENOID VALVE

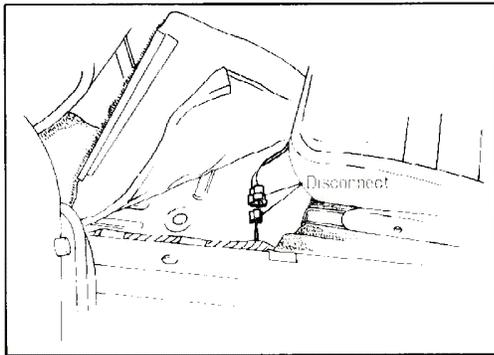
30. Disconnect the vacuum sensing tube (switching solenoid valve ~ pipe) at the pipe.
31. Place a finger over the vacuum sensing tube opening and make sure that air is sucked into the tube.
32. Gradually increase the engine speed and make sure that air is not sucked into the tube when the engine speed is 1,000 ~ 1,200 rpm or higher.
33. Reconnect the vacuum sensing tube.



57U04A-015

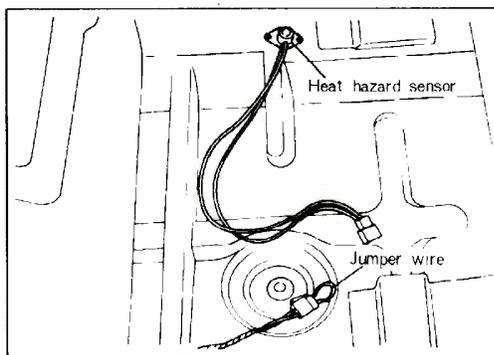
CHECKING RELIEF SOLENOID VALVE

34. Disconnect the vacuum sensing tube (Relief solenoid valve ~ pipe) at the pipe.
35. Place a finger over the vacuum sensing tube opening and make sure that air is sucked into the tube.
36. Increase the engine speed and make sure that air is not sucked into the tube when the engine speed is 3,600 ~ 4,400 rpm or higher.



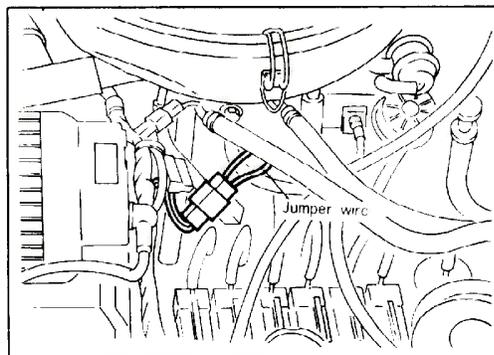
57U04A-016

37. Disconnect the connector from the catalyst thermo sensor.
38. Gradually increase the engine speed and make sure that air is not sucked into the tube when the engine speed is 1,000 ~ 1,200 rpm or higher.
39. Reconnect the connector to the catalyst thermo sensor.



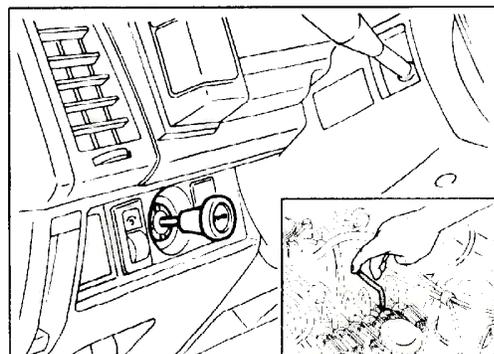
57U04A-017

40. Disconnect the jumper wire connected in step 21 and connect the connector to the throttle sensor.
41. Disconnect the connector from the heat hazard sensor and connect a jumper wire to both terminals of the connector.
42. Make sure that air is not sucked into the tube at any engine speed.
43. Disconnect the jumper wire connected in step 41 and reconnect the connector to the heat hazard sensor.



57U04A-018

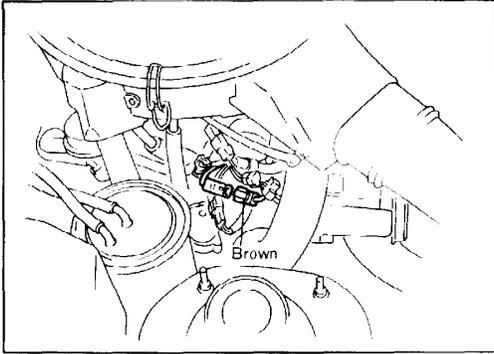
44. Stop the engine and disconnect the connector from the No. 2 water temperature switch on the radiator.
45. Disconnect the connector from the No. 1 water temperature switch and connect a jumper wire to both terminals of the connector.



57U04A-016

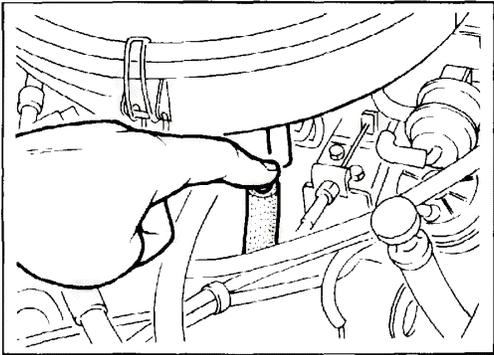
46. Pull the choke knob out about 15 mm (0.6 in) and start the engine.
47. Gradually increase the engine speed and make sure that air is not sucked into the tube when the engine speed is 1,000 ~ 1,200 rpm or higher.
48. Connect the vacuum sensing tube to the pipe.
49. Stop the engine and reconnect the No. 2 water temperature switch connector disconnected in step 44.
50. Disconnect a jumper wire connected in step 45 and connect the connector to the No. 1 water temperature switch.

4A EMISSION CHECKING PROCEDURE



57U04A-016

51. Start the engine and run it at idling speed.
52. Disconnect the connector (Brown).
(Only for A/T)

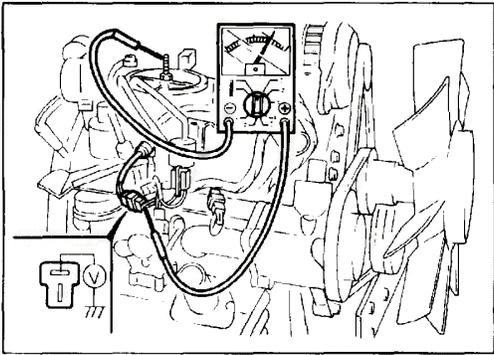


57U04A-018

CHECKING COASTING VALVE

53. Disconnect the air hose (coasting valve ~ air cleaner) at the air cleaner.
54. Place a finger over the air hose opening.
55. Increase the engine speed more than 3,000 rpm then decrease rapidly. Make sure that air is sucked into the air hose until the engine speed decreases to 1,000 ~ 1,200 rpm.
56. Reconnect the air hose to the air cleaner.
57. Reconnect the connector (Brown) disconnected in step 52. (Only for A/T)

A/T equipped vehicles proceed to step 60.



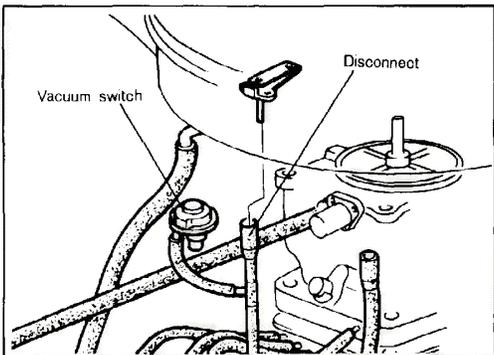
57U04A-019

CHECKING RICHER SOLENOID VALVE

58. Connect a voltmeter to the richer solenoid (WR) terminal and ground, then take a reading. (Only for M/T)

Voltage : 12V

59. Increase the engine speed more than 1,500 rpm and then decrease it.
Observe the voltmeter reading.
The voltmeter should show below 2V for 30 seconds when the engine speed becomes 1,100 rpm or less.



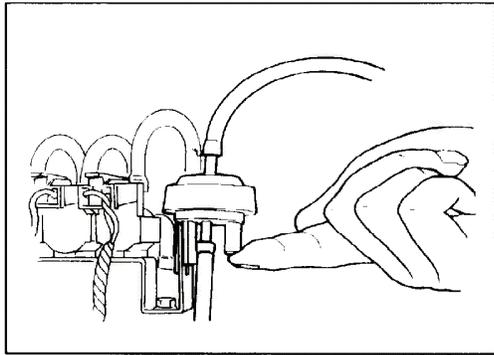
57U04A-020

60. Disconnect the vacuum sensing tube of the vacuum switch at the idle compensator and take a voltmeter reading.

Voltage : 0V

61. Reconnect the vacuum sensing tube to the idle compensator.
62. Disconnect the voltmeter.

VACUUM HOSE ROUTING DIAGRAM 4A

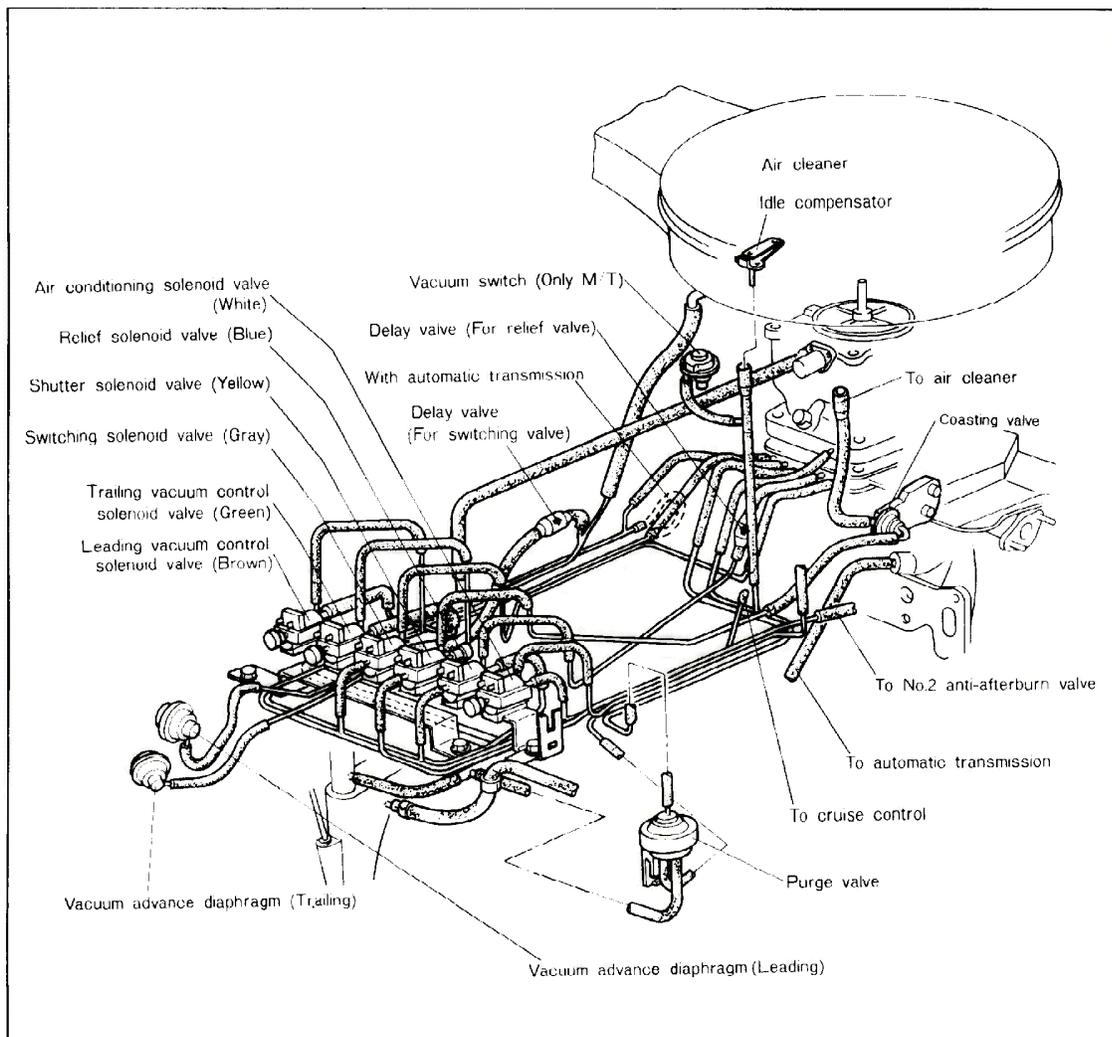


57U04A-021

CHECKING PURGE VALVE

63. Disconnect the hose (purge valve ~ oil filler pipe) from the purge valve.
64. Place a finger over the port of purge valve opening.
65. Increase the engine speed to 2,000 rpm and make sure air is sucked into the port.
66. Connect the hose to the purge valve.
67. Stop the engine and disconnect the tachometer from the engine.

VACUUM HOSE ROUTING DIAGRAM



47U04A-515

SPECIFICATIONS

Fuel tank capacity		63ℓ (16.4 U.S. gallons) (13.9 Imp. gallons)		
Fuel pump	Type	Motor		
	Fuel pressure	20 ~ 25 kPa (2.84 ~ 3.54 psi)		
	Feeding capacity	1,400 cc/min or more		
Fuel filter		Filter paper type		
Carburetor	Type	Downdraft type (4-barrel, 2-stage)		
	Throat diameter	28 x 34 mm (primary side x secondary side) (1.10 x 1.3386 in)		
	Venturi diameter	Primary	20 x 13 x 6.5 mm (0.79 x 0.51 x 0.26 in)	
		Secondary	28 x 10 mm (1.1 x 0.39 in)	
	Main jet	Primary	#92 #91 (A/T)	
		Secondary	#160	
	Main air bleed	Primary	No. 1	#70 #60 (A/T)
			No. 2	#70
		Secondary	#140	
	Slow jet	Primary	#46	
		Secondary	#110	
	Slow air bleed	Primary	No. 1	#70
			No. 2	#170 #150 (A/T)
		Secondary	No. 1	#160
			No. 2	#60
	Richer jet		#40 (M/T)	
Richer air bleed		#130 (M/T)		
Primary slow economizer		#100		
Idle speed	M/T	750 rpm (Neutral)		
	A/T	750 rpm (at "D")		
Air cleaner	Fresh-hot switching	Bi-metal type		
	Element	Long life dry		
Dash pot	Adjustment speed	3,800 ~ 4,200 rpm (in neutral)		
Throttle opener	Adjustment speed	1,150 ~ 1,250 rpm (in neutral)		

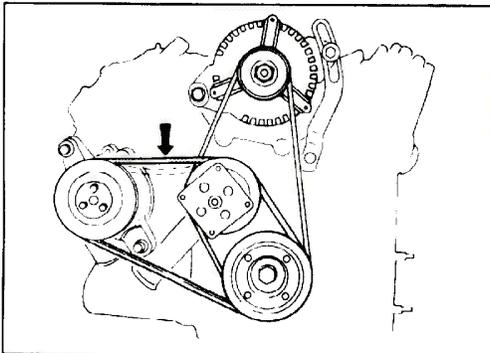
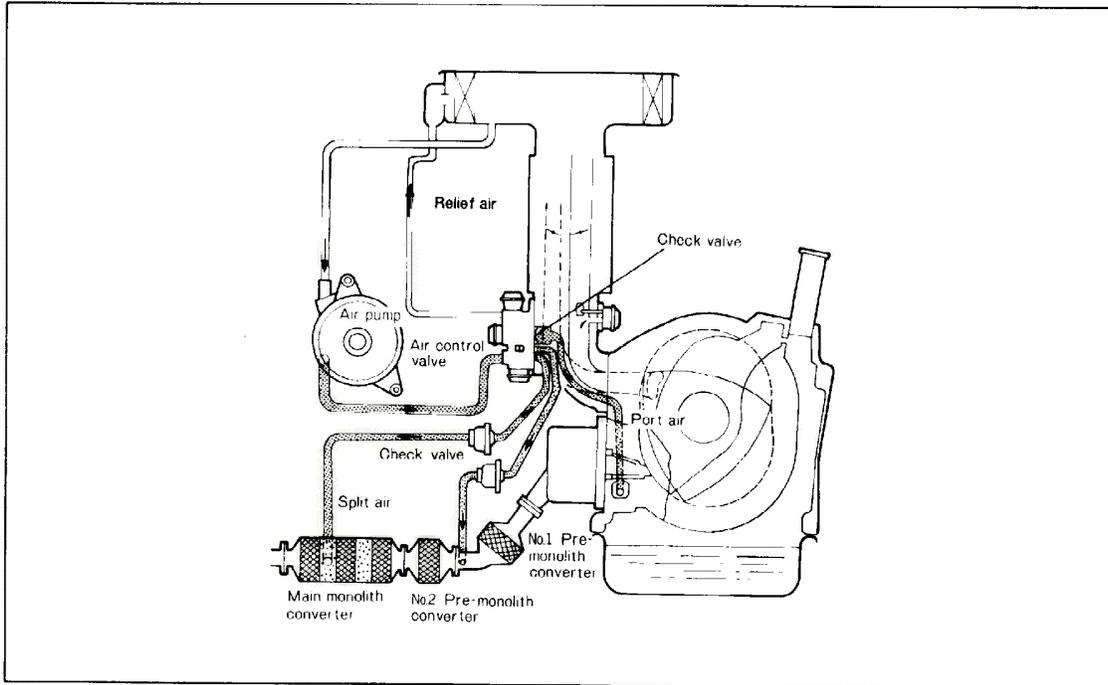
47U04A-516

TROUBLESHOOTING GUIDE

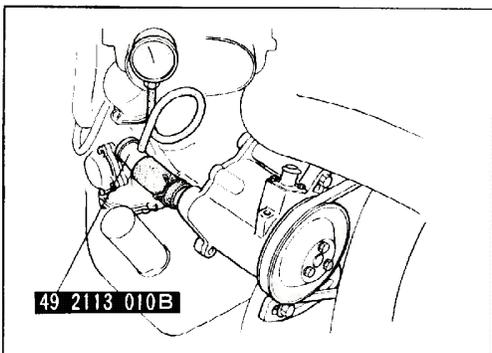
Problem	Possible Cause	Remedy	Page
Hard starting	Flooding	Refer below to the section on flooding	—
	Fuel pump malfunction	Replace	4A-48
	Improperly adjusted idle	Adjust	4A-62
	Choke malfunction	Adjust	4A-60
	Clogged jet(s)	Clean	4A-57
	Malfunction of idle compensator valve Intake system vacuum leakage	Replace Repair	4A-51
Rough idling	Improperly adjusted idle	Adjust	4A-62
	Flooding	Replace	4A-59
	Damaged mixture adjustment screw	Refer below to the section on flooding	—
	Malfunction of anti-afterburn valve	Replace	4A-39
	Slow flow, clogged idle port	Clean	4A-57
	Clogged main jet	Clean	—
	Idle compensator valve malfunction	Replace	4A-57
	Poor or damaged intake manifold gasket or carburetor insulator seal	Tighten or replace	—
	Throttle valve closes improperly or does not close	Repair or replace	4A-57
	Malfunction of shutter and coasting valve Broken, worn, or disconnected vacuum hose	Repair or replace Repair or replace	4A-38 —
Excessively high idle speed	Malfunction of hot idle compensator valve	Replace	4A-51
	Malfunction of throttle opener system	Adjust or replace	4A-66
	Improperly adjusted dash pot	Adjust	4A-40
Flooding	Damaged or improperly installed needle valve	Clean or replace	4A-54
	Improperly adjusted float level	Adjust	—
	Excessive fuel pump injection pressure	Replace	?
	Damaged float chamber gasket or loose installation screw	Tighten or replace	—
	Sunken float	Adjust	4A-59
Poor acceleration	Malfunctions in accelerator pump	Replace	4A-61
	Malfunction in throttle valve	Repair	4A-57
	Clogged jet(s)	Clean	4A-57
Poor operation at high speeds	Clogged main jet	Clean	4A-57
	Float level is too low	Adjust	4A-59
	Clogged fuel filter or fuel line	Replace or clean	4A-48
	Dirty air cleaner element	Replace	—
	Insufficient fuel pump discharge	Replace	4A-47
	Improper secondary valve opening	Repair	—
Excessive fuel consumption	Float level is too high	Adjust	4A-59
	Clogged air cleaner	Clean	—
	Loose jet(s)	Tighten	4A-57
	Damaged gasket	Replace	—
	Improper choke valve opening	Repair	4A-60
	Improperly adjusted idle	Adjust	4A-62
	Dirty air cleaner element	Replace	—
Collapsed fuel tank	Malfunction of evaporative check-and-cut valve	Replace	4A-45
	Clogged hoses of evaporative line	Replace	—
Noisy exhaust system	Exhaust-gas leakage	Repair	4A-22
	Loose insulator mounting bolt	Tighten	4A-22

57U04A-517

AIR INJECTION AND CATALYST



47U04A-022

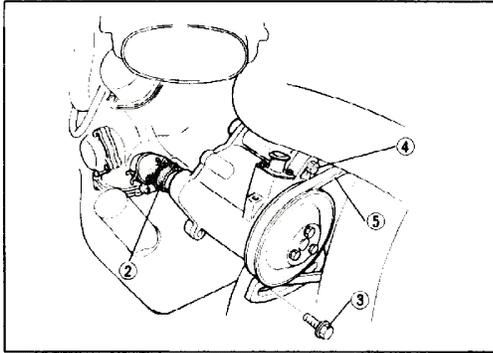


57U04A-023

AIR PUMP

Checking Air Pump

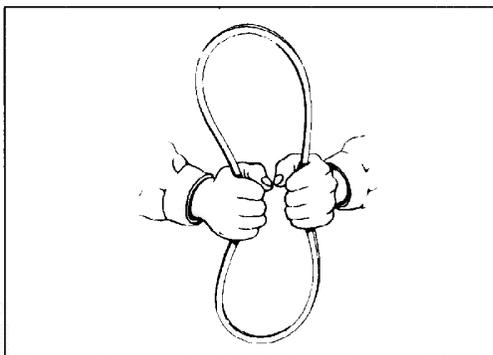
1. Warm up the engine until it reaches normal operating temperature.
Inspect hoses and connections for leaks.
2. Check the air pump for noise, if excessive, replace the air pump.
3. Check the air pump drive belt tension. Adjust to specifications, if necessary.
4. Disconnect the air hose (air pump ~ air control valve) at the air control valve.
5. Connect the **air pump gauge set (49 2113 010B)** to the air hose and clamp the hose securely to gauge.
6. Connect a tachometer to the engine.
7. Start the engine and run it at idling speed.
8. Observe the pressure reading on test gauge. The pressure reading should be **more than 11.5 kpa (1.64 lb/in²) at 800 rpm.**
9. If the pump pressure does not meet minimum specifications, replace the air pump and repeat test.



47U04A-024

Replacing Air Pump

1. Remove the air cleaner.
2. Disconnect the air inlet and outlet hoses.
3. Remove the air pump strap bolt.
4. Remove the air pump mounting bolt.
5. Disengage the air pump drive belt and remove the air pump.
6. Install the air pump in the reverse order of removing and adjust the drive belt tension.

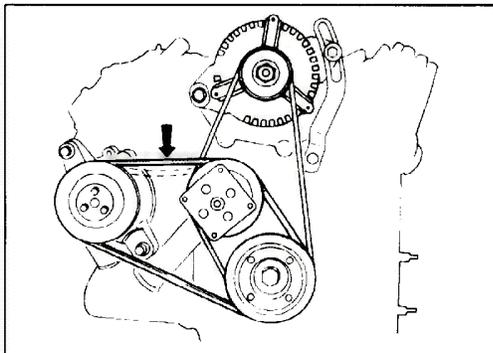


47U04A-025

AIR PUMP DRIVE BELT

Checking Air Pump Drive Belt

1. Check the drive belt for cracks, stretches or any type of deterioration. Also check that no oil or grease adheres to the belt. Replace if necessary.
2. If the belt noisy check for looseness or misaligned pulleys.



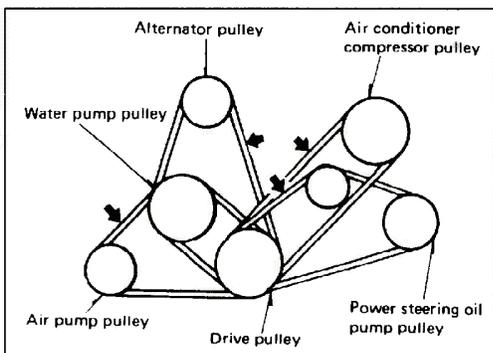
47U04A-026

Adjusting Air Pump Drive Belt

1. Loosen the air pump strap bolt and mounting bolt.
2. Move the air pump toward or away from the engine until the correct belt tension is obtained.

**Belt tension: 11 ~ 13 mm (0.43 ~ 0.51 in)
when pressed at 10 kg (22 lb)**

3. Tighten the pump mounting and strap bolts.

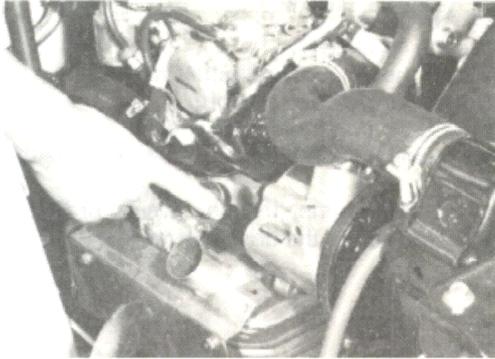


47U04A-027

Replacing Air Pump Drive Belt

1. Loosen the air con. and power steering pulley drive belts until the drive belt can be removed (if equipped).
2. Loosen the air pump strap and mounting bolts, then move the air pump until the drive belt can be removed.
3. Install a new belt and adjust the belt tension as explained above.
4. Install the air con. and power steering pulley drive belts and adjust the belt tension.

**Belt tension: 10 ~ 12 mm (0.40 ~ 0.47 in)... Power steering
when pressed at 10 kg (22 lb) and Air-con.**

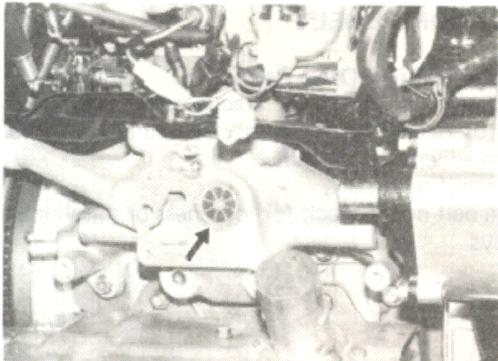


47U04A-028

CHECK VALVE (IN THE INTAKE MANIFOLD)

Checking Check Valve

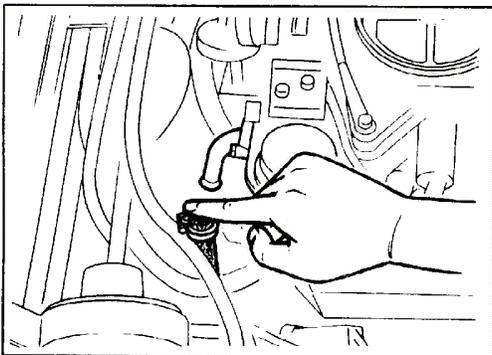
1. Disconnect the air hose (air pump ~ air control valve) at the air control valve.
2. Connect a tachometer to the engine.
3. Start the engine and disconnect the connector from the switching solenoid valve.
4. Increase the engine speed to **1,500 rpm** and watch for exhaust gas leakage at the air inlet fitting on the air control valve.
If there is exhaust gas leakage, replace the check valve.



47U04A-029

Replacing Check Valve

1. Remove the air control valve as described on Page 4A-24.
2. Remove the gasket and check valve.
3. Install the check valve in the reverse order of removing.



57U04A-030

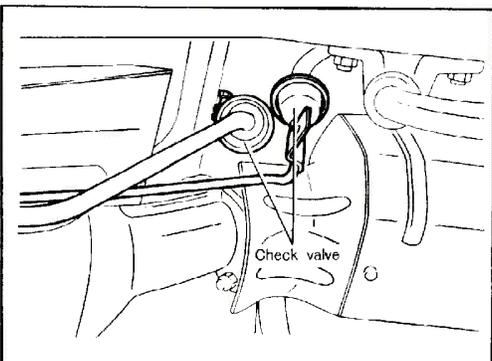
CHECK VALVE (INTAKE MANIFOLD ~ CATALYTIC CONVERTER, ACV ~ CATALYTIC CONVERTER)

Checking Check Valve

1. Disconnect the air hose (intake manifold ~ catalytic converter) at the rear side of the intake manifold.
2. Connect a tachometer to the engine.
3. Start the engine.
4. Increase the engine speed to **1,500 rpm** using the throttle. Place a finger and watch for exhaust gas leakage at the air pipe opening.
If there is exhaust gas leakage, replace the check valve.

Replacing Check Valve

1. Unfasten the clip and disconnect the air hose from the check valve.
2. Loosen the split air pipe attaching bolts and remove the air pipe ass'y.
3. Install the new check valve and pipe ass'y in the reverse order of removing.



47U04A-031

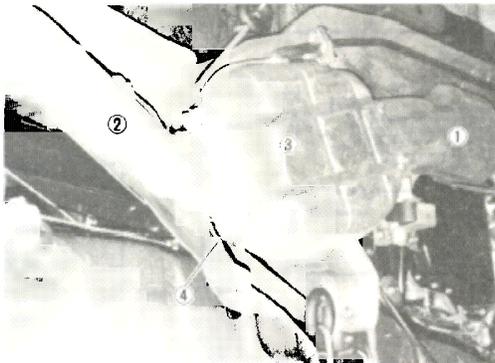


47U04A-032

PRE-MONOLITH AND MAIN CONVERTERS

Checking Converter

1. Visually inspect the pre-monolith and main monolith converter for cracks or any damage.
2. Inspect the proper tightness of pre-monolith and main monolith converter connections.
3. Start the engine and run it at idling speed.
4. Check the exhaust gas leakage from the pre monolith and main monolith converter connections.



47U04A-033

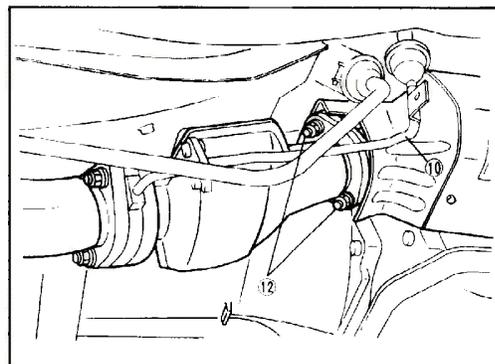
Replacing Converters

1. Remove the lower cover from the pre-monolith converter.
2. Remove the lower cover from the rear side of the exhaust pipe.
3. Remove the lower cover from the main converter.
4. Remove the catalyst thermo sensor.



57U04A-034

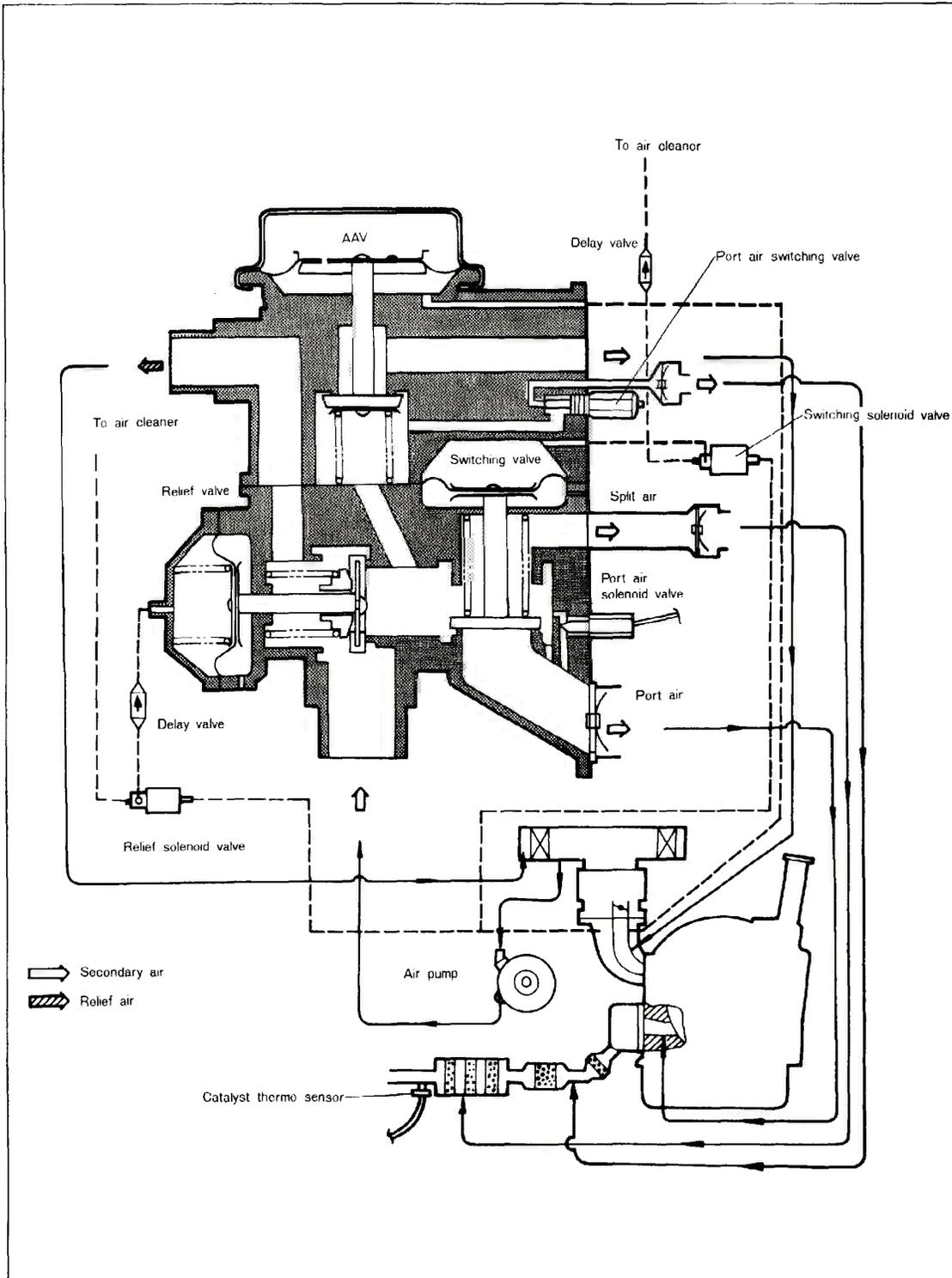
5. Remove the split air pipe from the main converter.
6. Remove the converter brackets.
7. Loosen the nuts attaching the main converter front flange to the No. 2 pre-monolith converter.

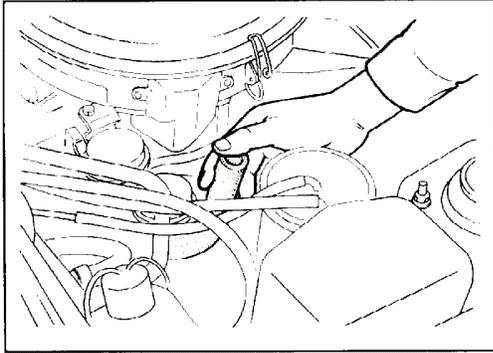


57U04A-035

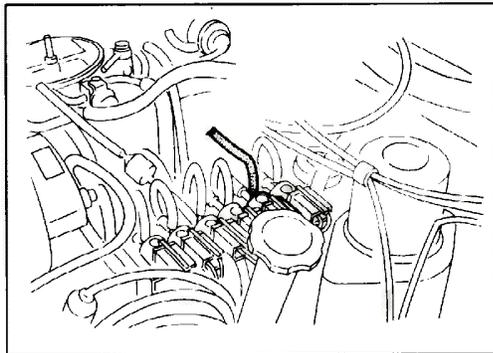
8. Support the converters securely to prevent them from dropping.
9. Loosen the nuts attaching the exhaust pipe rear to silencer.
10. Remove the air pipe from the pre-monolith converter.
11. Carefully lower the exhaust pipe and main converter assembly from the vehicle.
12. Remove the pre monolith converters by removing the attaching nuts.
13. Install the converters in the reverse order of removing.

SECONDARY AIR CONTROL SYSTEM

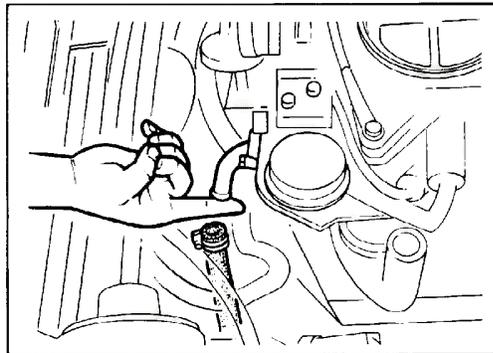




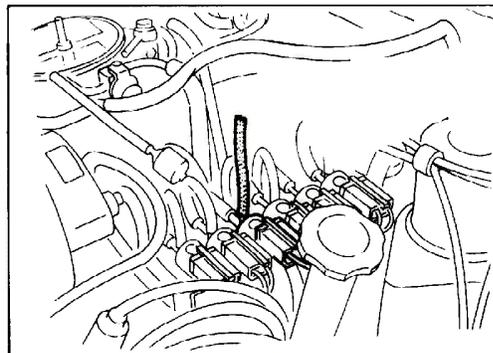
47U04A-036



47U04A-037



47U04A-038



47U04A-039

AIR CONTROL VALVE

Checking Air Control Valve

1. Warm up the engine to the normal operating temperature.
2. Connect a tachometer to the engine.
3. Disconnect the air hose (air cleaner ~ air control valve) at the air cleaner.
Place a finger over the hose opening.
4. Increase the engine speed and make sure that air flows out when engine speed is 1,500 ~ 2,500 rpm or higher.
5. Run the engine at idling speed.
6. Disconnect the vacuum sensing tube (relief solenoid valve ~ pipe) at the pipe.
7. Make sure that air flows out from the air hose.
8. Reconnect the vacuum sensing tube and the air hose.
9. Disconnect the split air hose (check valve ~ intake manifold) at the intake manifold.
Place a finger over the port opening.
10. Disconnect the vacuum sensing tube (switching solenoid valve ~ pipe) at the pipe.
11. Make sure that air flows out from the port.
12. Reconnect the vacuum sensing tube and split air hose.
Replace air control valve, if necessary.

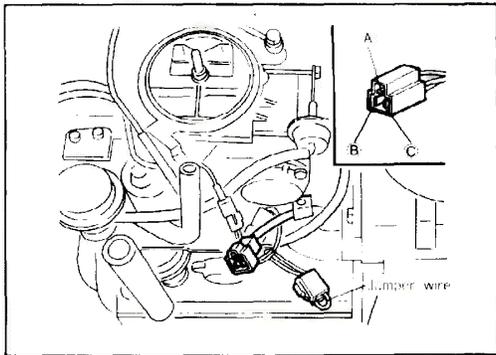
4A SECONDARY AIR CONTROL SYSTEM



47U04A-040

Replacing Air Control Valve

1. Remove the hot air duct.
2. Disconnect the air hose.
3. Disconnect the connector for the port air solenoid.
4. Remove the air control valve.
5. Install the air control valve in the reverse order of removing.

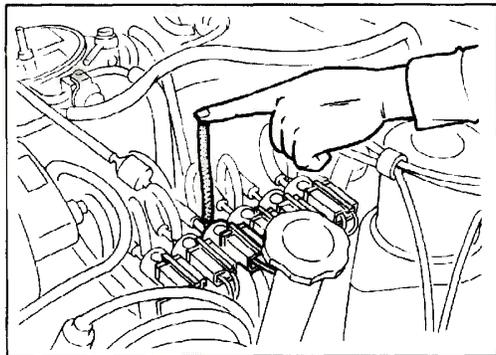


47U04A-041

SWITCHING SOLENOID VALVE

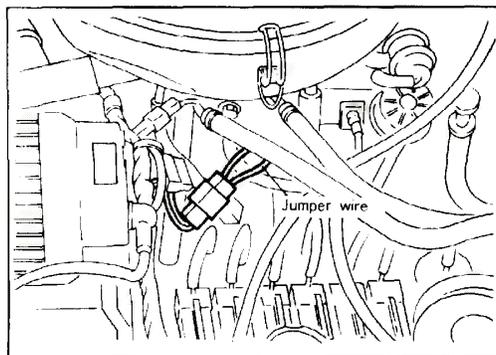
Checking Signal for Switching Solenoid Valve

1. Warm up the engine and run it at idling speed.
2. Connect a tachometer to the engine.
3. Disconnect the connector from the throttle sensor and connect a jumper wire to A and C terminals of the connector.



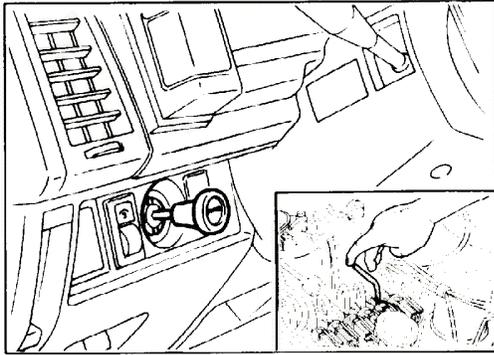
47U04A-042

4. Disconnect the vacuum sensing tube (switching solenoid valve ~ pipe) at the pipe.
5. Place a finger over the vacuum sensing tube opening and make sure that air is sucked into the tube.
6. Gradually increase the engine speed and make sure that air is not sucked into the tube when the engine speed is 1,000 ~ 1,200 rpm or higher.



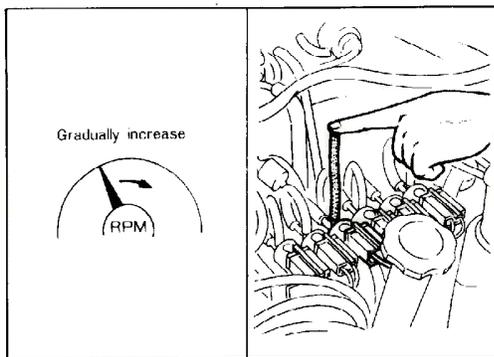
47U04A-042

7. Disconnect the connector from the No. 1 water temperature switch and connect a jumper wire to both terminals of the connector.



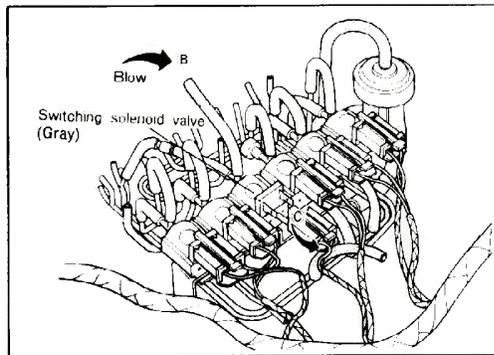
47U04A-043

8. Pull the choke knob out about 15 mm (0.6 in).
9. Increase the engine speed and make sure that air is sucked into the tube at any engine speed.
10. Disconnect the jumper wire connected in step 7 and connect the connector to the water temperature switch.



47U04A-044

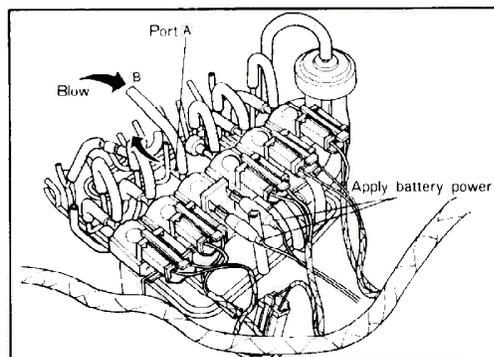
11. Disconnect the jumper wire connected in step 3 and connect the connector to the throttle sensor.
12. Gradually increase the engine speed and make sure air is sucked into the tube at any engine speed.
(Air is not sucked into the tube if the engine is accelerated quickly.)
13. Reconnect the vacuum sensing tube to the pipe.



47U04A-045

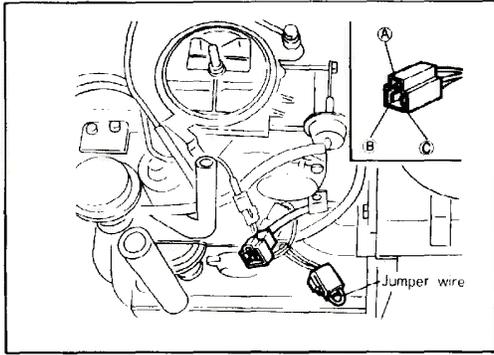
Checking Switching Solenoid Valve

1. Disconnect the vacuum sensing tubes from the solenoid valve and vacuum pipe.
2. Blow through the solenoid valve from the vacuum sensing tube B. Make sure air passes through the valve and comes out of the port C.



47U04A-046

3. Disconnect the connector from the switching solenoid valve and connect the battery power to terminals on the valve.
4. Blow through the valve from the vacuum sensing tube B. Make sure air passes through the valve and comes out from the port A of the valve.

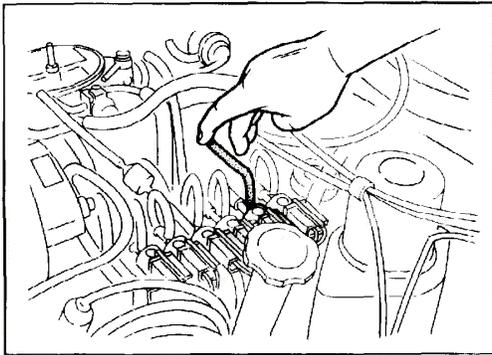


47U04A-047

RELIEF SOLENOID VALVE

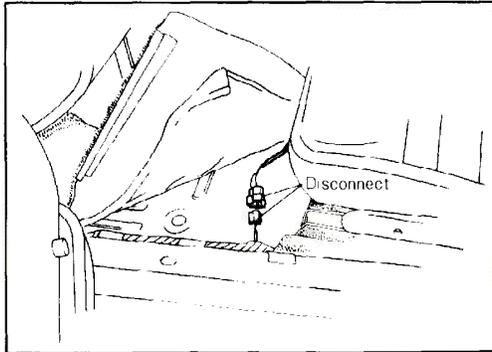
Checking Signal for Relief Solenoid Valve

1. Warm up the engine and run it at idling speed.
2. Connect a tachometer to the engine.
3. Disconnect the connector from the throttle sensor and connect a jumper wire to A and C terminals in the connector.



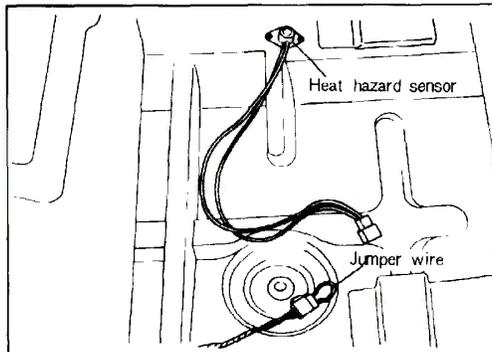
47U04A-048

4. Disconnect the vacuum sensing tube (relief solenoid valve ~ pipe) at the pipe.
5. Place a finger over the vacuum sensing tube opening and make sure that air is sucked into the tube.
6. Increase the engine speed and make sure that air is not sucked into the tube when the engine speed is 3,600 ~ 4,400 rpm or higher.



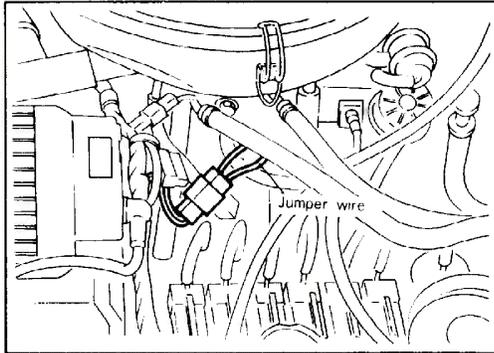
47U04A-049

7. Disconnect the connector from the catalyst thermo sensor.
8. Gradually increase the engine speed and make sure that air is not sucked into the tube when the engine speed is 1,000 ~ 1,200 rpm or higher.
9. Reconnect the connector to the catalyst thermo sensor.



47U04A-050

10. Disconnect the jumper wire connected in step 3 and connect the connector to the throttle sensor.
11. Disconnect the connector from the heat hazard sensor and connect a jumper wire to both terminals of the connector.
12. Make sure that air is not sucked into the tube at any engine speed.
13. Disconnect the jumper wire connected in step 11 and connect the connector to the heat hazard sensor.



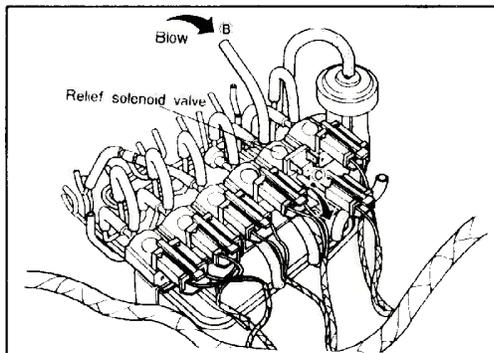
47U04A-051

14. Stop the engine and disconnect the connector from the No. 2 water temperature switch on the radiator.
15. Disconnect the connector from the No. 1 water temperature switch and connect a jumper wire to both terminals of the connector.



47U04A-052

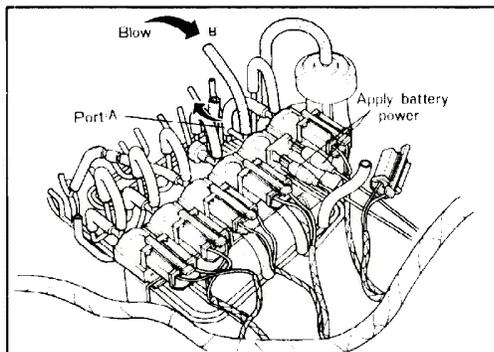
16. Pull the choke knob out about **15 mm (0.6 in)** and start the engine.
17. Gradually increase the engine speed and make sure that air is not sucked into the tube when the engine speed is 1,000 ~ 1,200 rpm or over.
18. Connect the vacuum sensing tube to the pipe.
19. Stop the engine and connect the connector disconnected in step 14.
20. Disconnect the jumper wire connected in step 15 and connect the connector to the No. 1 water temperature switch.



47U04A-053

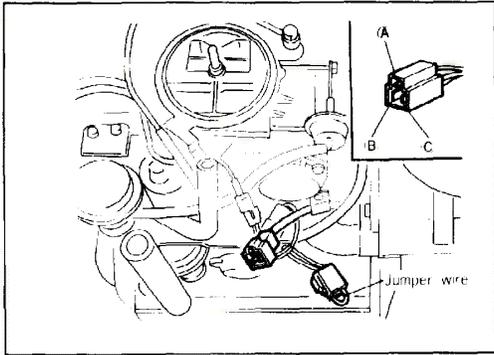
Checking Relief Solenoid Valve

1. Disconnect the vacuum sensing tubes from the solenoid valve and vacuum pipe.
2. Blow through the solenoid valve from the vacuum sensing tube B. Make sure air passes through the valve and comes out from the port C.



47U04A-054

3. Disconnect the connector from the relief solenoid valve and connect battery power to the terminals on the valve.
4. Blow through the valve from the vacuum sensing tube B. Make sure air passes through the valve and comes out from the port A of the valve.

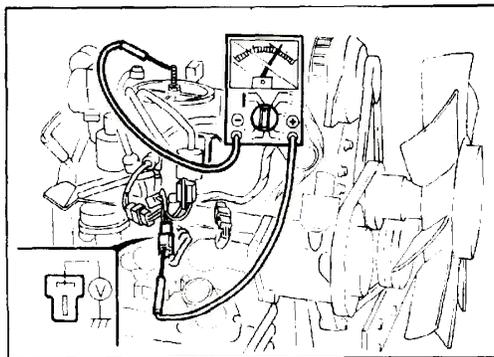


47U04A-055

PORT AIR SOLENOID VALVE

Checking Port Air Solenoid Valve

1. Warm up the engine and run it at idling speed.
2. Connect a tachometer to the engine.
3. Disconnect the connector from the throttle sensor and connect a jumper wire to A and C terminals of the connector.

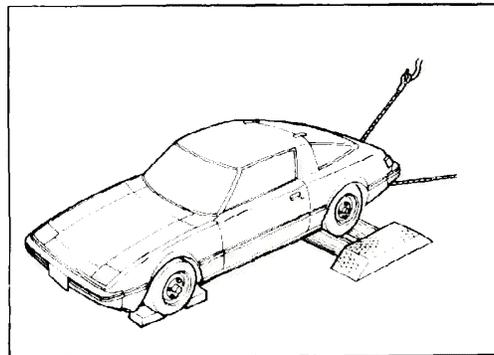


47U04A-056

4. Connect a voltmeter to the port air solenoid (GB) terminal and ground.
5. Increase the engine speed and observe the voltmeter reading.

Engine speed (rpm)	Voltage (V)
Idling speed ~ 3,000	below 2
3,000 ~ 4,000	approx. 12
more than 4,000	below 2

6. Disconnect the jumper wire connected in step 3 and connect the connector to the throttle sensor.



47U04A-057

7. Position the vehicle on a rolling-road tester.

Warning

Use wire rope to secure the vehicle so it doesn't move forward.

8. Increase the vehicle speed and observe the voltmeter reading.

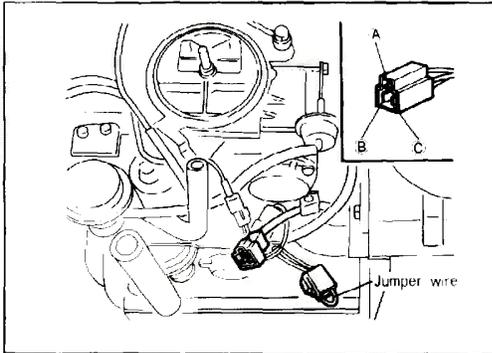
Below 50 MPH . . . below 2V
Above 50 MPH . . . approx. 12V



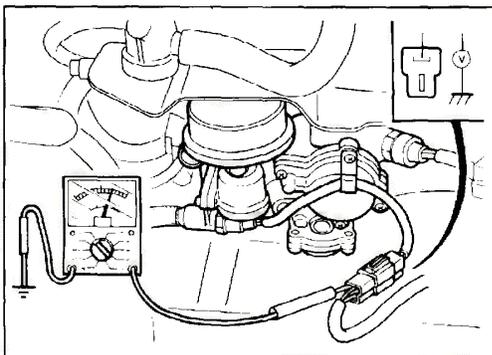
47U04A-058

Replacing Port Air Solenoid Valve

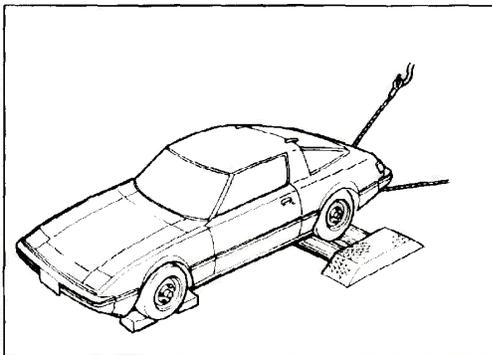
1. Disconnect the connector for the port air solenoid valve.
2. Remove the solenoid valve.
3. Install the solenoid valve in the reverse order of removing.



57U04A-055



57U04A-056



57U04A-057



57U04A-058

PORT AIR SWITCHING VALVE

Checking Port Air Switching Valve

1. Warm up the engine and run it at idling speed.
2. Connect a tachometer to the engine.
3. Disconnect the connector from the throttle sensor and connect a jumper wire to A and C terminals of the connector.

4. Connect a voltmeter to the port air switching valve (R) terminal and ground.
5. Increase the engine speed and observe the voltmeter reading.

Engine speed (rpm)	Voltage (V)
Idling speed ~ 3,000	approx. 12
3,000 ~ 4,000	below 2
more than 4,000	approx. 12

6. Disconnect the jumper wire connected in step 3 and connect the connector to the throttle sensor.

7. Position the vehicle on a rolling-road tester.

Warning

Use wire rope to secure the vehicle so it doesn't move forward.

8. Increase the vehicle speed and observe the voltmeter reading.

Below 50 MPH . . . approx. 12V

Above 50 MPH . . . below 2V

Replacing Port Air Switching Valve

1. Disconnect the connector for the port air switching valve.
2. Remove the switching valve.
3. Install the switching valve in the reverse order of removing.

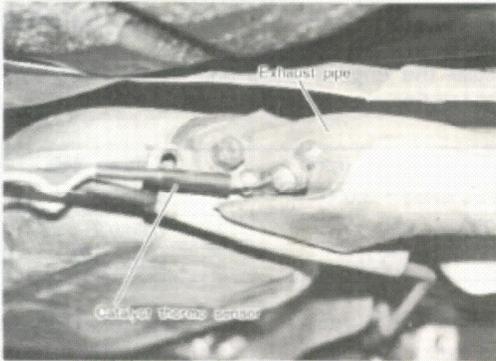


47U04A-059

CATALYST THERMO SENSOR

Checking Catalyst Thermo Sensor

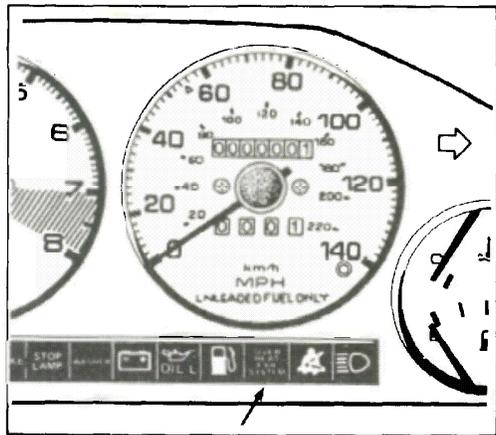
1. Disconnect the connector for the catalyst thermo sensor.
2. Connect an ohmmeter to the catalyst thermo sensor terminals and make sure that continuity exists between both terminals.
If it does not exist, replace the catalyst thermo sensor.



47U04A-060

Replacing Catalyst Thermo Sensor

1. Disconnect the connector of the catalyst thermo sensor.
2. Loosen the thermo sensor mounting nuts and remove the thermo sensor.
3. Install the thermo sensor in the reverse order of removing.

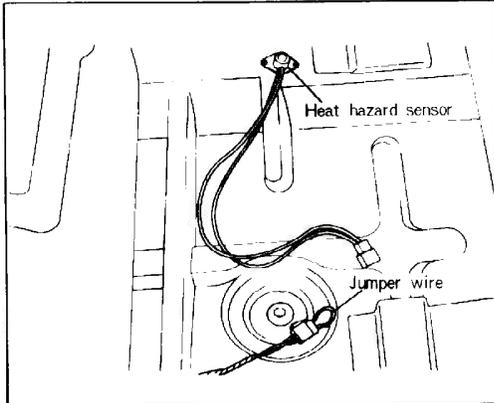


47U04A-061

HEAT HAZARD SENSOR

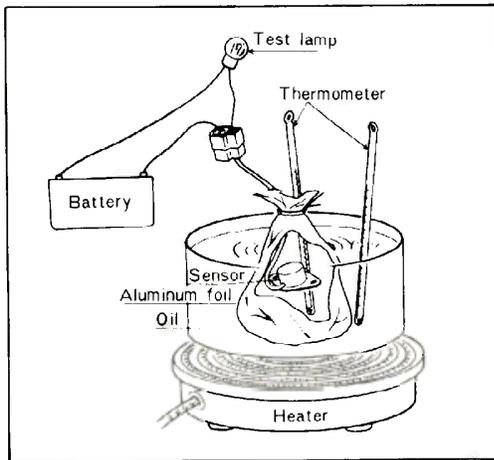
Checking Heat Hazard Protective and Warning System

1. Turn the ignition switch on. The heat hazard warning light comes on.
2. Start the engine and the warning light should go off.



47U04A-062

3. Disconnect the heat hazard sensor connector. Make sure the heat hazard warning light comes on when a jumper wire is connected to both terminals of the connector.



47U04A-063

Checking Heat Hazard Sensor

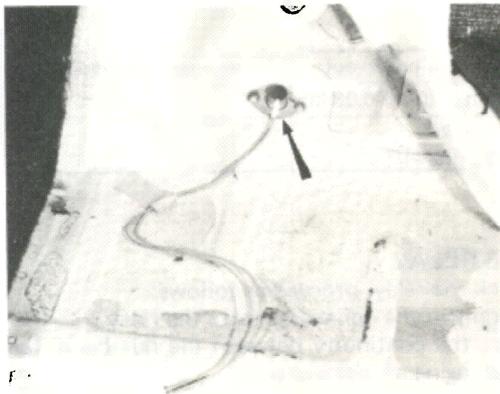
1. Remove the sensor.
2. Wrap the sensor and thermometer with aluminum foil to prevent oil penetration and place it in oil.
3. Connect the test lamp and battery to the sensor terminals in the connector as shown in Figure.
4. Gradually heat up the oil.

The test lamp should turn on when the temperature of the aluminum foil reaches to $130 \pm 10^\circ\text{C}$ ($266 \pm 18^\circ\text{F}$).

If the sensor does not operate within the specification, replace the sensor.

Caution

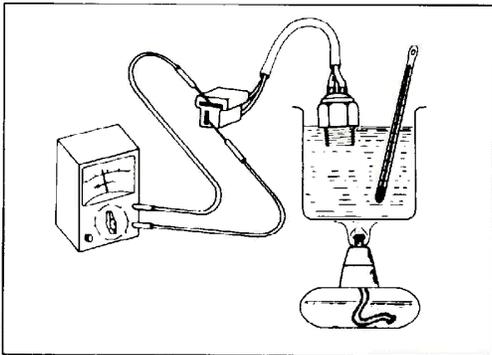
Do not heat up the oil more than 150°C (302°F).



47U04A-064

Replacing Heat Hazard Sensor

1. Remove the floor mat.
2. Disconnect the connector from the heat hazard sensor.
3. Remove the screws attaching the sensor and remove the sensor.
4. Install the sensor in the reverse order of removing.



47U04A-065

No. 1 AND No. 2 WATER TEMPERATURE SWITCHES

To check the No. 1 and No. 2 water temperature switches, proceed as follows:

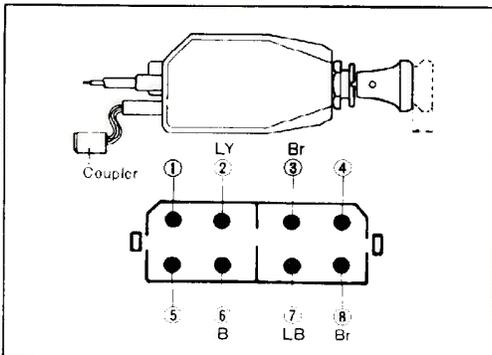
1. Remove the No. 1 water temperature switch from the water pump.
Remove the No. 2 water temperature switch from the radiator lower tank.
2. Place the water temperature switch in water with a thermometer and heat the water gradually.
3. **On the No. 1** water temperature switch, check the temperature at which **continuity does not exist** between the both terminals in the connector.

On the No. 2 water temperature switch, check the temperature at which **continuity exists** between the both terminals in the connector.

Specified temperature:

No. 1 water temperature switch
No continuity above $70 \pm 6.5^\circ\text{C}$
($158 \pm 11.7^\circ\text{F}$)

No. 2 water temperature switch
Continuity above $15 \pm 3^\circ\text{C}$ ($59 \pm 7^\circ\text{F}$)



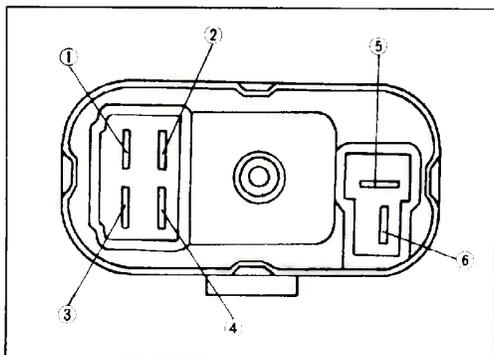
47U04A-066

CHOKE SWITCH AND CHOKE MAGNET

To check the choke switch and choke magnet, proceed as follows:

1. Disconnect the connector from the choke switch.
2. Check the continuity between the numbered terminals in the connector using an ohmmeter.

Choke knob pulled out	Numbers-continuity
$10 \pm 2 \text{ mm}$ ($0.4 \pm 0.08 \text{ in}$)	3 - 7
Any position (Choke magnet)	6 - 8



47U04A-067

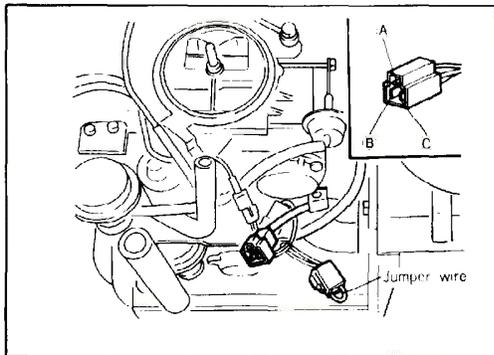
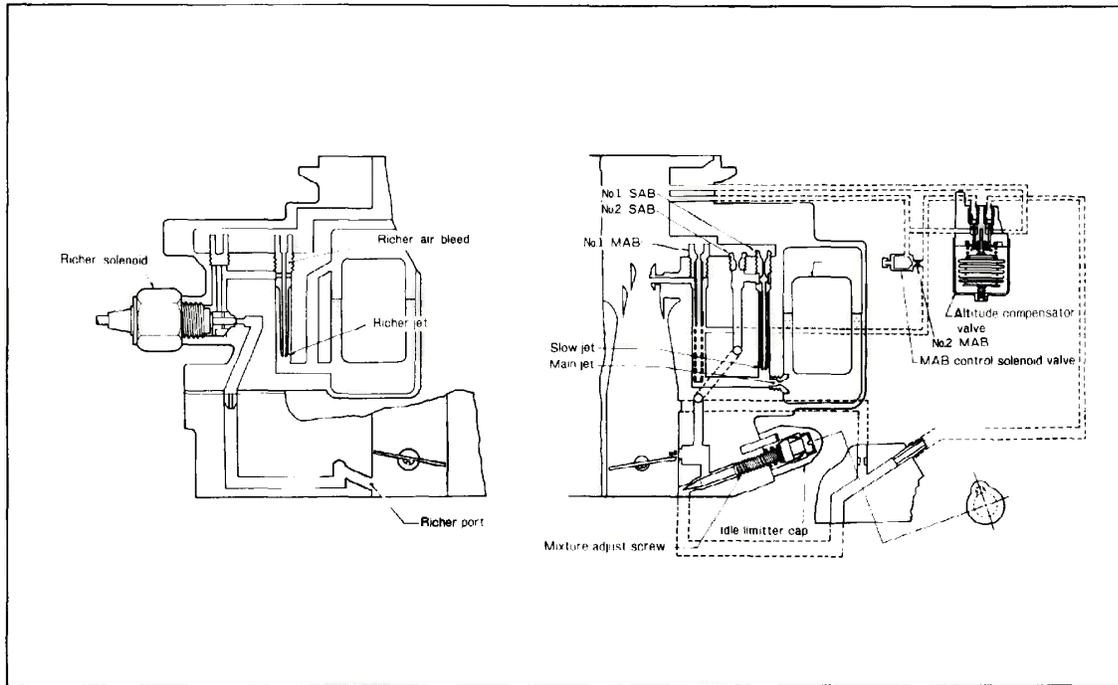
CHOKE RELAY

To check the relay, proceed as follows:

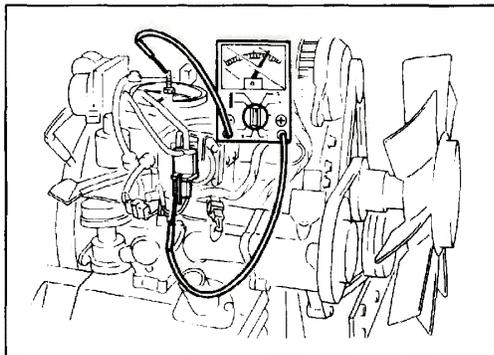
1. Disconnect the connector from the relay.
2. Check the continuity between the numbered terminals using an ohmmeter.

Numbers-continuity	Numbers-No continuity	Remarks
1 to 2	3 to 4	Without power applied
3 to 4	1 to 2	Connect the battery: position to terminal 6 and negative to 5

MIXTURE CONTROL SYSTEM



47U04A-068



47U04A-069

MAIN AIR BLEED CONTROL SOLENOID VALVE

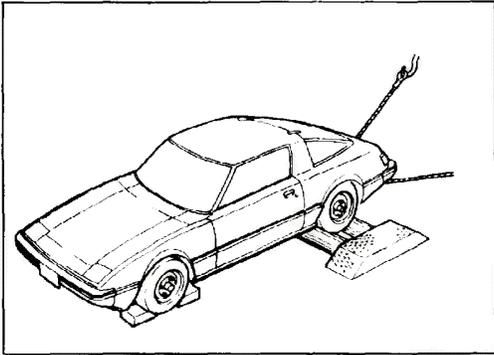
Checking the Signal for Main Air Bleed Control Solenoid Valve

1. Warm up the engine and run it at idling speed.
2. Connect a tachometer to the engine.
3. Disconnect the connector from the throttle sensor and connect a jumper wire to A and C terminals of the connector.
4. Connect a voltmeter to the main air bleed control solenoid (Br) terminal and ground.
5. Increase the engine speed and observe the voltmeter reading.

Engine speed (rpm)	Voltage (V)
Idling speed ~ 3,000	approx. 12
3,000 ~ 4,000	below 2
more than 4,000	approx. 12

6. Disconnect the jumper wire connected in step 3 and connect the connector to the throttle sensor.

4A MIXTURE CONTROL SYSTEM



47U04A-070

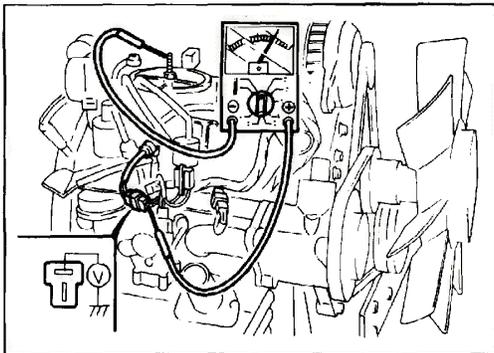
7. Position the vehicle on a rolling-road tester.

Warning

Use wire rope to secure the vehicle so it doesn't move forward.

8. Increase the vehicle speed and observe the voltmeter reading.

Below 50 MPH . . . approx. 12V
Above 50 MPH . . . below 2V



47U04A-071

RICHER SOLENOID VALVE (ONLY FOR M/T)

Checking Signal for Richer Solenoid Valve

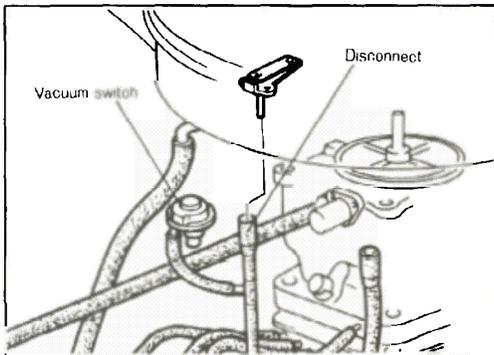
1. Start the engine and run it at idling speed.
2. Connect a voltmeter to the richer solenoid (WR) terminal and ground, then take a reading.

Voltage: 12V

3. Increase the engine speed more than 1,500 rpm and then decrease it.

Observe the voltmeter reading.

The voltmeter should show **below 2V for 30 seconds** when the engine speed becomes 1,100 rpm or less.

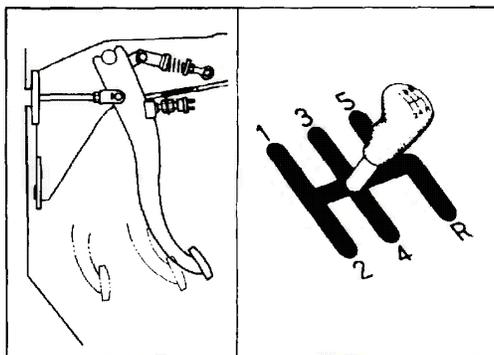


47U04A-072

4. Disconnect the vacuum sensing tube of the vacuum switch at the idle compensator and take a voltmeter reading.

Voltage: 0V

5. Reconnect the vacuum sensing tube to the idle compensator.



57U04A-073

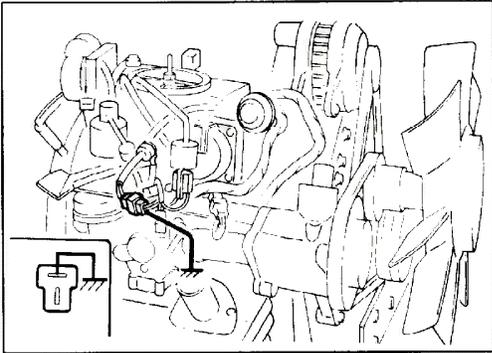
6. Disconnect the connector for clutch switch.

7. Depress the clutch pedal and shift into 1st ~ 5th gear.

Increase the engine speed more than 1,500 rpm and then decrease it.

Observe the voltmeter reading.

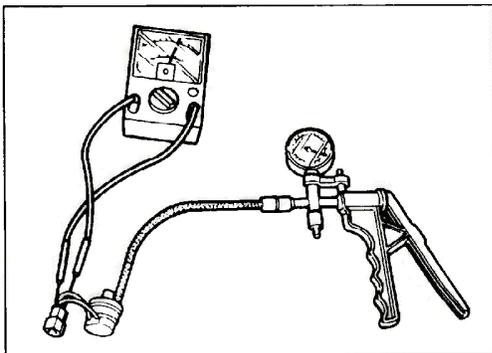
The voltmeter should show **12V**.



47U04A-074

Checking Richer Solenoid Valve

1. Start the engine and run it at idling speed.
2. Ground the richer solenoid (WR) terminal and make sure that the operating sound (clicking) should be heard.

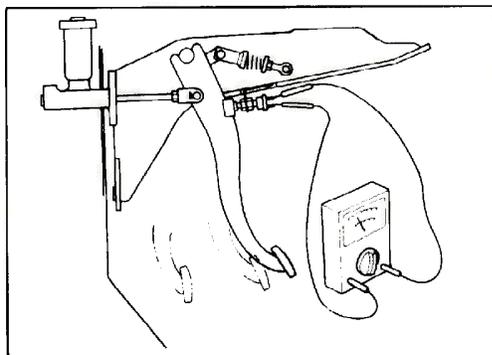


47U04A-075

Checking Vacuum Switch

1. Remove the vacuum switch.
2. Connect a vacuum pump to the vacuum switch.
3. Connect an ohmmeter to the vacuum switch, and then check the continuity between the switch terminals.

Vacuum	Switch
0 ~ 120 mmHg (4.7 inHg)	Open
more than 120 mmHg (4.7 inHg)	Closed

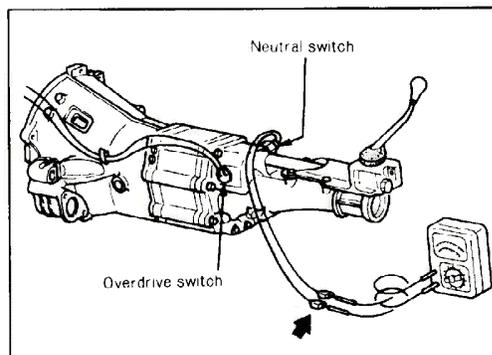


47U04A-076

Checking Clutch Switch

1. Disconnect the clutch switch connector.
2. Connect an ohmmeter to the clutch switch, and then check the continuity between the switch terminals.

When the pedal is depressed	Closed
When the pedal is released	Open



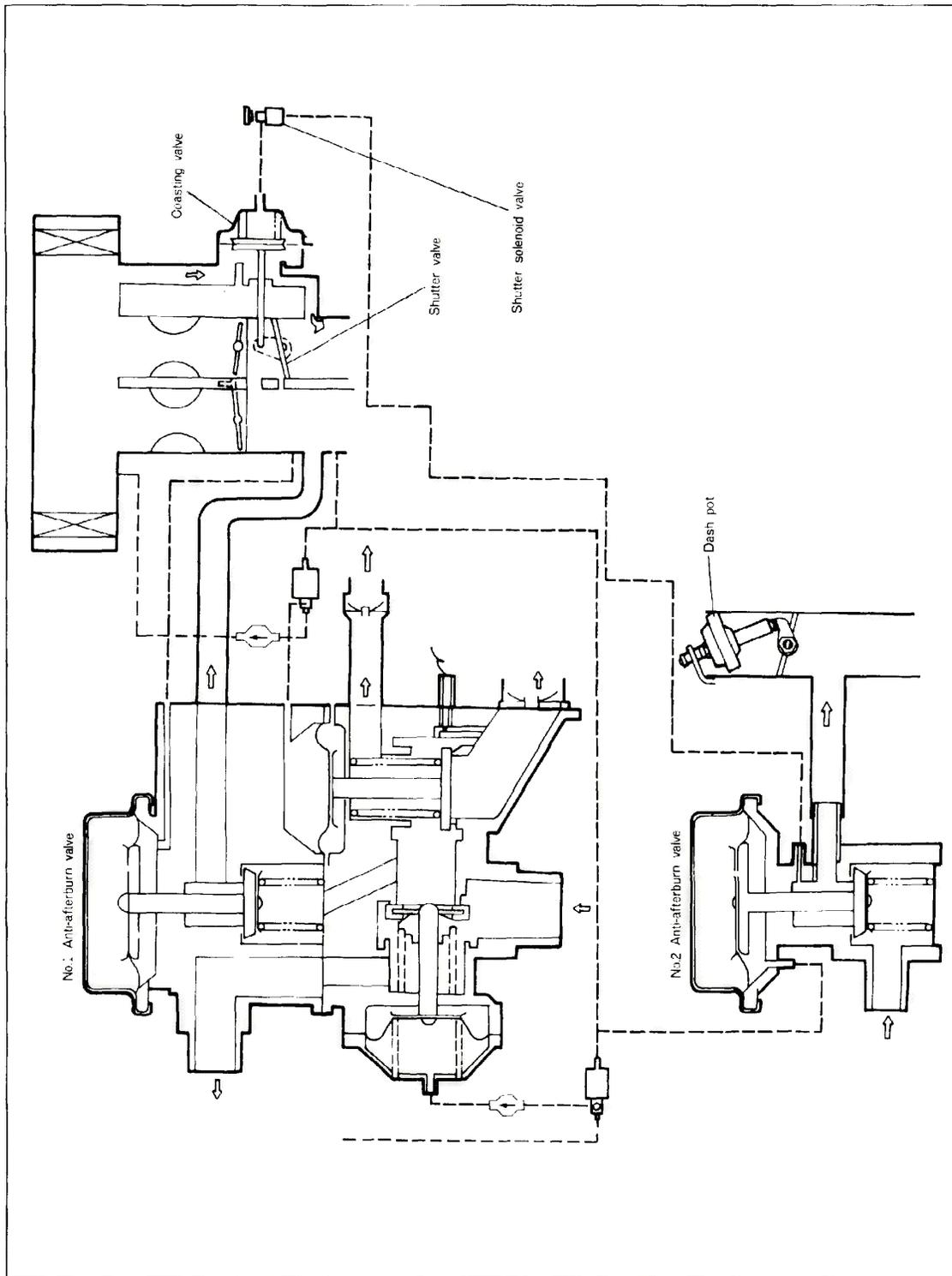
47U04A-077

Checking Neutral Switch

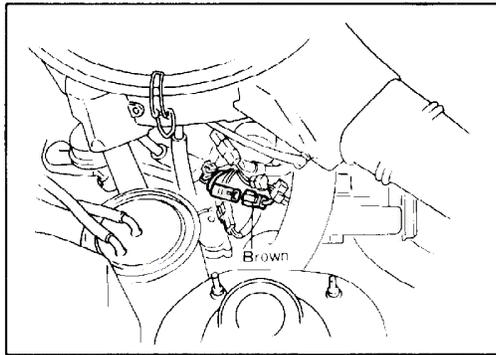
1. Disconnect the neutral switch connector.
2. Connect an ohmmeter to the neutral switch, and then check the continuity between the switch terminals.

In neutral	Closed
In other ranges	Open

DECELERATION CONTROL SYSTEM



47U04A.P35

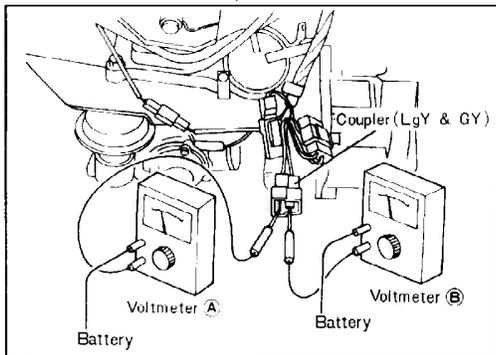


47U04A-078

THROTTLE SENSOR

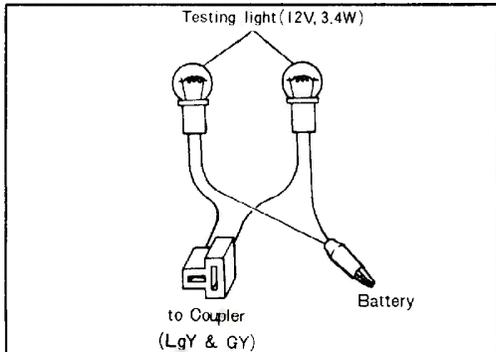
To check and adjust the throttle sensor, proceed as follows:

1. Warm up the engine to the normal operating temperature.
2. Connect the tachometer to the engine.
3. Disconnect the connector (Brown) as shown in figure.



47U04A-079

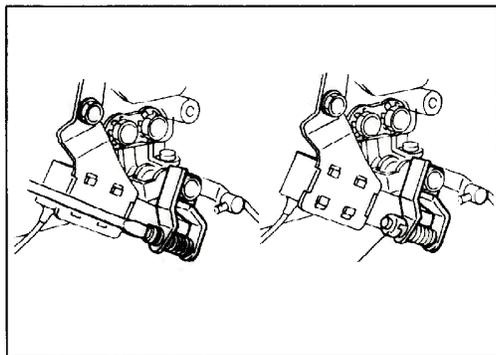
4. Connect the negative probe of the voltmeter to each terminal (GY and LgY) and connect the positive probe to the B terminal of the alternator.
5. Start the engine. Quickly decelerate the engine speed from 3,000 rpm and make sure that the current flows to both terminals simultaneously. The engine speed should be 1,000 ~ 1,200 rpm.



47U04A-080

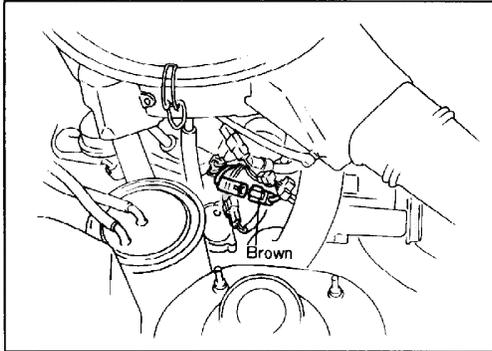
Reference

The testing light as shown in the figure can be prepared and used in place of the steps 4 and 5. In this case, the testing light turns on when current flows.

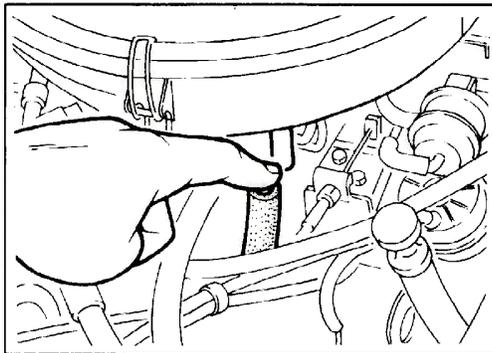


57U04A-081

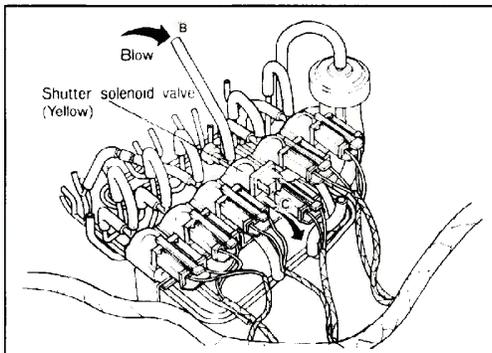
6. If the current does not start to flow to both terminals simultaneously, remove the cap from the throttle sensor adjusting screw.
7. Adjust the timing of the current flowing to the voltmeter A (LgY) by turning the throttle sensor adjusting screw. When the adjusting screw is screwed in, the current will begin to flow earlier, when the adjusting screw is screwed out, current will flow later.
8. After adjusting, install the cap onto the adjusting screw.



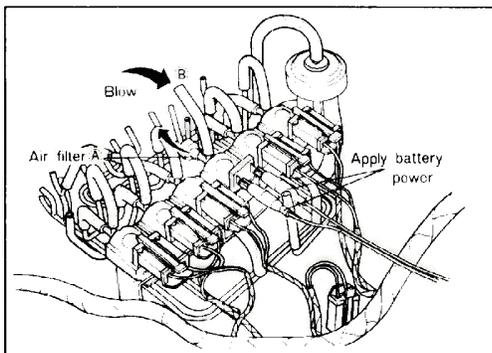
47U04A-082



47U04A-083



47U04A-084



47U04A-085

SHUTTER SOLENOID VALVE

Checking Signal for Shutter Solenoid Valve

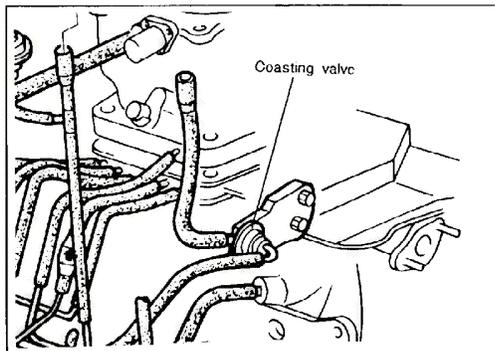
1. Warm up the engine and run it at idling speed.
2. Connect a tachometer to the engine.
3. Disconnect the connector (Brown) as shown in the figure. (Only for A/T)

4. Disconnect the air hose (coasting valve ~ air cleaner) at the air cleaner.
5. Place a finger over the air hose opening and make sure that the air is not sucked into the air hose at idling speed.
6. Increase the engine speed more than 3,000 rpm then decrease rapidly.
Make sure that air is sucked into the air hose until the engine speed decreases to 1,000 ~ 1,200 rpm.

Checking Shutter Solenoid Valve

1. Disconnect the vacuum sensing tubes from the solenoid valve and vacuum pipe.
2. Blow through the solenoid valve from the vacuum sensing tube B. Make sure the air passes through the valve and comes out of port C.

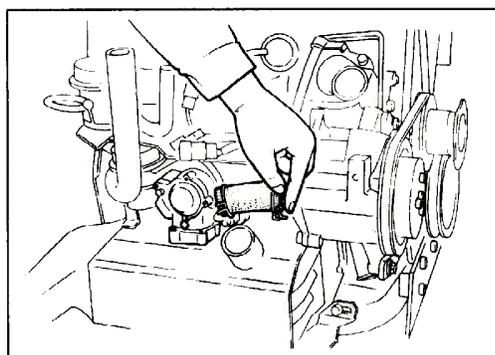
3. Disconnect the connector from the shutter solenoid valve and connect the battery power to the terminals on the valve.
4. Blow through the valve from the vacuum sensing tube B. Make sure the air passes through the valve and comes out from the air filter A of the valve.



57U04A-086

Replacing Coasting Valve

1. Remove the air cleaner.
2. Remove the carburetor. (Refer to page 4A-52)
3. Disconnect the air hose and vacuum sensing tube from the coasting valve.
4. Loosen the coasting valve mounting bolts and remove the coasting valve.
5. Install the coasting valve in the reverse order of removing.



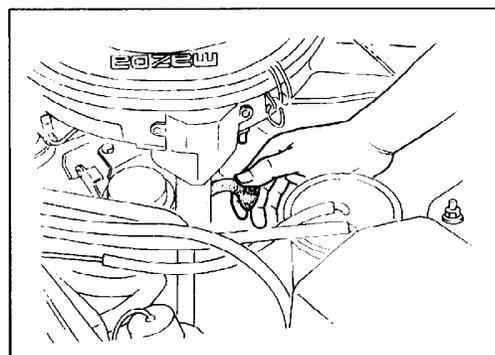
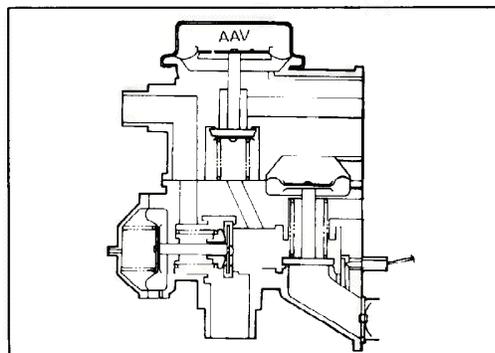
47U04A-087

No. 1 AND No. 2 ANTI-AFTERBURN VALVES

Checking No. 1 Anti-afterburn Valve

1. Warm up the engine and run it at idling speed.
2. Disconnect the air hose (air control valve ~ air pump) at the air pump.
3. Place a finger over the air hose opening and make sure that air is not sucked into the air hose at idling speed.
4. Increase the engine speed more than 3,000 rpm then decrease the engine speed rapidly.
5. Make sure that air is sucked into the air hose for a few seconds while decelerating.

Replace air control valve, if necessary.

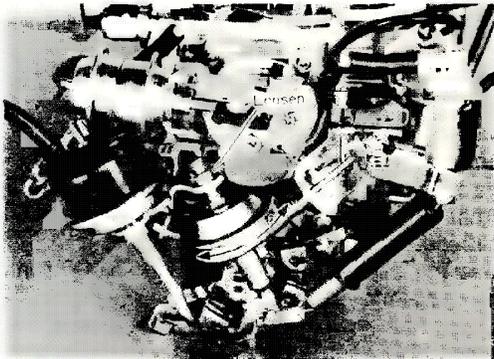
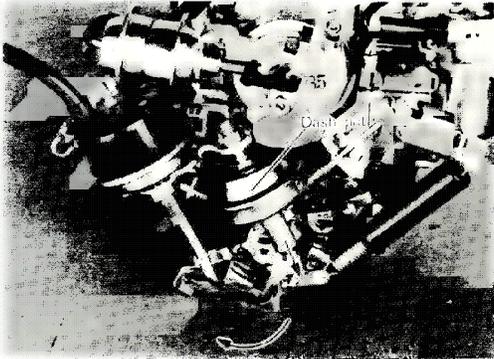


47U04A-088

Checking No. 2 Anti-afterburn Valve

1. Warm up the engine and run it at idling speed.
2. Disconnect the air hose (air cleaner ~ No. 2 anti-afterburn valve) at the air cleaner.
3. Place a finger over the air hose opening and make sure that air is not sucked into the air hose at idling speed.
4. Increase the engine speed more than 3,000 rpm then decrease the engine speed rapidly.
5. Make sure that air is sucked into the air hose for a few seconds while decelerating.

Replace No. 2 anti-afterburn valve, if necessary.



DASH POT

To check and adjust the dash pot, proceed as follows:

1. Remove the air cleaner.
2. Check that the dash pot rod does not keep the throttle lever from returning to the idle stop.
3. Quickly operate the throttle lever fully and make sure the dash pot rod extends quickly.

Release the throttle lever and make sure that the throttle lever returns slowly to idle position after it has touched the dash pot rod.

4. Connect a tachometer to the engine.
5. Start the engine and warm up the engine to the normal operating temperature.

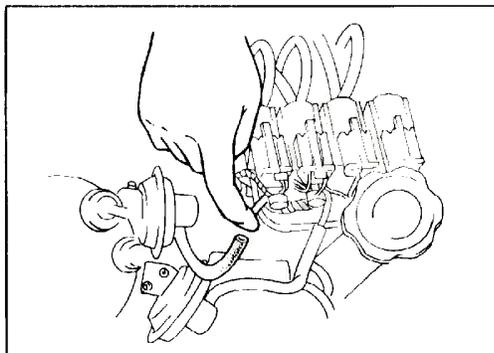
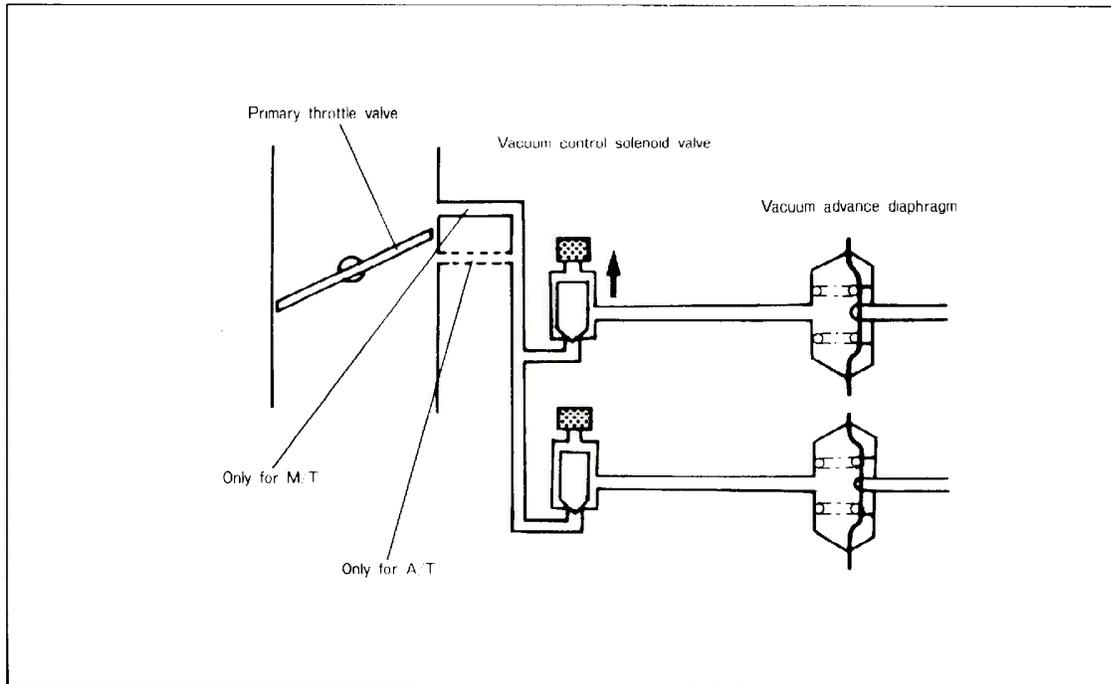
Make sure the engine operates at the specified idle speed.

Operate the throttle lever until it is away from the dash pot rod.

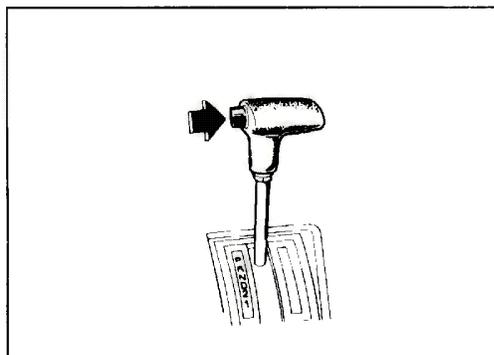
6. Slowly decrease the engine speed and check the engine speed at which the throttle lever just touches the dash pot rod.

The engine speed should be **3,800 ~ 4,200 rpm**. If the engine speed is not within the specification, loosen the lock nut and adjust the engine speed by turning the dash pot diaphragm.

IGNITION CONTROL SYSTEM



47U04A-090



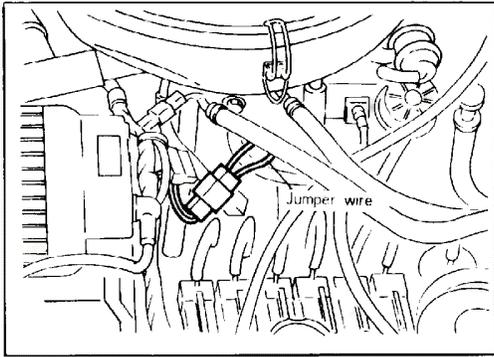
VACUUM CONTROL SOLENOID VALVE

Abbreviation; "T" : Trailing
 "L" : Leading

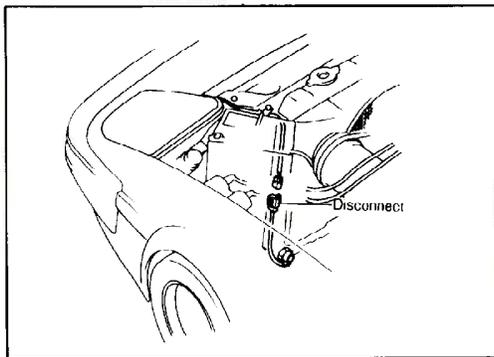
Checking Signal for "L" Vacuum Control Solenoid Valve

1. Warm up the engine to the normal operating temperature.
2. Connect a tachometer to the engine.
3. Disconnect the vacuum sensing tube (vacuum advance diaphragm "L" ~ pipe) at the pipe.
4. Place a finger over the pipe opening and make sure that air is not sucked into the pipe.
5. Gradually increase the engine speed and make sure that air is sucked into the pipe when the engine speed is 1,000 ~ 1,200 rpm or higher.
6. Decrease the engine speed from 4,000 rpm rapidly and make sure that air is not sucked into the pipe while decelerating.
7. On vehicles equipped with automatic transmission, run the engine at idling speed and make sure that air is sucked into the pipe when the shift lever is in the "R", "D", "D₁" or "D₂" position.

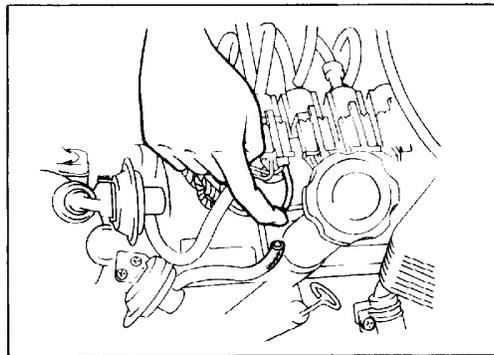
4A IGNITION CONTROL SYSTEM



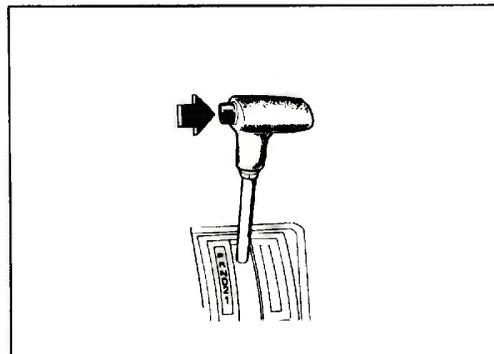
47U04A-091



47U04A-092



47U04A-093

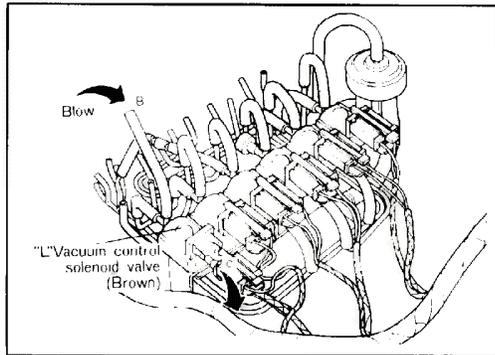


8. Disconnect the connector from the No. 1 water temperature switch and connect a jumper wire to both terminals in the connector.
9. Pull the choke knob out about 15 mm (0.6 in) and make sure that air is not sucked into the pipe at any engine speed.

10. Stop the engine and disconnect the connector for the No. 2 water temperature switch on the radiator.
11. Pull the choke knob out about 15 mm (0.6 in) and start the engine.
12. Increase the engine speed and make sure that air is sucked into the pipe when the engine speed is 1,000 ~ 1,200 rpm or higher.

Checking Signal for "T" Vacuum Control Solenoid Valve

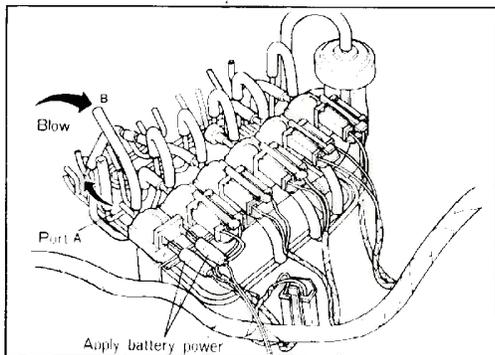
1. Warm up the engine to the normal operating temperature.
2. Connect a tachometer to the engine.
3. Disconnect the vacuum sensing tube (vacuum advance diaphragm "T" ~ pipe) at the pipe.
4. Place a finger over the pipe opening and make sure that air is not sucked into the pipe.
5. Increase the engine speed and make sure that air is sucked into the pipe when the engine speed is 2,900 ~ 3,100 rpm or higher.
6. Decrease the engine speed from 4,000 rpm rapidly and make sure that air is not sucked into the pipe while decelerating.
7. On vehicles equipped with automatic transmission, run the engine at idling speed and make sure that the air is sucked into the pipe when the shift lever is in the "R", "D", "D₁" or "D₂" position.
8. Conduct the same checking procedures in steps 8 to 12 of checking signal (for "L" vacuum control solenoid valve) to check the signal for "T" vacuum control solenoid valve.



47U04A-094

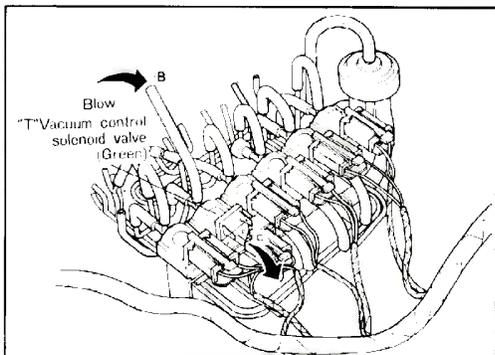
Checking "L" Vacuum Control Solenoid Valve

1. Disconnect the vacuum sensing tubes from the solenoid valve and vacuum pipe.
2. Blow through the solenoid valve from the vacuum sensing tube B .
Make sure the air passes through the valve and comes out from the air filter C .



47U04A-095

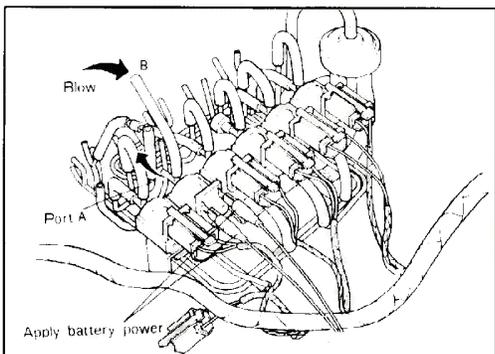
3. Disconnect the connector from the "L" vacuum control solenoid valve and connect the battery power to terminals on the valve.
4. Blow through the valve from the vacuum sensing tube B .
Make sure the air passes through the valve and comes out from the port A of the valve.



47U04A-096

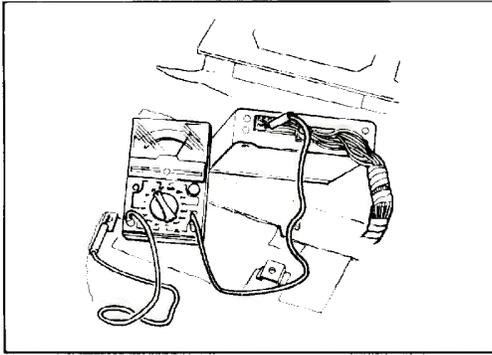
Checking "T" Vacuum Control Solenoid Valve

1. Disconnect the vacuum sensing tubes from the solenoid valve and vacuum pipe.
2. Blow through the solenoid valve from the vacuum sensing tube B .
Make sure the air passes through the valve and comes out from the air filter C .



47U04A-097

3. Disconnect the connector from the "T" vacuum control solenoid valve and connect the battery power to terminals on the valve.
4. Blow through the valve from the vacuum sensing tube B .
Make sure the air passes through the valve and comes out from the port A of the valve.



57U04A-543

CONTROL UNIT

CHECKING CONTROL UNIT

1. Connect a voltmeter to the control unit as shown in the figure.
2. Turn the ignition switch ON, and then measure the voltage of each terminal.

Cautions

- a. Before checking control unit, warm up the engine to the normal operating temperature.
- b. Do not start the engine.

Terminal	Connection to	Voltage with ignition ON (When functioning properly)
A	Ignition coil \ominus terminal	approx. 12V
B	Ignition switch	approx. 12V
C	Choke switch	below 1.5V
D	Ignition coil \ominus terminal	approx. 12V
E	Throttle sensor	approx. 8V
F	Switching solenoid valve	approx. 12V
G	Throttle sensor	1 ~ 2V
H	Ignition switch "START" terminal	below 1.5V (above 8V at "START")
I	Throttle sensor	0V
J	No. 2 water temperature switch	below 1.5V
L	Air-con. solenoid valve	approx. 12V
M	Main air bleed solenoid valve	approx. 12V
N	Relief solenoid valve	below 2V
O	Heat hazard sensor	below 2V
P	Ground	0V
Q	Shutter solenoid valve	below 1.5V
R	Idle richer solenoid valve	0V
S	Vacuum control solenoid valve (L)	approx. 12V (in neutral)
T	Vacuum control solenoid valve (T)	approx. 12V (in neutral)
U	Port air solenoid valve	below 1.5V
V	Ignition switch "START" terminal	below 1.5V (above 8V at "START")
a	Catalyst thermo sensor	below 1.5V
b		
c	Catalyst thermo sensor	below 1.5V
d		
e	Port air switching valve	approx. 12V
f		
h	Vehicle speed sensor	0V: Reed switch (speedometer) . . . closed 6 ~ 12V: Reed switch (speedometer) . . . open
i	Air-con. cut relay	below 1.5V . . . air con. switch OFF
j		
k	Neutral switch	0V . . . in gear approx. 12V . . . in neutral
l	Clutch switch	0V . . . pedal released approx. 12V . . . pedal depressed
m		
n	Fuel pump cut relay	below 1.5V

Control unit connector	
m	U
k	S
i	Q
e	O
c	M
c	I
a	G
	E
	C
	A
n	V
l	X
j	R
h	P
f	N
d	L
b	J
	H
	F
	D
	B



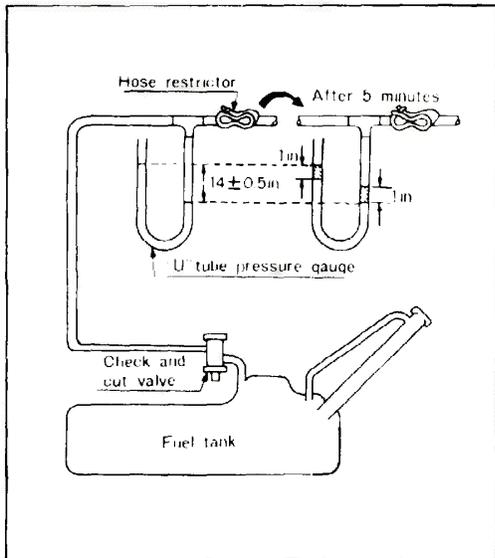
47U04A-098

CRANKCASE AND EVAPORATIVE EMISSION CONTROL SYSTEM

EVAPORATIVE LINE

To check the evaporative line, proceed as follows:

1. Disconnect the ventilation hose from the canister.
2. Connect the "U" tube pressure gauge to the disconnected ventilation hose.

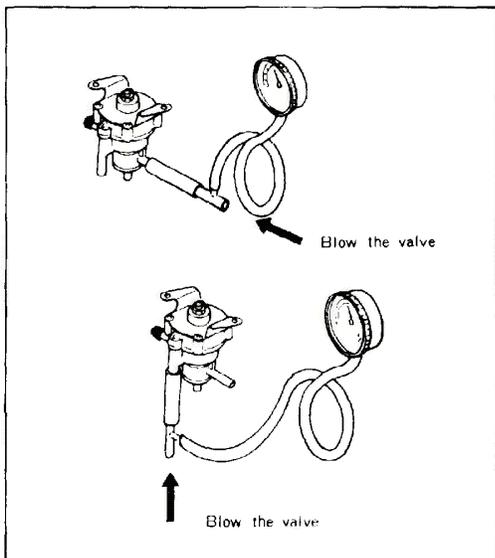


47U04A-099

3. Gradually apply low compressed air into the "U" tube so that the difference of water level should be **356 ± 12 mm (14 ± 0.5 in)**.
4. Then blind the inlet of the "U" tube and leave the "U" tube with the inlet blind for five minutes. If the water level drops within the hatched lines shown in the figure, evaporative line is in good condition.

If not, inspect the following points and repair or replace as required.

- a) Leaky or loose evaporative line
- b) Leaky fuel tank
- c) Leaky or loose fuel line
- d) Leaky filler cap



47U04A-100

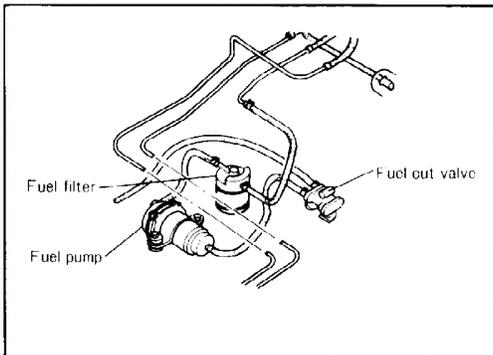
Checking Check and Cut Valve

1. Remove the check and cut valve.
2. Connect a pressure gauge to the passage of the fuel tank.
3. Blow through the valve. The valve should open with the pressure of **5.5 ~ 7 kpa (0.78 ~ 1.0 lb/in²)**.
4. Remove the pressure gauge and connect it to the passage to atmosphere.
5. Blow through the valve and if the valve opens with the pressure of **1 ~ 5 kpa (0.14 ~ 0.71 lb/in²)**, the valve is normal.

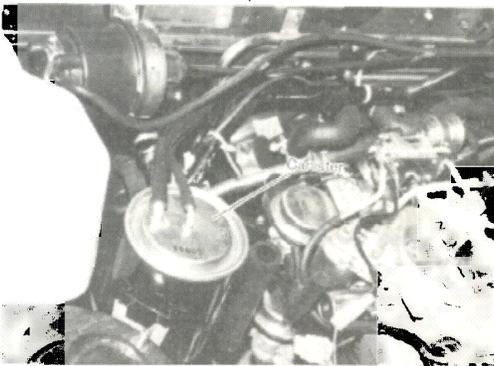
Note

The test should be performed with the valve located horizontally. Otherwise the weight of the valve will cause it to move out of position and close the passage.

4A CRANKCASE AND EVAPORATIVE EMISSION CONTROL SYSTEM



47U04A-101



Replacing Check and Cut Valve

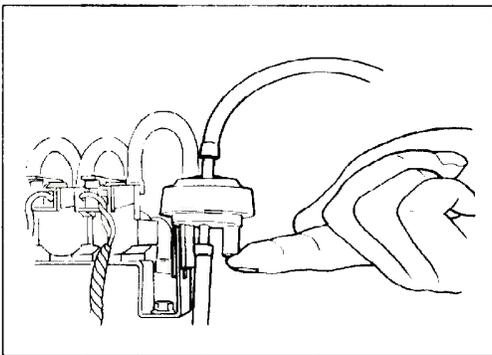
1. Raise the rear end of the vehicle and support it with stands.
2. Unfasten the hose bands and disconnect the evaporative hoses from the check and cut valve.
3. Remove the check and cut valve.
4. Install the check and cut valve in the reverse order of removing noting the hose position.

Notes

- a) When installing the check and cut valve, fully push in the evaporative hoses to the valve and secure the hoses with bands.
- b) When connecting the fuel hoses to the valve, note the direction of the valve fittings.

CHARCOAL CANISTER

Visually check the canister for any leakage of the active carbon. Tap the canister with a finger no abnormal sound should be audible.

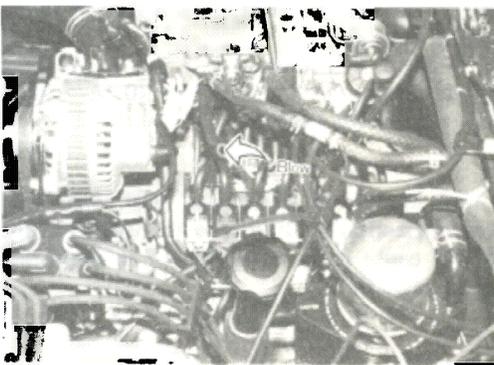


47U04A-102

PURGE VALVE

To check the purge valve, proceed as follows:

1. Disconnect the hose (purge valve ~ oil filler pipe) from the purge valve.
2. Start the engine and run it at idling speed.
3. Place a finger to the port opening and check that the air is not drawn into the port.
4. Increase the engine speed to **2,000 rpm**, the air should be drawn into the port.



47U04A-103

AIR VENT SOLENOID VALVE

To check the air vent solenoid valve, proceed as follows:

1. Check the air vent hose for cracking or other damage.
2. Disconnect the air vent hose from the ventilation pipe.
3. Slowly blow through the hose and make sure that the air passes through the air vent solenoid valve.
4. Turn the ignition switch on.
Slowly blow through the hose and make sure the air does not pass through the air vent solenoid valve.

FUEL TANK AND FUEL LINE

FUEL PUMP

Testing Fuel Pump

Before the tests, make sure the fuel filter has been changed within the recommended maintenance mileage interval.

Pressure test

1. Remove the air cleaner assembly. Disconnect the fuel main hose at the carburetor.
Use care to prevent combustion due to fuel spillage.
2. Connect a pressure gauge, a restrictor and flexible hoses so that the fuel can be discharged into a suitable graduated container.
3. Disconnect the connector from the fuel pump cut relay and connect a jumper wire as shown.
4. Turn the ignition switch on and vent the system into the container by opening the hose restrictor momentarily.
5. Close the hose restrictor, allow the pressure to stabilize, and note the reading.

Fuel pressure: 20 ~ 25 kpa (2.84 ~ 3.55 psi)

If the pump pressure is within the specifications, perform the test for volume.

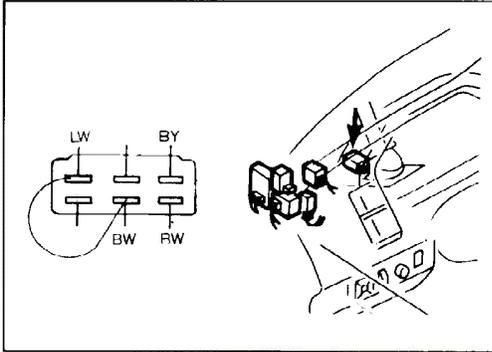
Volume test

With the fuel pump pressure within specifications, test the volume as follows:

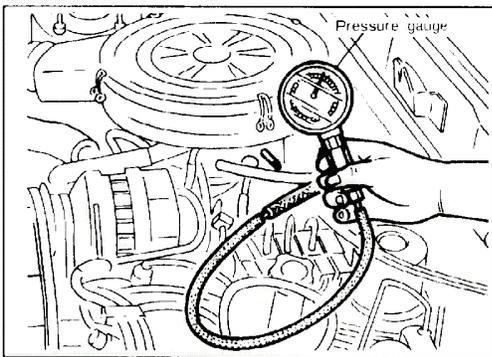
1. Turn the ignition switch on.
2. Open the hose restrictor and expel the fuel into the container, while observing the time required to expel **1,400 cc (1.48 U.S. quarts, 1.23 Imp. quarts)**.
Close the restrictor. **1,400 cc or more** of fuel should be expelled within **one minute**.

Replacing Fuel Pump

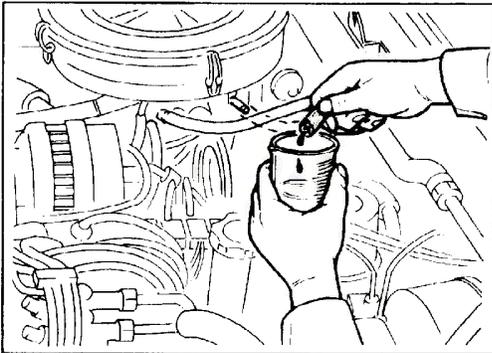
1. Remove the storage compartment located behind the driver's seat.
2. Disconnect the connector of the fuel pump.



47U04A-104



47U04A-105

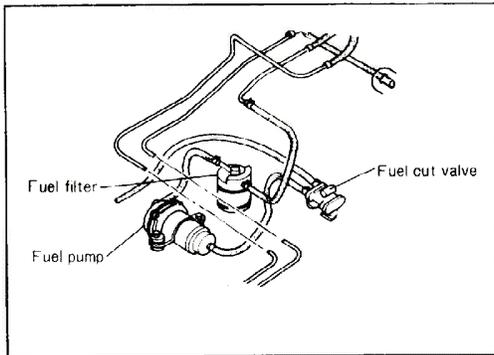


47U04A-106



47U04A-107

4A FUEL TANK AND FUEL LINE

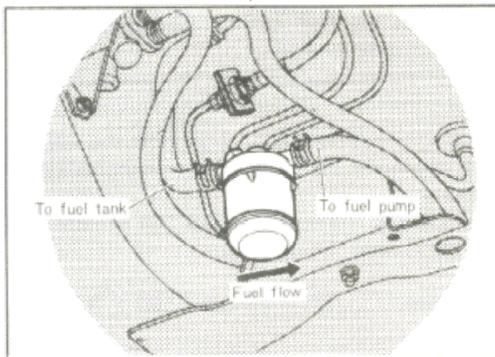


47U04A-108

3. Raise the rear end of the vehicle and support it with stands.
4. Remove the fuel pump protector cover.
5. Disconnect the inlet and outlet hoses from the fuel pump.
6. Remove the fuel pump.
7. Install the new fuel pump by following the removal procedures in the reverse order.

Caution

When installing, fully push in fuel hoses to the fuel inlet and outlet fittings of the pump, and secure the hoses with clips.



47U04A-109

FUEL FILTER

The fuel filter should be replaced at intervals, following the maintenance schedule.

To replace the fuel filter, proceed as follows:

1. Raise the rear end of the vehicle and support it with stands.
2. Loosen the clips at both ends of the filter and disconnect the fuel hoses.
3. Remove the fuel filter from the retainer.
4. Install a new filter and connect the fuel hoses.

Caution

When installing the filter, fully push in the fuel hoses to the fuel filter and secure the hoses with clips.



47U04A-110

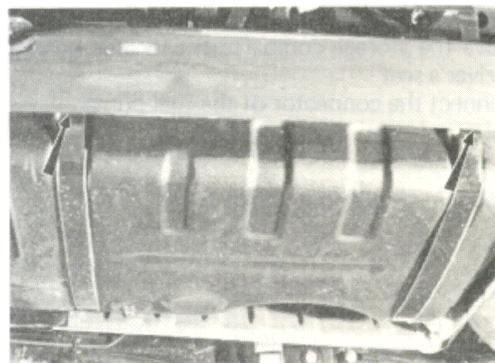
FUEL TANK

Removing Fuel Tank

1. Drain the fuel in the tank.
2. Raise the rear end of the vehicle and support it with stands.
3. Remove the tank protectors.

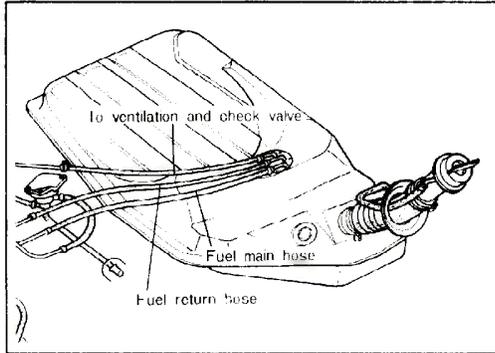
Warning

When removing the fuel tank, keep sparks, cigarettes and open flames away from the fuel tank.



47U04A-111

4. Disconnect the fuel main hose, fuel return hose and evaporation hoses from the fuel tank.
5. Remove the fixing band attaching bolts and lower the fuel tank.



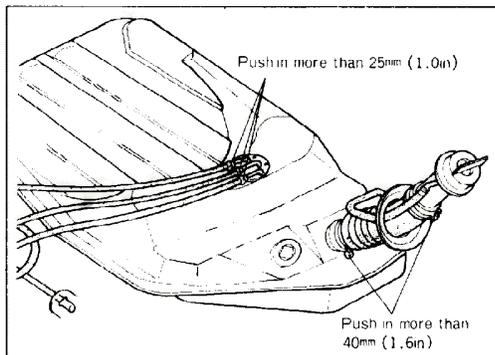
47U04A-112

Checking Fuel Tank

Check the fuel tank for cracks and corrosion. If any defect is present, repair or replace as necessary.

Warning

Before repairing, clean the fuel tank thoroughly with steam and sufficiently remove all explosive gas.

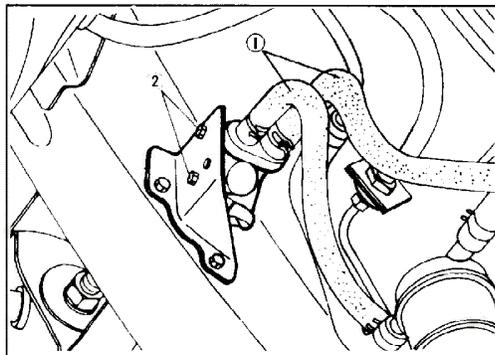


47U04A-113

Installing Fuel Tank

Install the fuel tank in the reverse order of removal, **noting** the following points.

1. Push the hose ends of the fuel main hose, fuel return hose and evaporation hoses in to the fuel tank fittings until the fittings are inserted to **more than 25 mm (1.0 in)**.
2. Push the fuel filler hose ends in to the fuel tank pipe and the filler pipe **more than 40 mm (1.6 in)**.



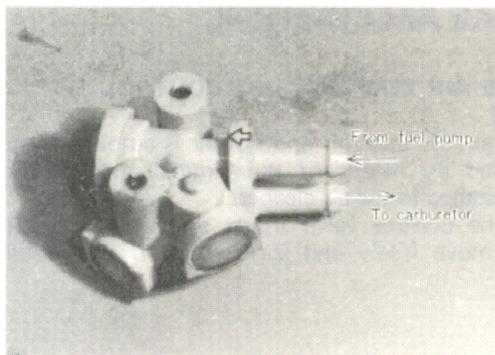
47U04A-114

FUEL CUT VALVE

Check the fuel cut valve for cracks or damages.

To replace the fuel cut valve, proceed as follows:

1. Disconnect the hoses at the fuel cut valve.
2. Remove the valve attaching bolts and remove the fuel cut valve.

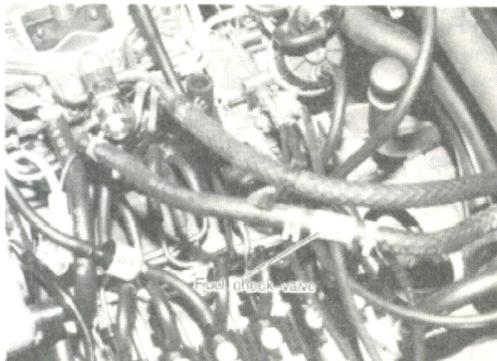


47U04A-115

3. Install the fuel cut valve in the reverse order of removing.

Cautions

- a) Fully push in the fuel hoses to the valve and secure the hoses with clips.
- b) When connecting the fuel hoses, note the arrow marks on the valve body.



47U04A-116

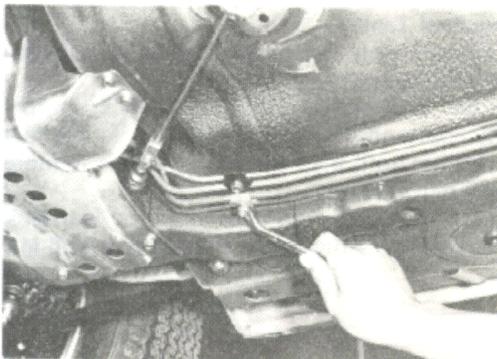
FUEL CHECK VALVE

Check the fuel check valve for cracks or damage. To replace the fuel check valve, proceed as follows:

1. Disconnect the hoses from the valve and remove the valve.
2. Install the valve in the reverse order of removing.

Cautions

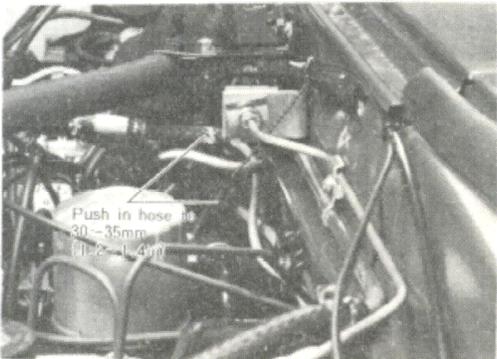
- a) Fully push in the valve to the hose ends and secure it with clips.
- b) Make sure that the arrow mark on the valve is directed as shown in figure.



47U04A-117

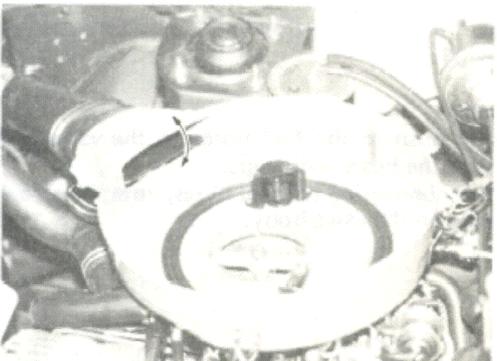
FUEL LINE

Inspect the fuel lines for leaks and tighten the fuel line connections to prevent leakage. It is important to keep the fuel system clean and free from water. If an excessive amount of dirt or water is found, drain the fuel tank and blow out the fuel lines with compressed air.



47U04A-118

When replacing the fuel hose, push in the fuel hose end to the fuel pipe until the fuel pipe is inserted to **30 ~ 35 mm (1.2 ~ 1.4 in)**.



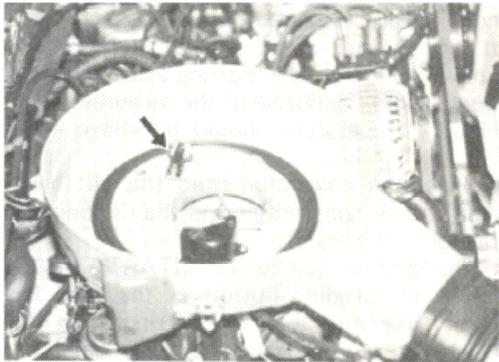
47U04A-119

INTAKE AIR CONTROL

INTAKE AIR TEMPERATURE CONTROL VALVE

The intake of fresh air and hot air is automatically controlled by means of the bimetal and control valve installed in the air cleaner.

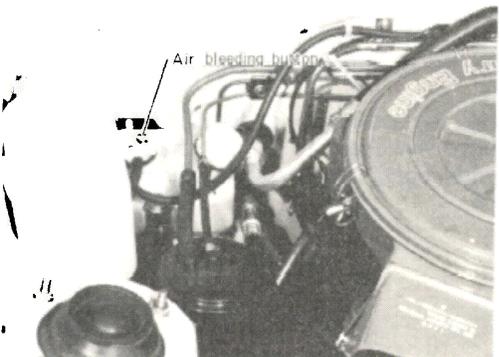
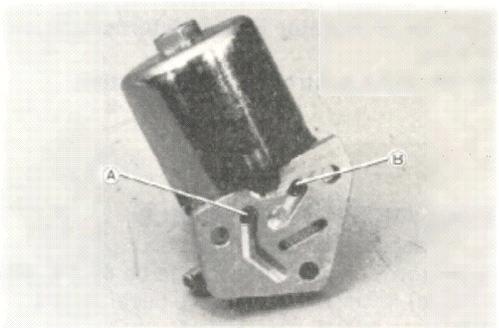
Move the control valve inside the air cleaner, it should move freely and spring tension should be present.



47U04A-120



47U04A-121



47U04A-122

IDLE COMPENSATOR

Checking Idle Compensator

1. Check that the valve is in a closed position when the bimetal temperature is lower than operating temperature.

Opening temperature	65 ± 4°C (149 ± 8°F)
---------------------	----------------------

To check, suck air into the tube. If excessive air leakage is found, replace the idle compensator assembly.

2. When the bimetal temperature is **more than approx. 69°C (159°F)**, check to see the valve is in open position. If the valve is not open, replace the idle compensator as an assembly.

ALTITUDE COMPENSATOR

Checking Altitude Compensator Valve

An altitude compensator valve is fitted to the carburetor to optimize the air fuel mixture at high altitude by supplying additional air into the carburetor to overcome excessively rich mixture due to low atmospheric pressure at high altitudes.

To check the altitude compensator valve, proceed as follows.

1. Remove the air cleaner and start the engine. Make sure the engine operates smoothly.
2. Blind the slow port on the carburetor air horn by placing a finger and make sure the idle speed drops at altitude of more than 500 ~ 1,500 m (1,640 ~ 4,920 ft). If not, perform the following test.
 - 1) Remove the altitude compensator valve.
 - 2) Blow through the valve from port A and B, and check to see that the air passes through the valve when the altitude is more than 500 ~ 1,500 m (1,640 ~ 4,920 ft).

Note

The operating specification of the altitude compensator valve will be changed by atmospheric pressure.

SUB-ZERO STARTING ASSIST DEVICE (EXCEPT FOR CALIFORNIA)

CHECKING SUB-ZERO STARTING ASSIST DEVICE

1. Make sure that there is sufficient starting assist fluid in the tank. Replenish if necessary.
2. Disconnect the connector of "S" terminal from the starting motor magnetic switch.

4A ACCELERATOR LINKAGE



47U04A-123

3. Remove the air cleaner cover.
4. Turn the ignition key to the "START" position and make sure that the starting assist fluid does not spout from the nozzle of the carburetor.
[Ambient temperature should be above -18°C (0°F)]
5. Disconnect the connector from the oil thermo unit on the oil pan and ground the disconnected connector to the body.
6. Turn the ignition key to the "START" position with the air bleeding button of the tank kept pushed, make sure that the starting assist fluid spouts out from the nozzle of the carburetor.

SUB-ZERO STARTING ASSIST FLUID

The mixture proportion of starting assist fluid should be 90% of a high quality ethylene glycole anti-freeze solution plus 10% of water.

OIL THERMO UNIT

The oil thermo unit is in good condition if it is energized below -18°C (0°F) and is not above it.

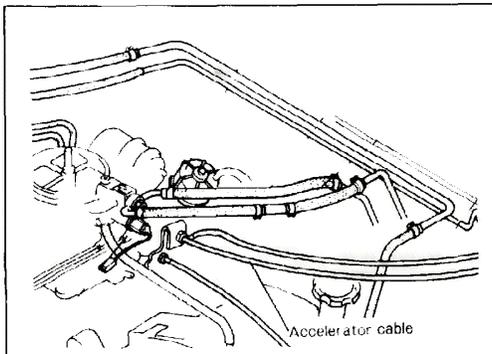
ACCELERATOR LINKAGE

CHECKING ACCELERATOR LINKAGE

Remove the air cleaner and, with the accelerator pedal fully depressed, observe the position of the carburetor throttle valves. They should be vertical (wide open position).

Check that the accelerator linkage returns fully and does not bind.

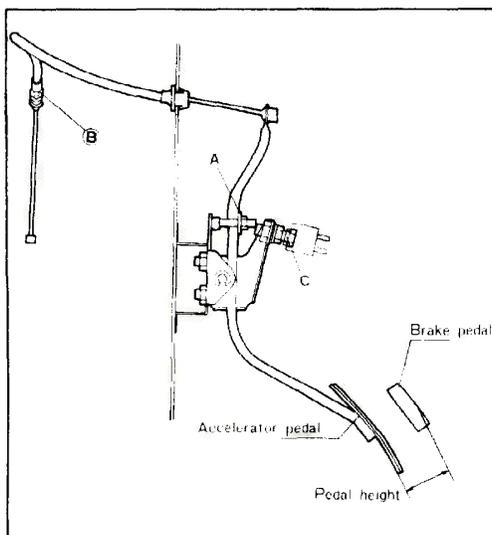
Examine the choke control for free operation.



47U04A-124

ADJUSTING ACCELERATOR CABLE

1. Check the accelerator pedal position.
The accelerator pedal height should be $42 \pm 5 \text{ mm}$ ($1.7 \pm 0.2 \text{ in}$) lower than the brake pedal height.
If necessary, adjust the nut A to obtain the correct position.
2. Check the free play of the cable at the carburetor.
It should be $1 \sim 3 \text{ mm}$. If the free play is not within the specifications, adjust it with the nut B.
3. Depress the accelerator pedal all the way down to the floor and check to see that the throttle valves are wide open. If necessary, adjust the stopper bolt C.

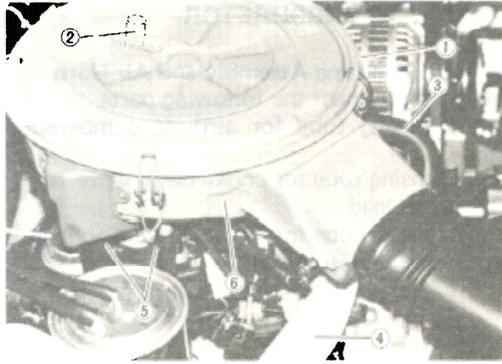


47U04A-125

CARBURETOR

REMOVING CARBURETOR

Remove and disconnect the following parts.



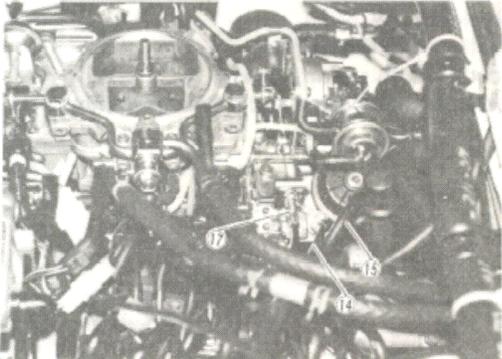
47U04A-126

1. Air cleaner cover
2. Idle compensator tube
3. Air pump inlet hose
4. Hot air hose
5. Air hoses
6. Air cleaner



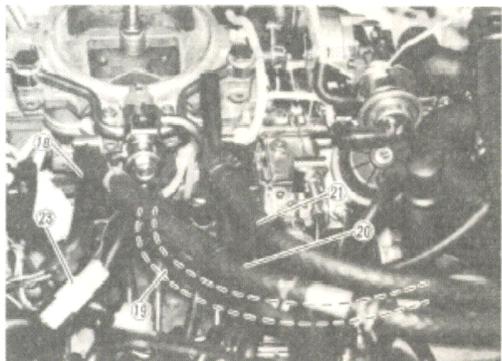
47U04A-127

7. No. 2 anti-afterburn valve and bracket assembly
8. Choke heater lead connector
9. Throttle sensor connector
10. Main air bleed control solenoid valve
11. Metering oil pump connecting rod
12. Richer solenoid valve connector (only for M/T)



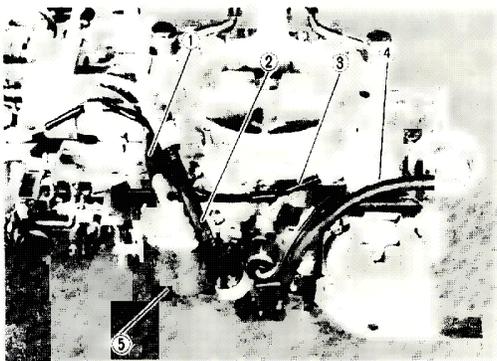
47U04A-128

13. Hot start assist cable
14. Accelerator cable
15. Vacuum sensing tube (Throttle opener)
16. Accelerator cable (Cruise control)
17. Choke cable

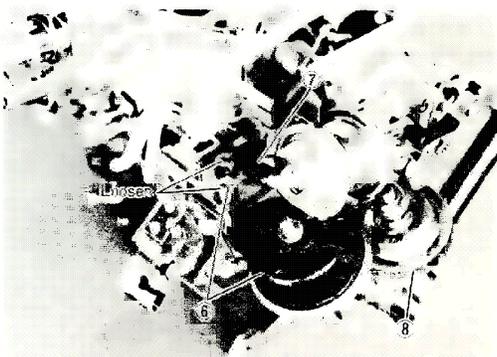


47U04A-129

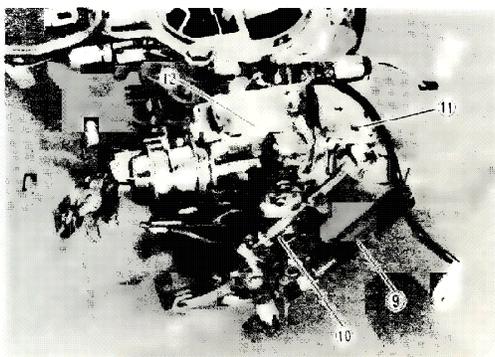
18. Air vent hose
19. Sub-zero start assist fluid hose (Except for California)
20. Fuel return hose
21. Fuel main hose
22. Metering oil pump tubes
23. Air vent solenoid valve connector
24. Carburetor attaching nuts



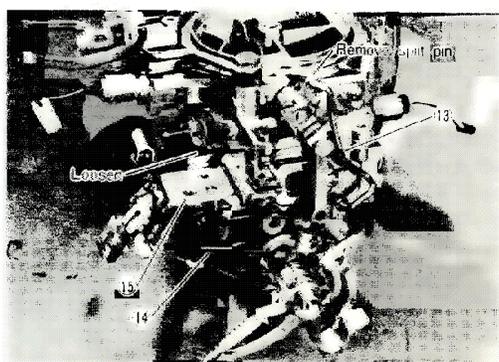
47U04A 130



47U04A-131



47U04A 132



47U04A-133

DISASSEMBLING CARBURETOR

Bimetal Spring Housing Assembly and Air Horn

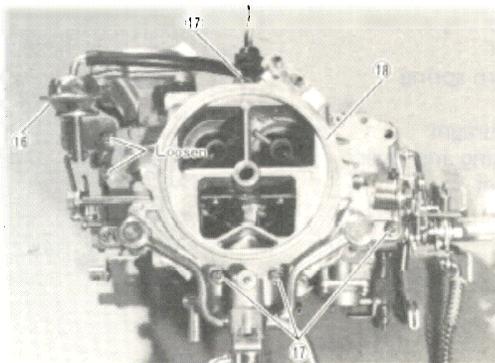
Remove and disconnect the following parts.

1. Vacuum sensing tube for altitude compensator valve
2. Vacuum sensing tube for choke delay valve
3. Choke heater lead
4. Vacuum sensing tube for No. 2 choke diaphragm
5. Altitude compensator valve

6. Throttle opener and bracket assembly
7. Vacuum sensing tube for No. 1 choke diaphragm
8. Dash pot and bracket assembly

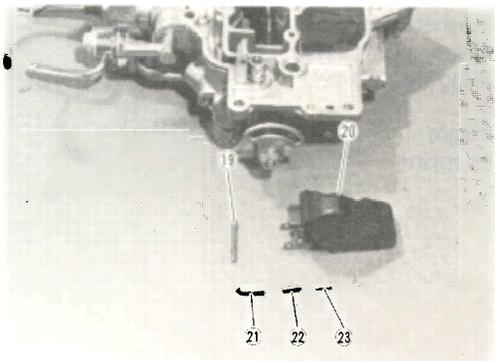
9. Throttle return spring
10. Throttle sub-return spring
11. Throttle return spring bracket
12. Bimetal spring housing and bracket assembly

13. Fast idle rod
14. Hot start assist lever spring
15. Bracket



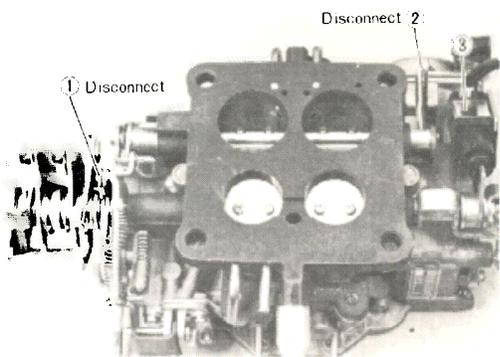
48U04A-134

- 16. No. 2 Choke diaphragm
- 17. Air horn attaching screws
- 18. Air horn assembly



47U04A-135

- 19. Float pin
- 20. Float
- 21. Needle valve and hook spring
- 22. Spring
- 23. Valve stem

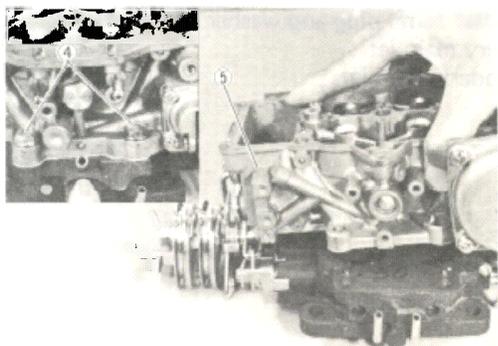


47U04A-136

Main Body

Remove and disconnect the following parts.

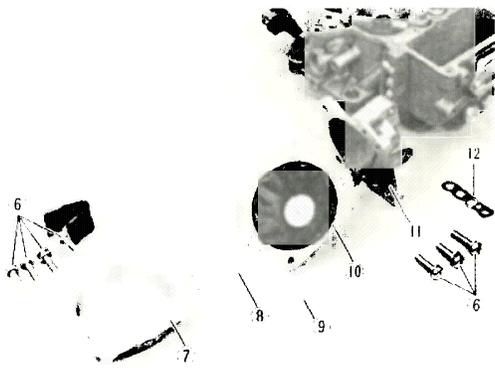
- 1. Accelerator pump rod (split pin)
- 2. Secondary throttle valve rod (split pin)
- 3. Throttle sensor



47U04A-137

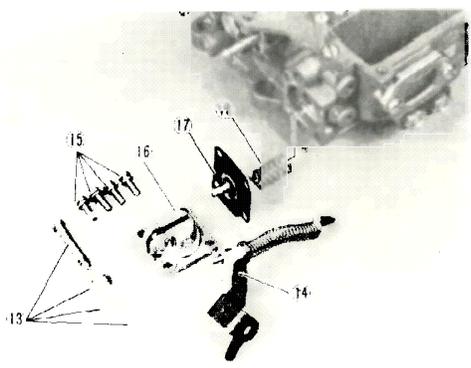
- 4. Main body attaching bolts
- 5. Main body

4A CARBURETOR



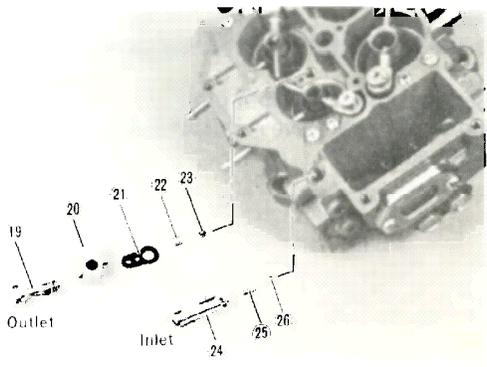
- 6. Attaching screws
- 7. Cover
- 8. Return spring
- 9. Clip
- 10. Diaphragm
- 11. Housing and lever
- 12. Gasket

47UD4A-138



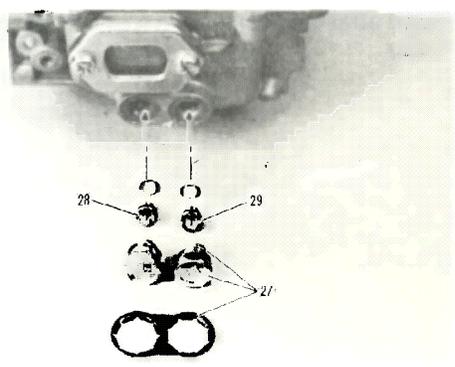
- 13. Clip, washers and shaft
- 14. Accelerator pump lever
- 15. Attaching screws
- 16. Cover
- 17. Diaphragm
- 18. Return spring

47U04A-139



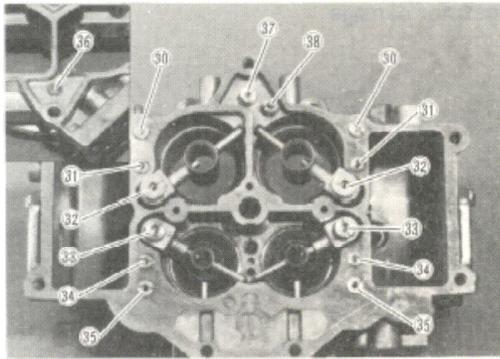
- 19. Screw
- 20. Nozzle
- 21. Gasket
- 22. Weight
- 23. Outlet check valve
- 24. Check valve seat
- 25. Weight
- 26. Inlet check valve

47U04A-140



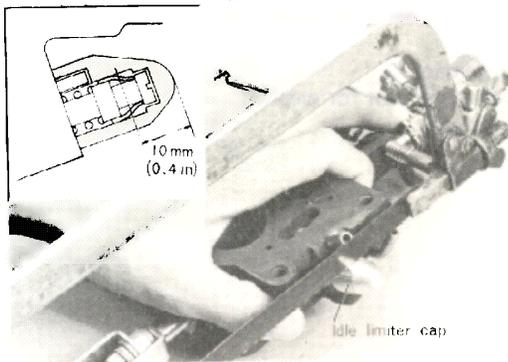
- 27. Retainer, blind plug and washer
- 28. Primary main jet
- 29. Secondary main jet

47U04A-141



47U04A-142

- 30. Secondary No. 2 step air bleed
- 31. Secondary step jet
- 32. Secondary main air bleed
- 33. Primary main air bleed
- 34. Primary slow jet
- 35. Primary No. 2 slow air bleed
- 36. Air bleed
- 37. Richer air bleed and jet (M/T only)
- 38. Blind plug (M/I only)



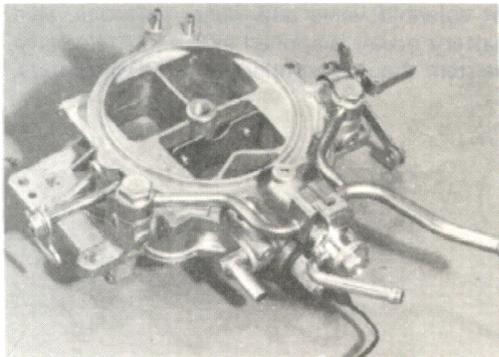
47U04A-143

Throttle Body

Remove the following parts.

1. Idle limiter cap
2. Mixture adjust screw (inside of idle limiter cap)

To remove the mixture adjust screw, cut out the idle limiter cap with a saw as shown in figure.



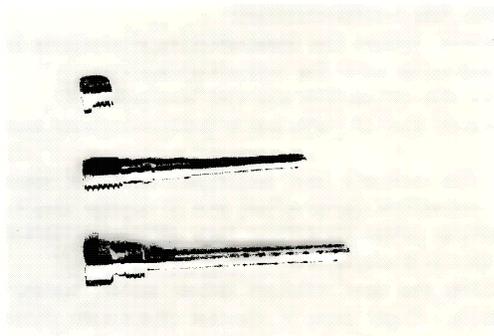
57U04A-144

INSPECTING CARBURETOR

Before inspecting, wash all parts in clean solvent, blow fuel passages with compressed air and remove the dirt. **Never use a wire for cleaning the jets.**

Inspect the following parts and replace if necessary.

- Air horn, main body and throttle body for cracks and breakage
- Choke shaft and throttle shaft for wear
- Linkage and connecting rod for bend
- Return springs for damage



47U04A-145

All jets and air bleeds for clogging

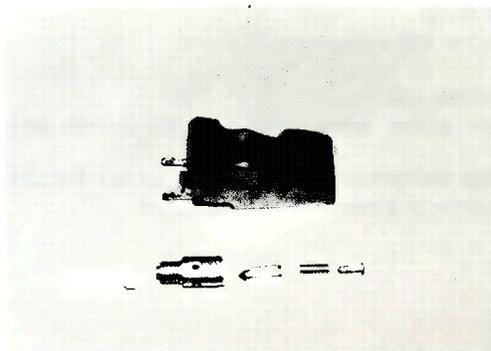
Diaphragms for damage



47U04A-146

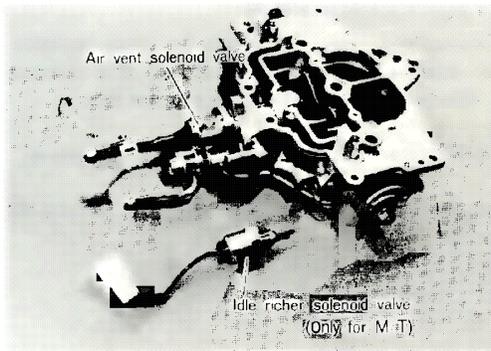
Inspect the following parts and replace if necessary.

Float for damage
Needle valve and seat for wear or rust
Strainer for clog



47U04A-147

Air vent solenoid valve and richer solenoid valve.
When battery power is applied to the solenoid valve,
the valve stem should be pulled in to the valve body.



47U04A-148

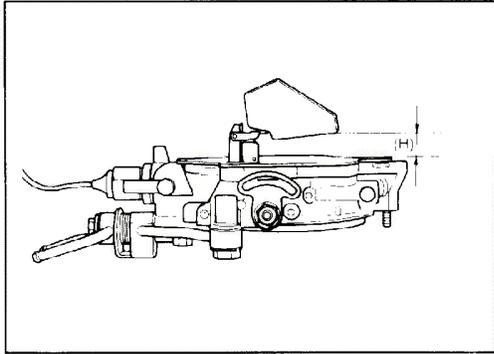
ASSEMBLING CARBURETOR

To assemble, follow the disassembling procedures in the reverse order with the following cautions.

1. Discard the old gaskets and use new ones.
2. Make sure that all parts are in good condition and clean.
3. Both the primary and secondary systems have their respective parts which are of similar shape. Therefore, when installing, care should be taken so as not to mistake one for the other.
4. In fitting the new mixture adjust screw, tighten it lightly. Then turn it counter-clockwise three turns for the preliminary setting.

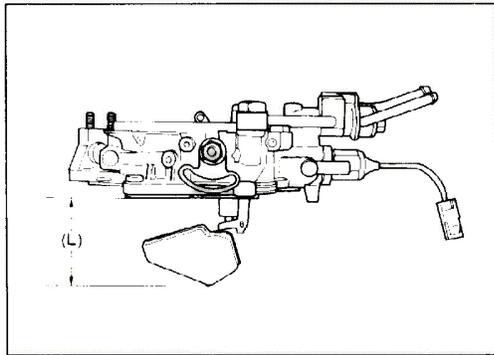


47U04A-149



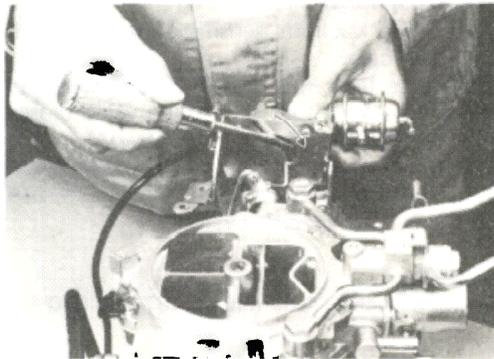
47U04A-150

5. Before installing the air horn assembly, adjust the float level as follows:
 Invert the air horn on a stand and allow the float to lower by its own weight.
 Measure the clearance (H) between the float and the air horn gasket.
 This clearance should be **16 ± 0.5 mm (0.63 ± 0.02 in)**. If the clearance is not within specifications, bend the float seat lip until the proper clearance is obtained.



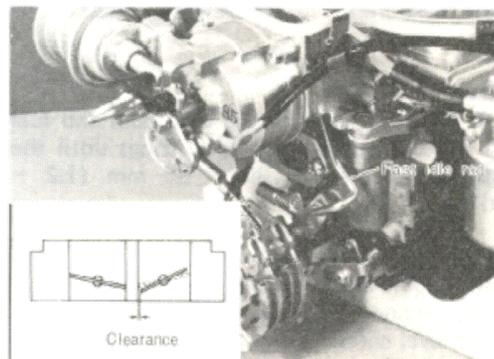
47U04A-151

- Turn the air horn to the normal position and allow the float to lower by its own weight.
 Measure the distance (L) between the bottom of float and the air horn gasket.
 The clearance should be **51 ± 0.5 mm (2.0 ± 0.02 in)**. If the clearance is not within specifications, bend the float stopper until the proper distance is obtained.



47U04A-152

6. When installing the bimetal spring housing to the main body, fit the choke shaft lever to the bimetal spring accurately by closing the choke valve and pulling the vacuum diaphragm shaft.



47U04A-153

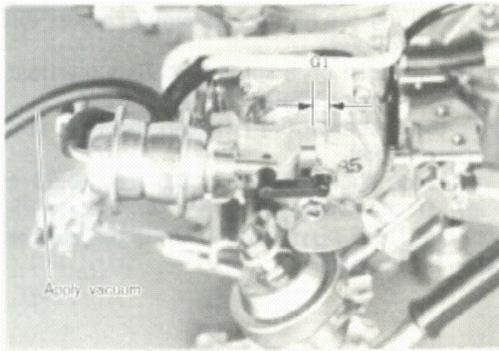
CHECKING AND ADJUSTING CARBURETOR

Fast Idle Opening Angle

With the choke valve fully closed, measure the clearance between the primary throttle valve and the wall of the throttle bore.

Clearance: 1.0 ~ 1.2 mm (0.040 ~ 0.047 in)

If the clearance is not within specification, bend the fast idle rod until the proper clearance is obtained.

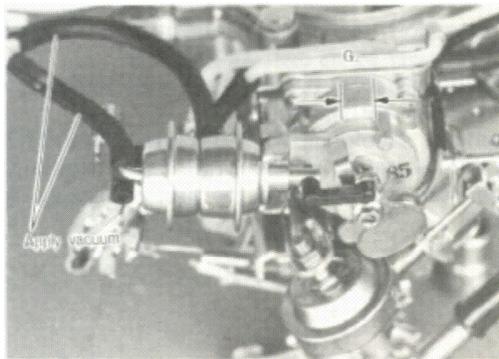


47U04A-154

Choke Valve Opening Angle

1. Disconnect the vacuum sensing tubes from the No. 1 vacuum diaphragm.
2. Pull the choke lever link out fully and keep its position.
3. Apply vacuum of **more than 500 mm-Hg (19.7 in-Hg)** to No. 1 vacuum diaphragm and make sure the clearance (G1) is specified value.

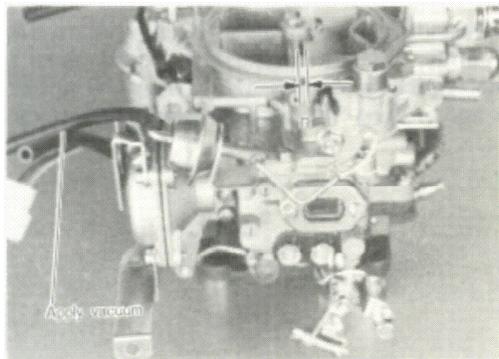
Clearance G1: 5.5 ~ 6.2 mm (0.22 ~ 0.24 in)



47U04A-155

4. Apply vacuum of **more than 500 mm-Hg (19.7 in-Hg)** to No. 1 vacuum diaphragms and make sure the clearance (G2) is specified value.

Clearance G2: 11.5 ~ 13 mm (0.45 ~ 0.51 in)

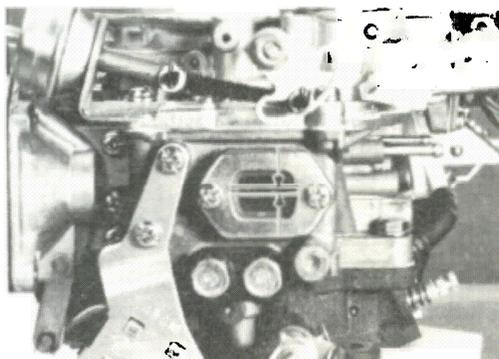


47U04A-156

No. 2 Choke Diaphragm

1. Disconnect the vacuum sensing tube from the vacuum diaphragm.
2. Pull the choke lever link out fully and keep its position. Make sure that the choke valve closes fully. Cool the choke bimetal if necessary.
3. Apply vacuum of **more than 500 mm-Hg (19.7 in-Hg)** to the vacuum diaphragm and make sure the clearance (R) is specified value.

**Clearance (R):
1.46 ~ 1.80 mm (0.057 ~ 0.070 in)**



47U04A-157

INSTALLING CARBURETOR

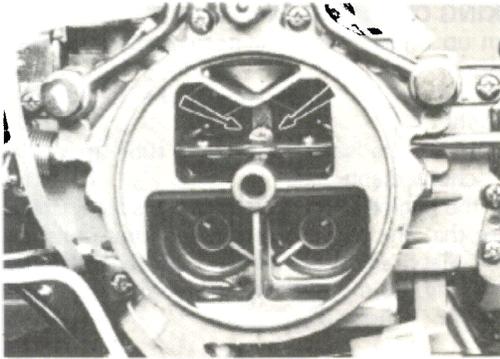
Install the carburetor in the reverse order of removing.

Caution

Push in the hose ends of the fuel main and fuel return hoses to the carburetor fittings until the fittings are inserted to 30 ~ 35 mm (1.2 ~ 1.4 in).

After installing, **note** the followings.

1. Start the engine and check for fuel leakage.
2. With the engine operating, check the fuel level. The fuel level should be in the specified mark in the sight glass.



57U04A-158

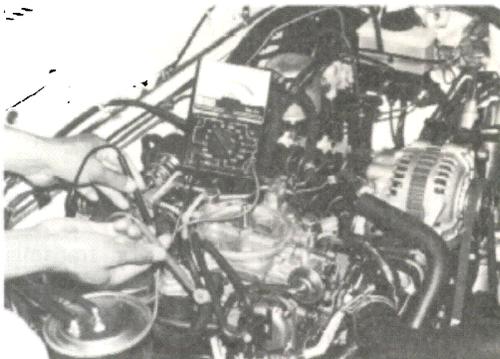
3. Inspect the accelerator pump as follows.
 - 1) Place the vehicle on a level ground.
 - 2) Remove the air cleaner cover.
 - 3) Start the engine and check that the fuel level is at the specified mark in the sight glass.
 - 4) Stop the engine. Operate the throttle valve and check to see that the fuel is discharged from the nozzles of the pump.
4. Adjust the idle speed and idle mixture as instructed on page 4A-63.



47U04A-159

CHECKING CARBURETOR HEATER

1. Disconnect the connector of the No. 1 water temperature switch and connect a jumper wire to both terminals in the connector.
2. Connect a tachometer to the engine.
3. Disconnect the carburetor heater connector and connect a voltmeter to the connector.
4. Start the engine and set engine speed to **2,000 rpm with choke knob**.
See that current flows to the carburetor heater lead, but it does not flow when the choke knob is pushed back completely.



47U04A-160

5. Connect one probe of an ohmmeter to the carburetor heater lead and the other to the carburetor body. If there is no meter movement, the carburetor heater has an open circuit and must be replaced.

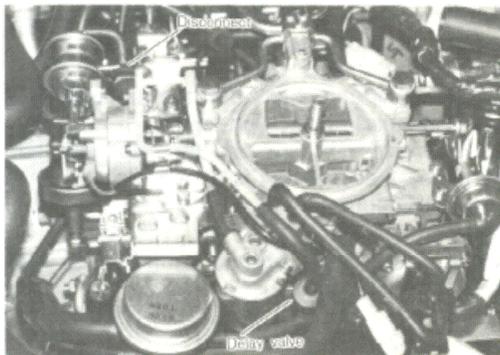


47U04A-161

CHECKING No. 1 AND No. 2 CHOKE DIAPHRAGMS

1. Remove the air cleaner assembly.
2. Start the engine and run it at idling speed.
3. Disconnect the vacuum sensing tubes from the No. 1 and No. 2 choke diaphragms.
Each diaphragm shaft should be come out from the choke diaphragm.

4A IDLE SPEED AND IDLE MIXTURE



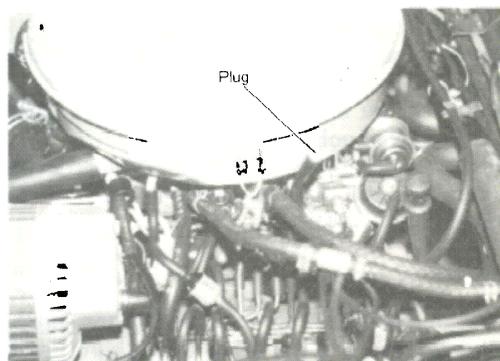
4704A-162

CHECKING CHOKE DELAY VALVE

1. Warm up the engine to the normal operating temperature.
2. Stop the engine and remove the air cleaner assembly.
3. Disconnect the vacuum sensing tube from the No. 1 choke diaphragm.
4. Start the engine and run it at idling speed. Check to see that the diaphragm shaft is fully pulled in to the diaphragm with in **26 ~ 38 seconds** after connecting the disconnected vacuum sensing tube to the No. 1 choke diaphragm.

Note

On vehicles equipped with automatic transmission, place the selector lever to "N" position.



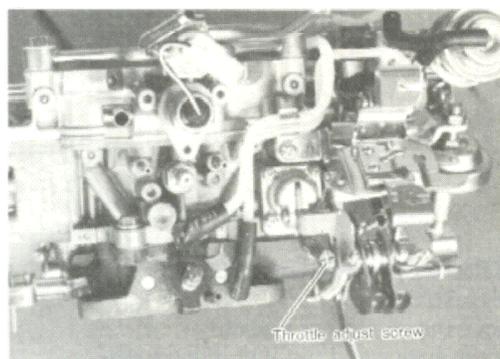
47U04A-163

IDLE SPEED AND IDLE MIXTURE

ADJUSTING IDLE SPEED AND IDLE MIXTURE

Before checking or adjusting the idle speed and idle mixture, follow these directions.

- a. Switch off all accessories.
- b. Remove the fuel filler cap.
- c. Connect a tachometer to the engine.
- d. Disconnect the richer solenoid connector.



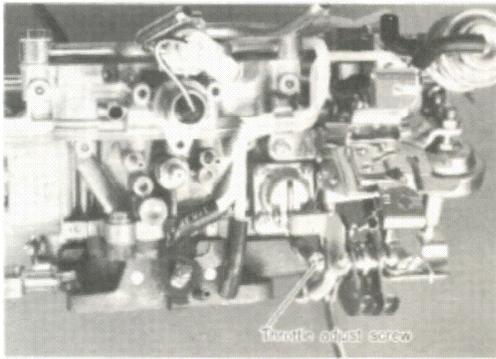
47U04A-164

Idle Speed:

1. Warm up the engine until it reaches normal operating temperature.
2. On vehicles equipped with automatic transmission, shift the selector lever to "D" position.
3. Check the idle speed. If the idle speed is not specified, adjust the idle speed to **750 rpm** by turning the throttle adjust screw.

Idle Speed;

Manual transmission: 750 rpm in neutral
Automatic transmission: 750 rpm in "D" position



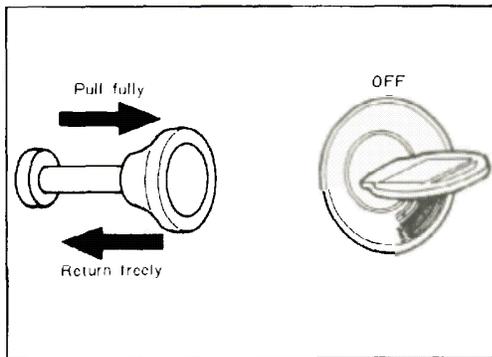
57U04A-165



47U04A-166



47U04A-167



47U04A-168

Idle Mixture:

Usually idle mixture adjustment is unnecessary. In case overhaul is necessary due to carburetor trouble, make idle mixture adjustment as follows:

1. Remove the throttle body and cut out the idle limiter cap as instructed on page 4A-57.
2. Fit a new mixture adjust screw as instructed on page 4A-58.
3. Set the idle speed to the following specifications by turning the throttle adjust screw.

Specifications;

Manual transmission: 770 rpm in neutral
Automatic transmission: 870 rpm in "N" position

4. Set the idle speed at the highest rpm by turning the mixture adjust screw.
5. Reset the idle speed to the following by turning the throttle adjust screw.

Specifications;

Manual transmission: 770 rpm in neutral
Automatic transmission: 870 rpm in "N" position

6. Screw in the mixture adjust screw and adjust the idle speed to **750 rpm for manual transmission** and **840 rpm in "N" position for automatic transmission.**
7. On vehicles equipped with automatic transmission, shift the selector lever to "D" position and adjust the idle speed to **750 rpm** by turning the throttle adjust screw.
8. After idle mixture adjustment is completed, fit an idle limiter cap onto the mixture adjust screw securely.

Caution

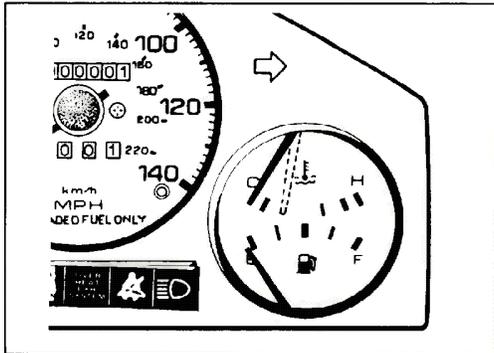
After adjusting the idle speed, the throttle sensor on the carburetor should be adjusted.

AUTOMATIC CHOKE RELEASE SYSTEM

CHECKING AUTOMATIC CHOKE RELEASE SYSTEM

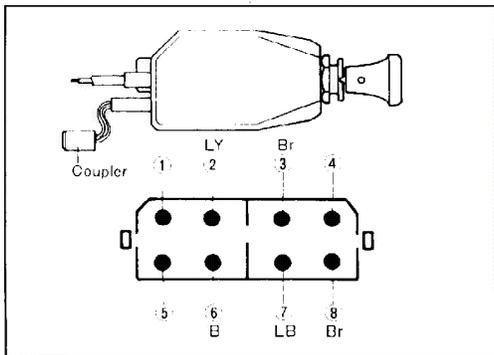
1. When the engine is cold, pull the choke knob fully with the ignition switch off, and check that the choke knob returns automatically.
2. Connect a tachometer to the engine.

4A HOT START ASSIST SYSTEM



47U04A-169

4. Set engine speed to **2,000 rpm with choke knob**.
5. Leave the engine running and see that the choke knob automatically returns completely when the temperature gauge indicates the range shown in figure.



47U04A-170

CHECKING CHOKE MAGNET

1. Disconnect the connector from the choke switch.
2. Check the continuity between the numbered terminals in the connector using an ohmmeter. The continuity should exist between 6 and 8 terminals.

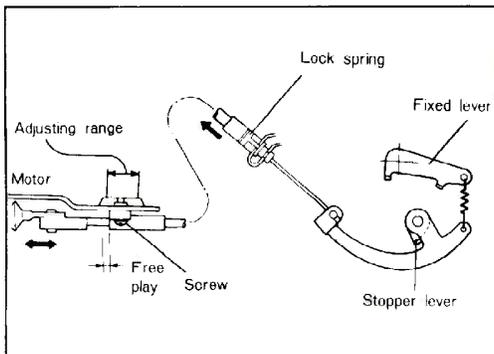


47U04A-171

HOT START ASSIST SYSTEM

CHECKING HOT START ASSIST SYSTEM

1. Inspect the hot start assist linkage for proper installation, no sticking or binding, and full return.
2. Warm the engine to normal operating temperature then stop the engine.
3. Disconnect the connectors for leading and trailing primary wires from the ignition coils.
4. Crank the engine. Check to see that the hot start lever operates and throttle valves open.



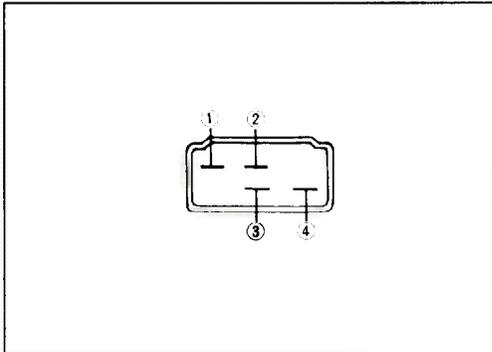
47U04A-172

ADJUSTING HOT START ASSIST CABLE

1. Pull the start assist motor inner cable until the stopper lever touches to the start lever and check the free play.

Free play: 1 ~ 2 mm (0.04 ~ 0.08 in)

2. If the free play is not within the specified value, loosen the screw and adjust it.



57U04A-173

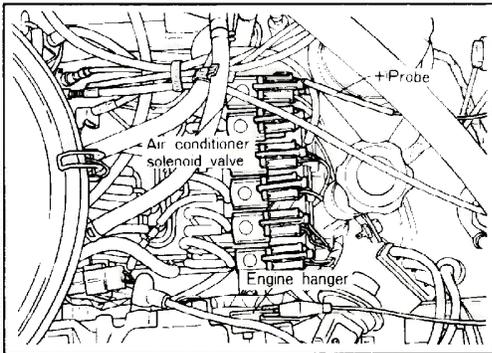
CHECKING HOT START ASSIST RELAY

1. Disconnect the connector from the relay.
2. Check the continuity between 1 and 4 terminals, referring to the following table.

Continuity	Remarks
Closed	Without power applied
Open	Connect the battery: positive to terminal 2 and negative to 3.

RELATIVE PART

Check the No. 1 water temperature switch as described on page 4A-32.

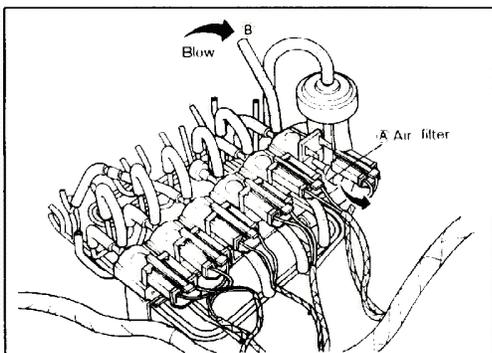


47U04A-174

THROTTLE OPENER

CHECKING SIGNAL INSPECTION

1. Warm the engine to the normal operating temperature and stop the engine.
2. Connect a tachometer to the engine.
3. Connect the positive probe of the voltmeter to the negative terminal of the air conditioner solenoid valve connector (white) and ground the negative probe of the voltmeter to the body.
4. Start the engine and turn on the air conditioner compressor switch.
5. Increase the engine speed to **2,000** rpm with throttle. Slowly decrease the engine speed and check that the voltmeter reads near OV at **1,100 ± 100 rpm.**

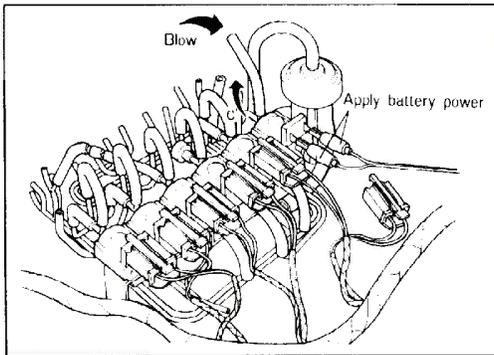


47U04A-175

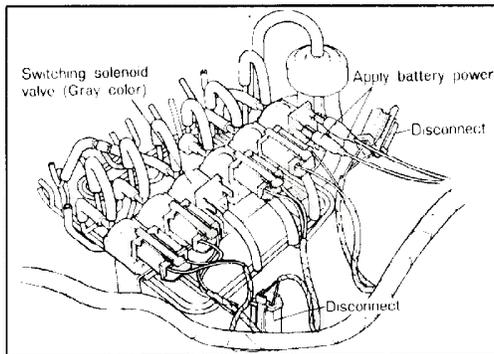
CHECKING AIR CONDITIONING SOLENOID VALVE

1. Disconnect the vacuum sensing tubes from the solenoid valve and vacuum pipe.
2. Blow through the solenoid valve from the vacuum sensing tube B. Make sure the air passes through the valve and comes out from the air filter A of the valve.

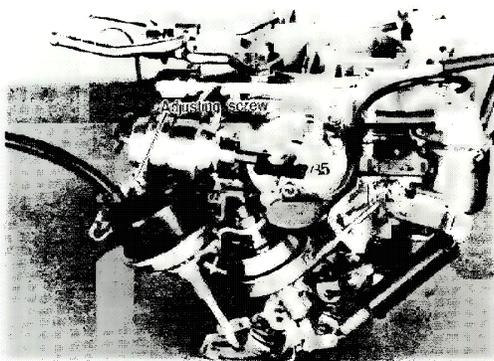
4A THROTTLE OPENER



47U04A-175



47U04A-176



3. Disconnect the connector from the solenoid valve and connect the battery power to terminals on the valve.
4. Blow through the valve from the vacuum sensing tube B. Make sure the air passes through the valve and comes out from the port C.

INSPECTING AND ADJUSTING THROTTLE OPENER

1. Switch off all the accessories.
2. Remove the fuel filler cap.
3. Disconnect the tube at the idle compensator in the air cleaner and plug the end of the tube.
4. Connect a tachometer to the engine and warm the engine to the normal operating temperature.
5. Disconnect the connector from the switching solenoid valve (Gray).
6. Disconnect the vacuum sensing tubes from the leading vacuum control units on the distributor and plug the tubes.
7. Turn off the air conditioner switch.
8. Disconnect the connector from air conditioner solenoid valve. Connect the battery power to the terminal in the connector and connect the other terminal to ground. Check to see that the throttle opener operates and engine speed increases to **1,200 ± 50 rpm in neutral**.
9. If the engine speed is not within the specification, adjust it by turning the adjusting screw.