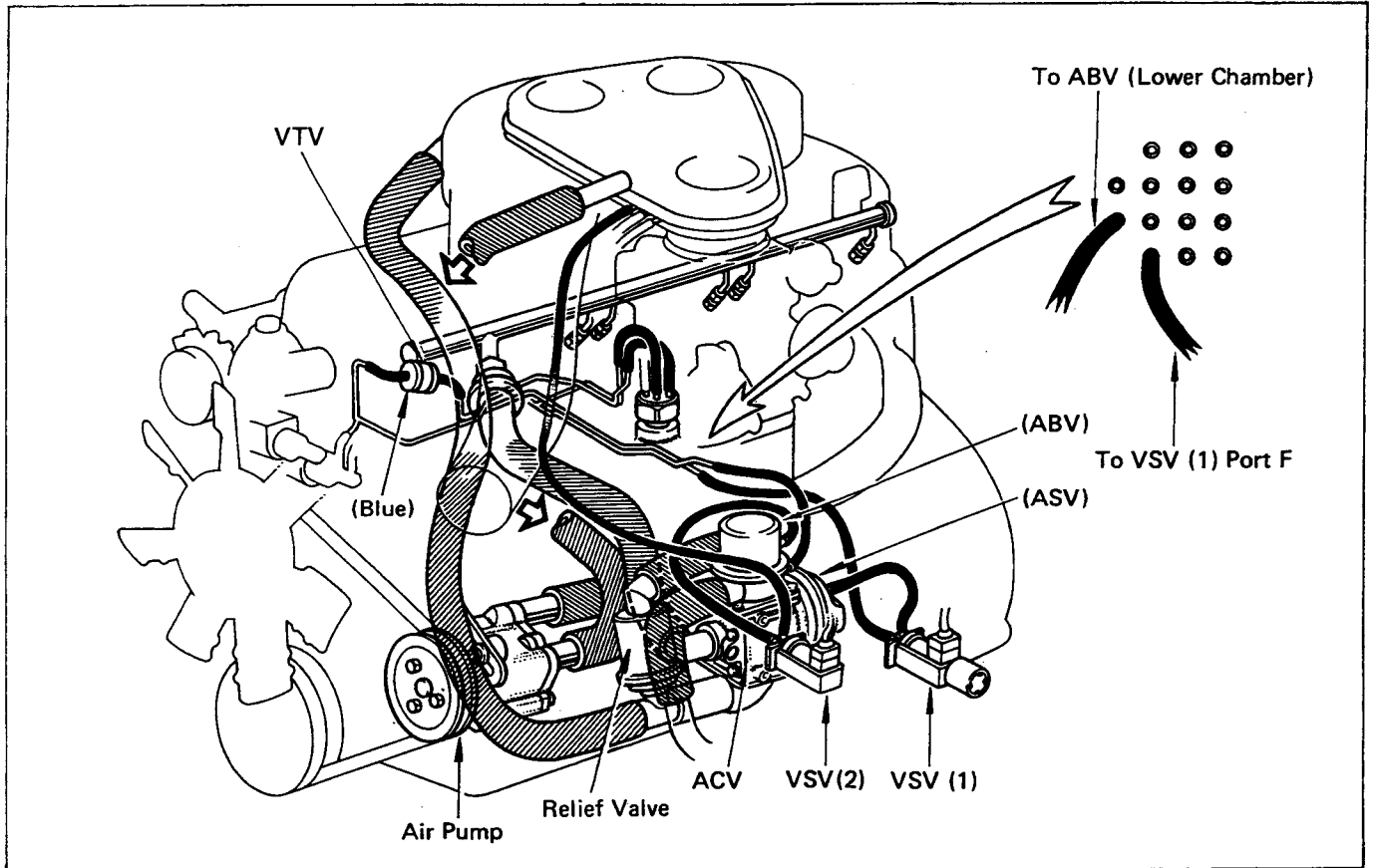
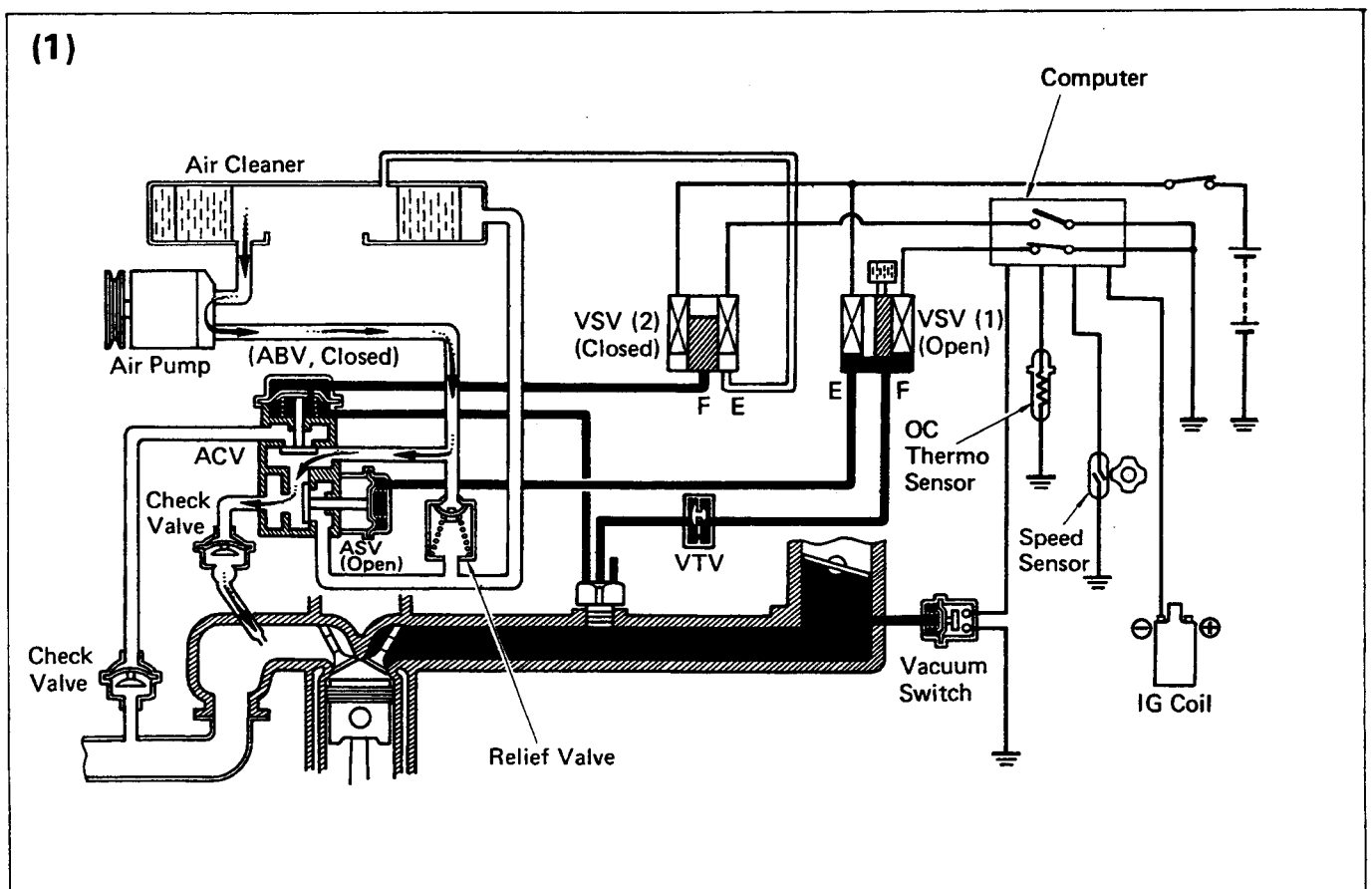


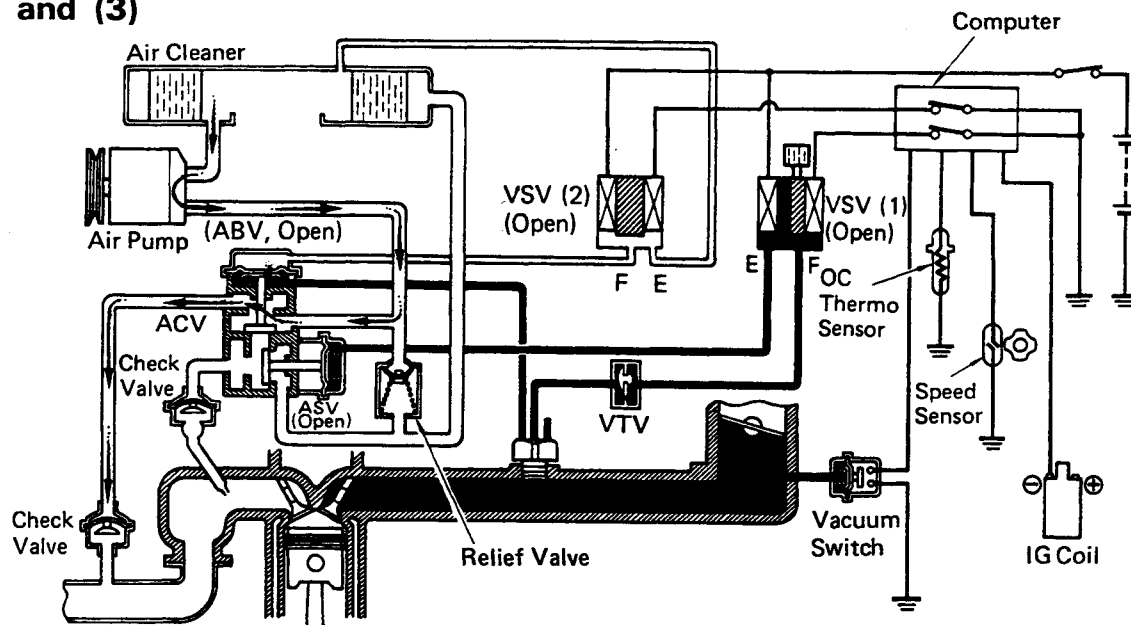
AIR INJECTION (AI) SYSTEM



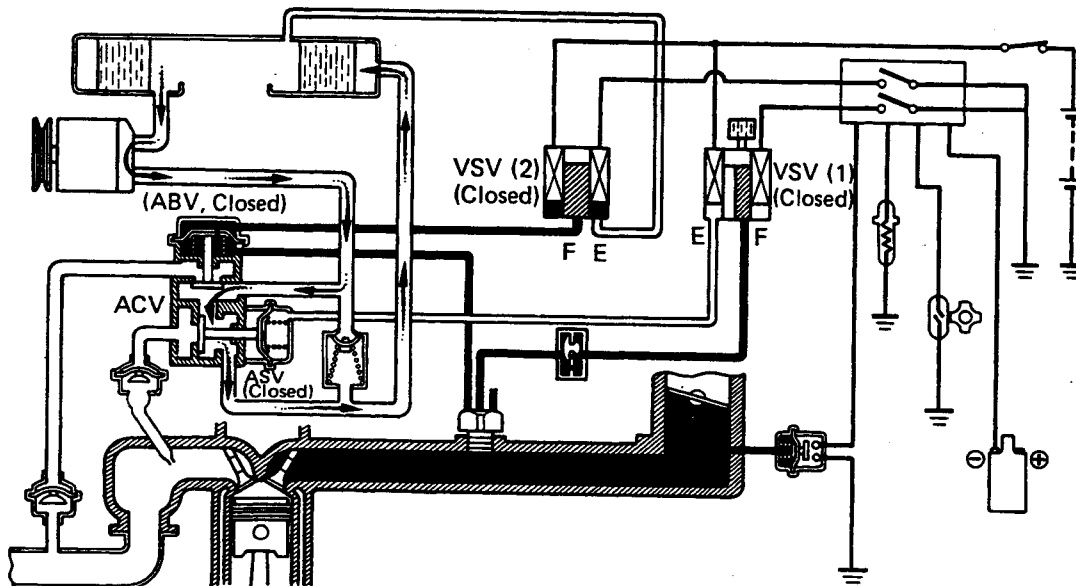
(1)



(2) and (3)



(4)



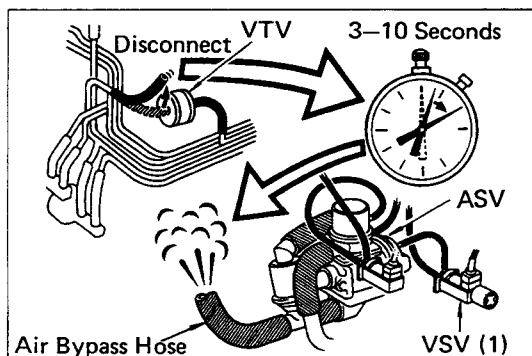
For reburning the unburnt HC and CO in the exhaust gas, compressed air from the air pump is blown into the exhaust ports during low-middle vehicle speed. During high vehicle speed, air is blown into the exhaust pipe (Just ahead of OC).

OC Temp.	Vehicle Speed	Deceleration Fuel Cut System	VSV (1)	VSV (2)	ASV	ABV	Air from Air Pump
Below 600°C (1,112°F)	Below 35 mph (56 km/h)	OFF	OPEN (E-F)	CLOSED (E-F)	OPEN	CLOSED	Injected to EXHAUST PORTS (1)
		*ON		OPEN (E-F)		OPEN	Injected to EXHAUST PIPE (2)
	Above 50 mph (80 km/h)	—		OPEN (E-F)		OPEN	Injected to EXHAUST PIPE (3)
Above 785°C (1,445°F)	—	OFF	CLOSED (E-F)	CLOSED (E-F)	CLOSED	CLOSED	Bypassed to AIR CLEANER (4)
		*ON		OPEN (E-F)		OPEN	Injected to EXHAUST PIPE

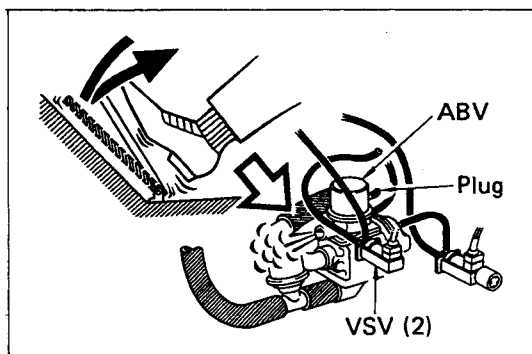
Remarks * Intake vacuum above 355 mmHg (13.97 in. Hg) and engine speed above 1,800 rpm.

INSPECTION OF AI SYSTEM

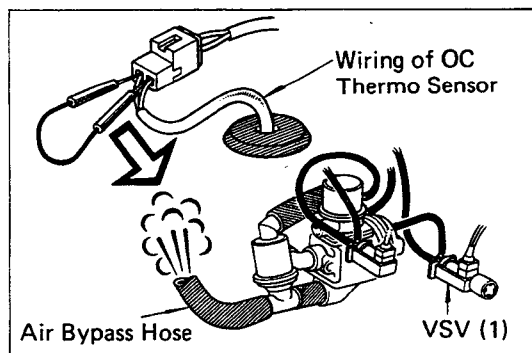
1. VISUALLY CHECK HOSES AND TUBES FOR CRACKS, KINKS, DAMAGE OR LOOSE CONNECTIONS
2. DISCONNECT AIR BYPASS HOSE FROM AIR CLEANER
3. START ENGINE

**4. CHECK VTV AND ASV**

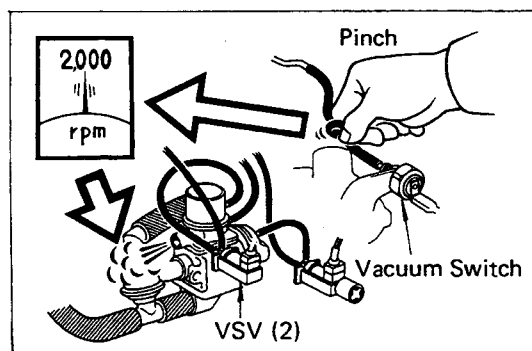
- (a) With the engine idling, check that air is not discharged from the air bypass hose.
- (b) Disconnect the vacuum hose from the VTV at the blue side. Check that air is discharged from the air bypass hose within 3–10 seconds.
- (c) Reconnect the vacuum hose to the VTV. Check that air stops quickly.

**5. CHECK ABV**

- (a) Disconnect the air hose between the ABV and exhaust pipe at the ABV side.
- (b) Disconnect the vacuum hose between the ABV and VSV(2) at the ABV side, and plug the ABV.
- (c) Race the engine and quickly close the throttle valve. Check that air is discharged momentarily from the ABV.
- (d) Reconnect the vacuum hose to the ABV.

**6. CHECK OC THERMO SENSOR TO VSV(1)**

- (a) With the engine idling, connect a wire to both OC thermo sensor terminals.
- (b) Check that air is discharged from the air bypass hose.
- (c) Disconnect the wire from the OC thermo sensor terminals.

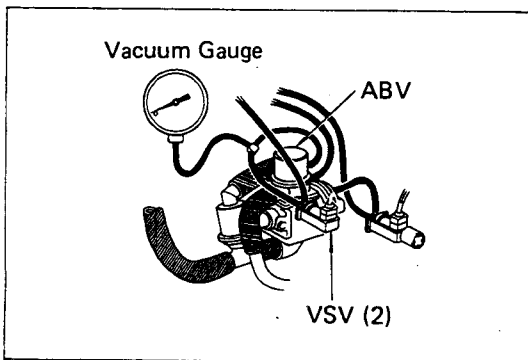
**7. CHECK DECELERATION FUEL CUT SYSTEM TO VSV(2)**

- (a) Pinch the vacuum hose to the vacuum switch at idle.
- (b) Gradually increase the engine speed to 2,000 rpm.
- (c) Check that air is discharged from the ABV.

NOTE:

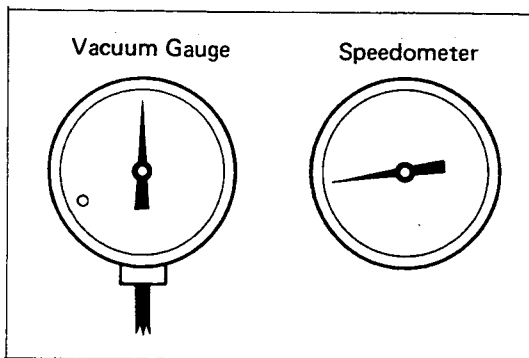
- Perform this inspection in as short a time as possible.
- The engine will misfire slightly at the same time.

- (d) Release the pinched hose.
- (e) Reconnect the air bypass hose to the air cleaner, and air hose to the ABV.

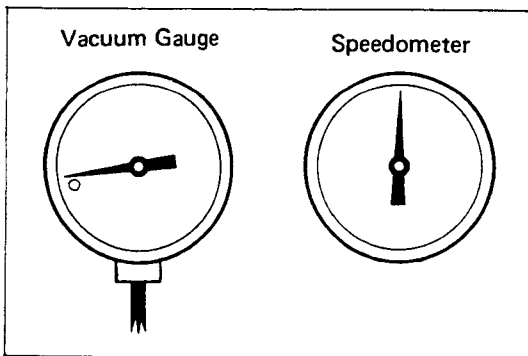


8. CHECK SPEED SENSOR TO VSV(2)

- (a) Connect a vacuum gauge to the hose between the VSV(2) and ABV using a 3-way connector.
- (b) Set the gauge at the driver's seat.



- (c) Perform a road test observing the speedometer and the vacuum gauge.
 - Check that the vacuum gauge indicates intake manifold vacuum at low-middle speed driving (below 35 mph or 56 km/h).



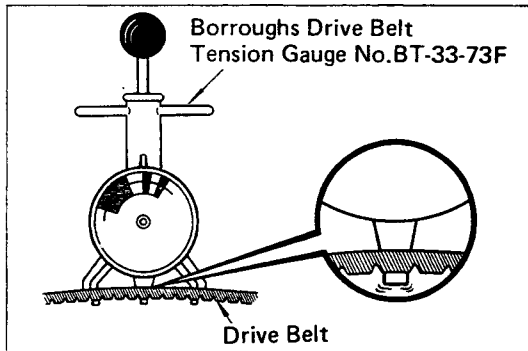
- Check that the vacuum gauge indicates zero at high speed driving (above 50 mph or 80 km/h).
- (d) Disconnect the vacuum gauge and reconnect the vacuum hose to the proper location.

IF NO PROBLEM IS FOUND WITH THIS INSPECTION, THE SYSTEM IS OKAY; OTHERWISE INSPECT EACH PART

INSPECTION OF AIR PUMP DRIVE BELT

1. VISUALLY CHECK DRIVE BELT FOR CRACKS, OILNESS OR WETNESS

The belt should not touch the bottom of the pulley groove.



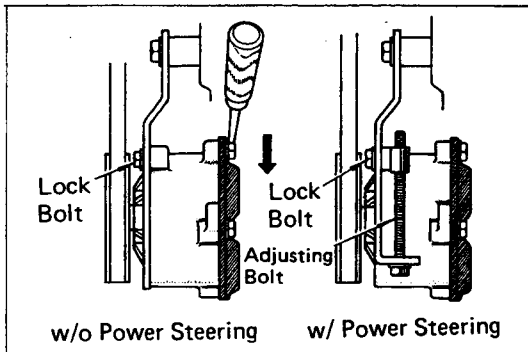
2. CHECK AND ADJUST DRIVE BELT TENSION

- (a) Check the drive belt tension with Borroughs Drive Belt Tension Gauge No. BT-33-73F.

Belt tension:

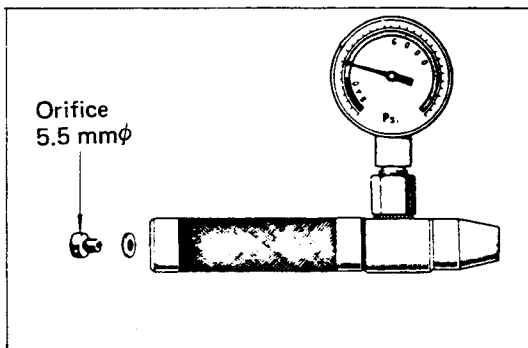
New belt 145 ± 25 lb

Used belt 100 ± 20 lb



- (b) To adjust, loosen the adjusting lever bolt and pivot bolt, shift the air pump toward the direction of belt tension, and retighten the bolts.

CAUTION: Do not attempt to shift the air pump by prying on the die cast part with a lever. Pry on the rear cover when making the adjustment.



INSPECTION OF AIR PUMP

1. CHECK AIR PUMP FOR ABNORMAL NOISE

2. CHECK AIR PUMP DISCHARGE PRESSURE

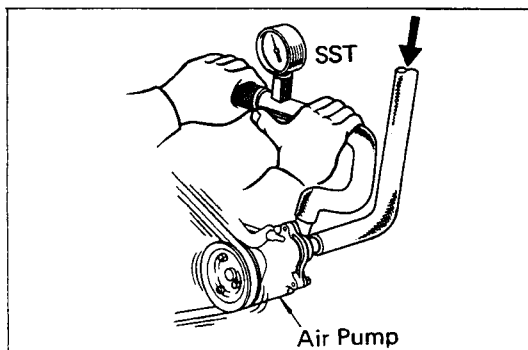
- (a) Connect the air pump tester* to the hose at the air pump outlet.

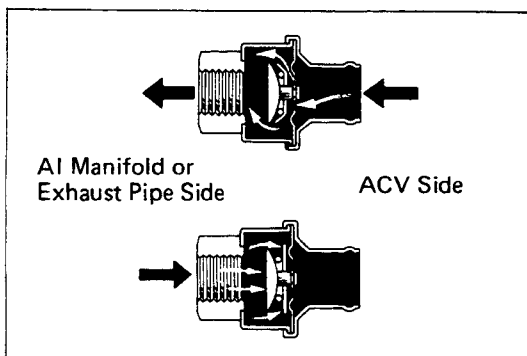
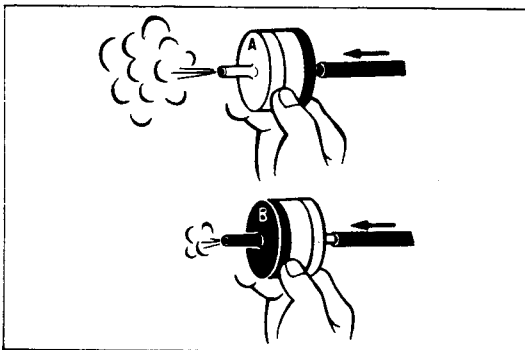
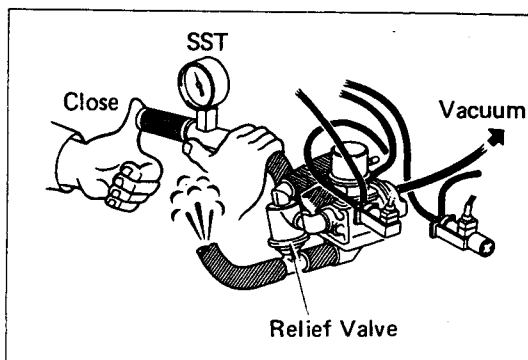
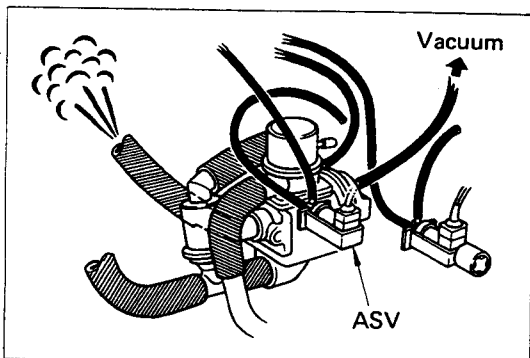
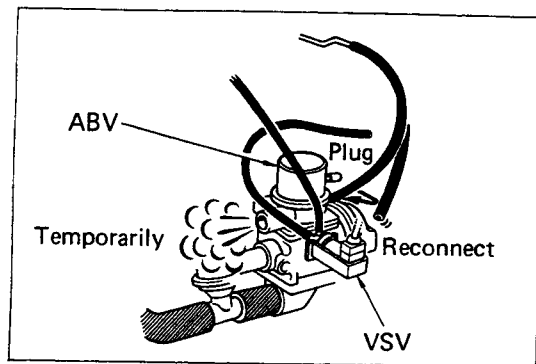
*SST 09258-14010

- (b) Select and use a specified orifice (5.5 mm dia. or 0.217 in. dia.) on the SST.
- (c) Set the engine speed at 1,200 rpm.
- (d) The gauge of the SST should indicate in the green zone.

If the SST indicates in the red zone, replace the pump assembly.

- (e) Reconnect the hose to the proper location.





INSPECTION OF ACV

1. CHECK ABV OPERATION

- Disconnect the air hose between the ABV and exhaust pipe at the ABV side.
- Disconnect the vacuum hose between the ABV and VSV (2) at the ABV side, and plug the ABV.
- With the engine idling disconnect the vacuum hose between the ABV and vacuum pipe at the ABV side and reconnect it.
- Check that compressed air comes out temporarily from the ABV.
- Reconnect the air hose to the ABV.

2. CHECK ASV OPERATION

- Disconnect the air hose from the check valve.
- Disconnect the vacuum hose from the ASV.
- With the engine idling, apply vacuum directly to the ASV.
- Check that compressed air comes out of the air hose to the check valve.

3. CHECK OPENING PRESSURE OF RELIEF VALVE

- Disconnect the air bypass hose from the air cleaner.
- Connect the air pump tester* to the air hose to check valve.

*SST 09258-14010

- Close the orifice on the SST with your finger.
- Increase the engine speed gradually and measure the relief valve opening pressure.

Opening pressure: 0.40 – 0.60 kg/cm² (5.7 – 8.5 psi)

- Remove the SST.
- Reconnect the vacuum hoses and air hoses to the proper locations.

INSPECTION OF VTV

CHECK VTV BY BLOWING AIR FROM EACH SIDE

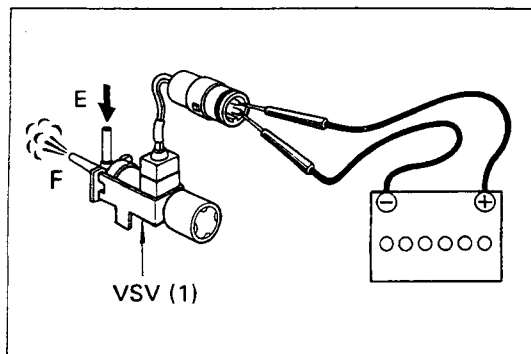
- Check that air flows without resistance from B to A.
 - Check that air flows with difficulty from A to B.
- If a problem is found, replace the VTV.

INSPECTION OF CHECK VALVES

CHECK VALVES BY BLOWING AIR FROM EACH SIDE

- Check that air flows from the ACV side to manifold (or exhaust pipe) side.
- Check that air does not flow from the manifold (or exhaust pipe) side to ACV side.

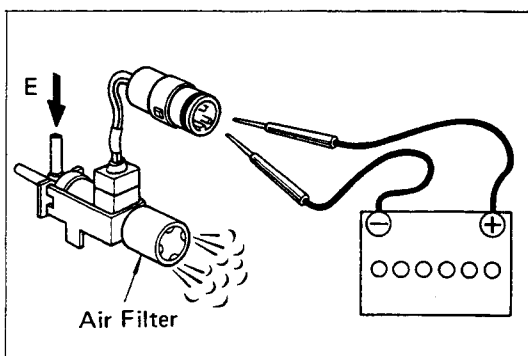
If a problem is found, replace the valve.



INSPECTION OF VSV (1)

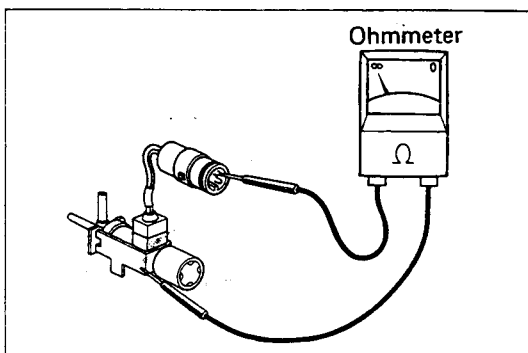
1. CHECK VACUUM CIRCUIT CONTINUITY IN THE VSV(1) BY BLOWING AIR INTO PIPE

- (a) Connect the VSV(1) terminals to the battery terminals as illustrated.
- (b) Blow into pipe E and check that air comes out of pipe F.



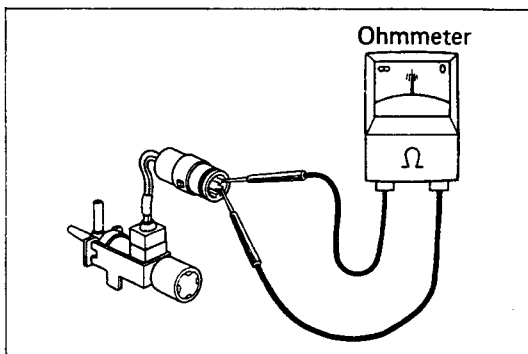
- (c) Disconnect the battery.
- (d) Blow into pipe E and check that air comes out of the air filter.

If a problem is found, replace the VSV(1).



2. CHECK FOR SHORT CIRCUIT

Using an ohmmeter, check that there is no continuity between the positive (+) terminal and the VSV(1) body. If there is continuity, replace the VSV(1).

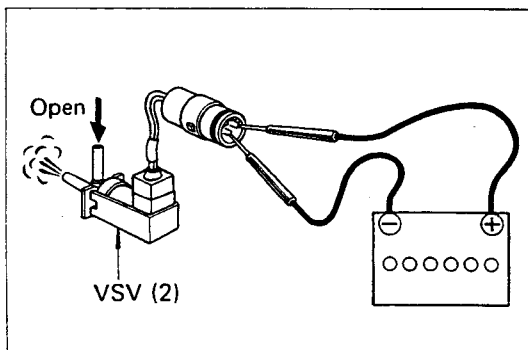


3. CHECK FOR OPEN CIRCUIT

Using an ohmmeter, measure the resistance between the positive (+) terminal and the other terminal as shown.

Specified resistance: 38 – 43 ohms at 20°C (68°F)

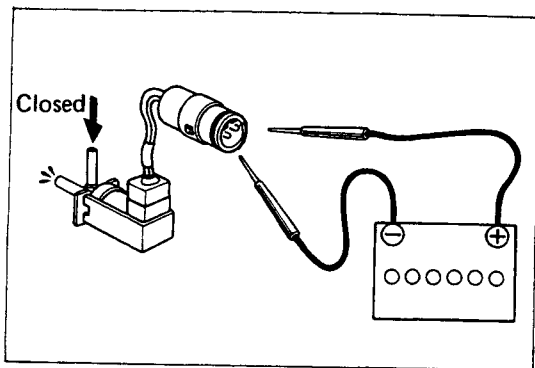
If the resistance is not within specification, replace the VSV(1).



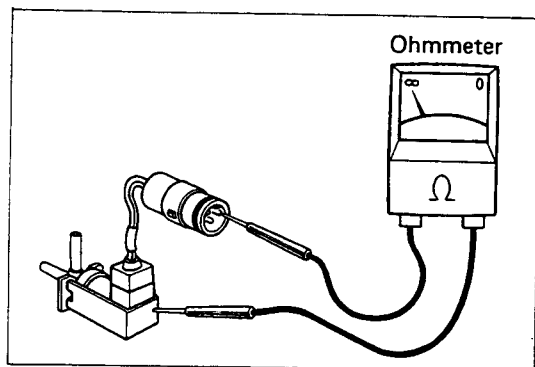
INSPECTION OF VSV (2)

1. CHECK VACUUM CIRCUIT CONTINUITY IN VSV(2) BY BLOWING AIR INTO PIPE

- (a) Connect the VSV(2) terminals to the battery terminals as shown.
- (b) Blow into the pipe, and check that the VSV(2) is open.

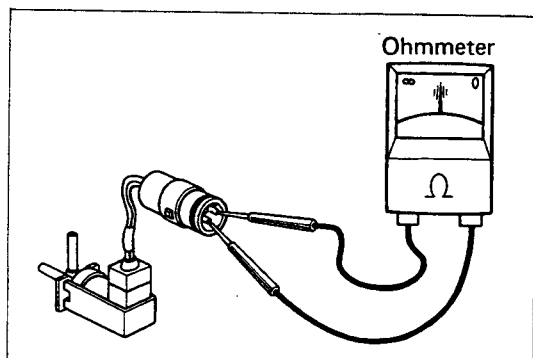


- (c) Disconnect the battery positive (+) terminal.
 - (d) Blow into the pipe and check that the VSV(2) is closed.
- If a problem is found, replace the VSV(2).



2. CHECK FOR SHORT CIRCUIT

Using an ohmmeter, check that there is no continuity between the positive (+) terminal and the VSV(2) body. If there is continuity, replace the VSV(2).

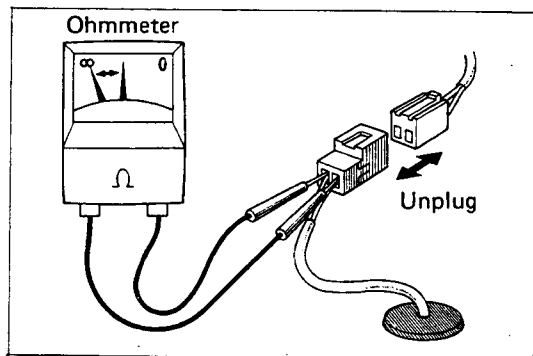


3. CHECK FOR OPEN CIRCUIT

Using an ohmmeter, measure the resistance between the positive (+) terminal and the other terminals as shown.

Specified resistance: 38 – 43 ohms at 20°C (68°F)

If the resistance is not within specification, replace the VSV(2).



INSPECTION OF OC THERMO SENSOR

1. MEASURE RESISTANCE

- (a) Unplug the wiring connector.
- (b) Using an ohmmeter, measure the resistance between both terminals at idling.

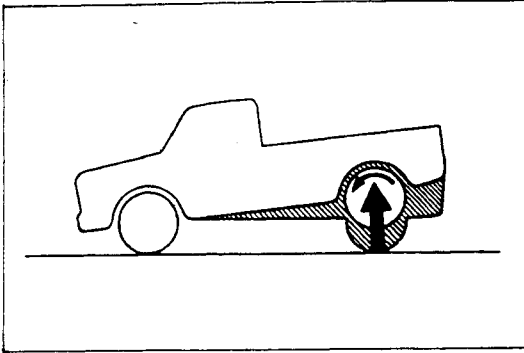
Resistance: 2 – 200 kilo-ohm

CAUTION: The ohmmeter probe should be inserted from the rear side of the connector.

- (c) Plug in the wiring connector.

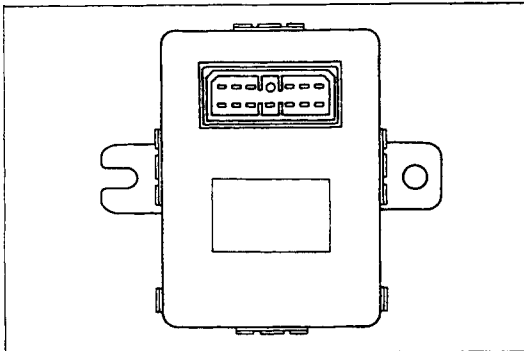
2. CHECK SENSOR WIRING

- (a) Look for damage.
- (b) Check for loose connection.

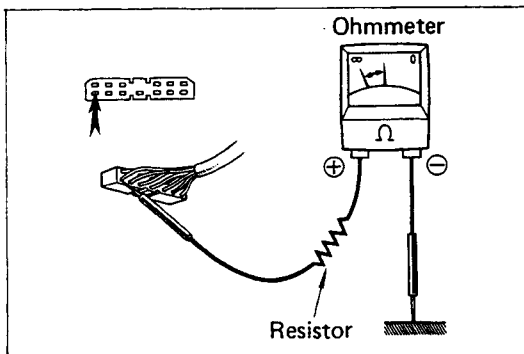


INSPECTION OF SPEED SENSOR

1. JACK UP ONE REAR WHEEL OFF THE GROUND
2. RELEASE PARKING BRAKE
3. SET SHIFT LEVER INTO NEUTRAL



4. UNPLUG WIRING CONNECTOR FROM COMPUTER
The location of computer is on the left cowl.



5. CHECK ON-OFF CYCLES OF SPEED SENSOR

- (a) Place (+) terminal of the ohmmeter on the wiring connector terminal and (-) terminal on ground.
- (b) Turn the rear wheel slowly.
- (c) Check that the ohmmeter needle deflects consistently.

CAUTION: The ohmmeter probe should be inserted from the rear side of the connector.

If the ohmmeter needle does not deflect, check that the speed sensor terminals at the back side of the speedometer are properly connected. If the connection is OK, replace the speedometer assembly.

6. RECONNECT WIRING CONNECTOR TO COMPUTER

INSPECTION OF DECELERATION FUEL CUT SYSTEM

See page 3-44.