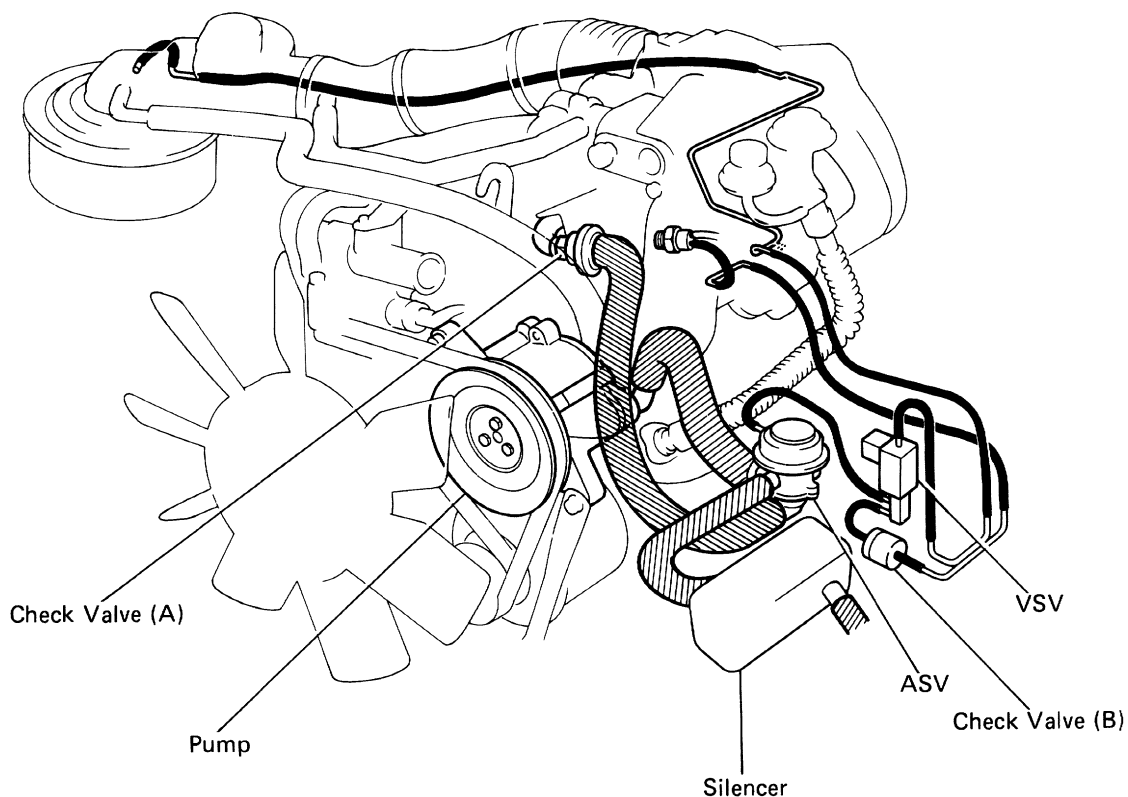
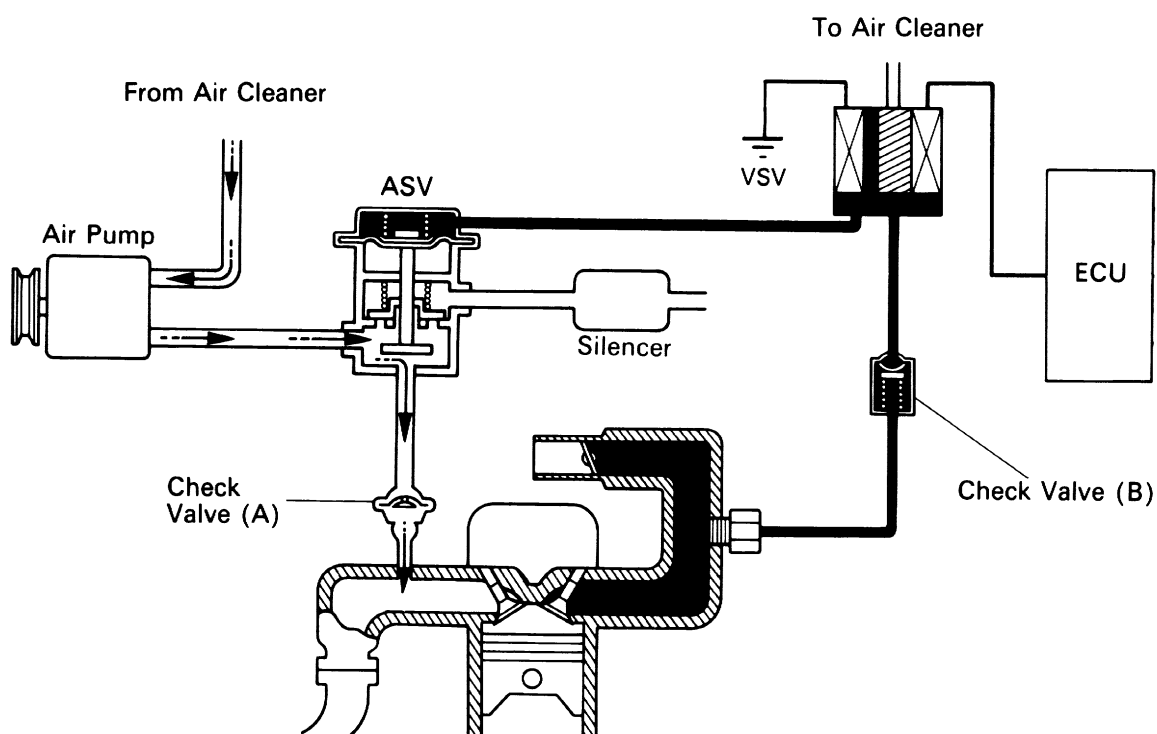


## AIR INJECTION (AI) SYSTEM



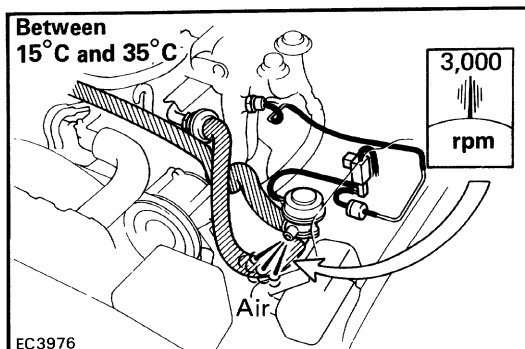
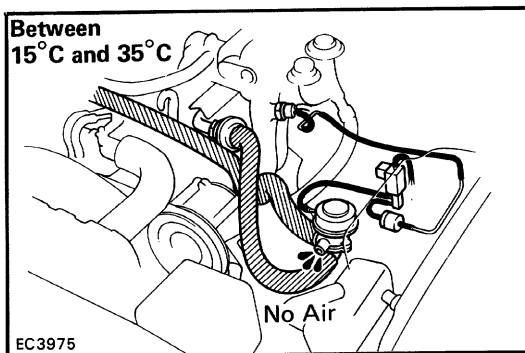
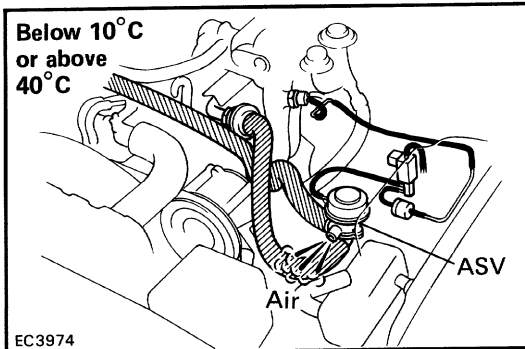
EC3981



EC2922

For reburning the unburnt CO,HC in the exhaust port, compressed air from the air pump is blown into the exhaust port.

| Coolant Temp.                 | Driving Condition | Engine RPM      | Vehicle Speed         | VSV | ASV    | AI System |
|-------------------------------|-------------------|-----------------|-----------------------|-----|--------|-----------|
| Below 10°C (50°F)             |                   |                 |                       | OFF | CLOSED | OFF       |
| Between 15 – 35°C (59 – 95°F) | —                 |                 |                       | ON  | OPEN   | ON        |
| Above 40°C (104°F)            | Ex. deceleration  |                 |                       | OFF | CLOSED | OFF       |
|                               | Deceleration      | Above 2,000 rpm |                       | OFF | CLOSED | OFF       |
|                               |                   | Blow 2,000 rpm  | Above 6 mph (10 km/h) | ON  | OPEN   | ON        |



## INSPECTION OF AI SYSTEM

### 1. VISUALLY CHECK HOSES AND TUBES FOR CRACKS, KINKS, DAMAGE OR LOOSE CONNECTIONS

### 2. PREPARATION

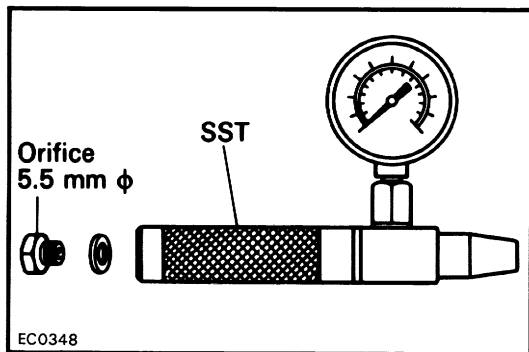
Disconnect the air by-pass hose from the ASV.

### 3. CHECK ASV WITH FOLLOWING TEMPERATURE:

- The coolant temperature should be below 10°C (50°F) or above 40°C (104°F).
- Start the engine and check that air is discharged from the ASV.
- The coolant temperature should be between 15°C (59°F) and 35°C (95°F).
- With engine idling, check that air is not discharged from the ASV.
- The coolant temperature should be between 15°C (59°F) and 35°C (95°F).
- Increase the engine speed to 3,000 rpm and check that air is discharged from the ASV.

## INSPECTION OF AIR PUMP DRIVE BELT

(See page [MA-4](#))



## INSPECTION OF AIR PUMP

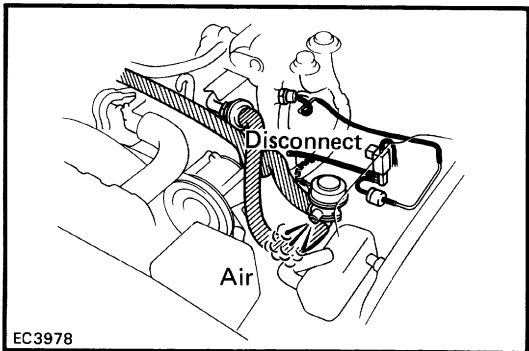
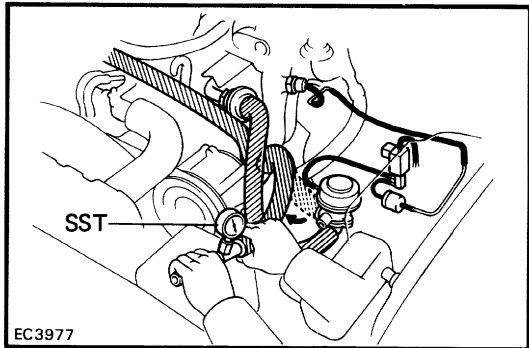
### 1. CHECK AIR PUMP FOR ABNORMAL NOISE

### 2. CHECK AIR PUMP DISCHARGE PRESSURE

- Connect SST (air pump tester) to the hose at the air pump outlet.  
SST 09258-14010
- Select and use a specified orifice (5.5 mm dia. or 0.217 in.) on the SST.
- Set the engine speed at 1,200 rpm.
- The gauge of the SST should indicate in the green zone.

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

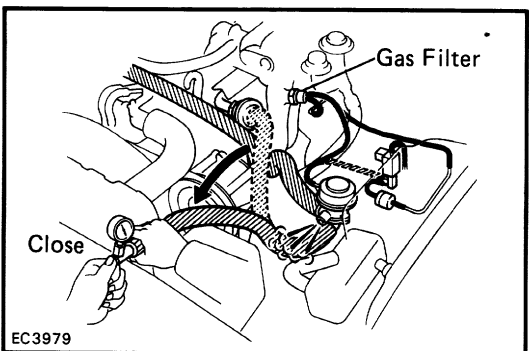
- Reconnect the hose to the proper location.



## INSPECTION OF ASV

### 1. CHECK ASV OPERATION

- Disconnect the vacuum hose from the ASV.
- Check that air comes out from the ASV.



### 2. CHECK OPENING PRESSURE OF RELIEF VALVE

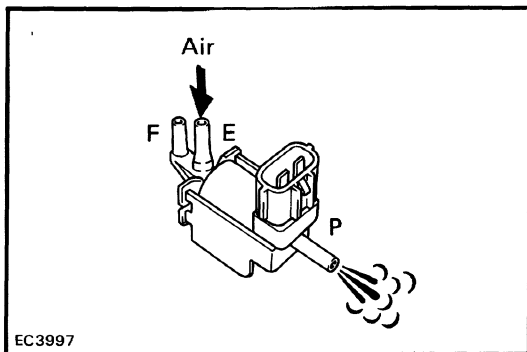
- Disconnect the air hose from the check valve.
- Connect SST (air pump tester) to the hose.  
SST 09258-14010
- Disconnect the vacuum hose from the VSV and connect the vacuum hose to the gas filter.
- Close the orifice on the SST with your finger.
- Increase the engine speed gradually and measure the relief valve opening pressure.

**Opening pressure:**

**39 – 59 kPa**

**(0.40 – 0.60 kgf/cm<sup>2</sup>, 5.7 – 8.5 psi)**

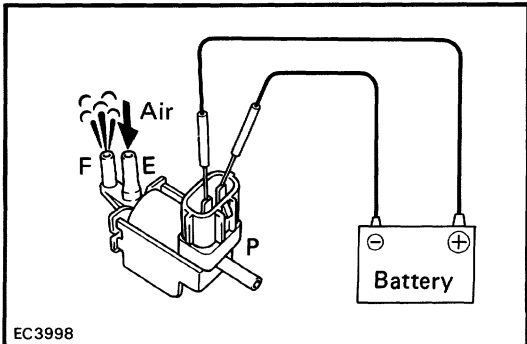
- Remove the SST and reconnect the hose to the proper location.



## INSPECTION OF VSV

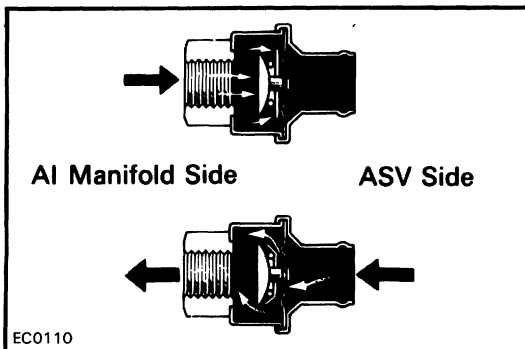
### INSPECT VSV

- (a) Blow air into pipe E and check that air comes out of pipe P.



- (b) Apply battery voltage across the terminals.  
(c) Blow air into pipe E and check that air comes out of pipe F.

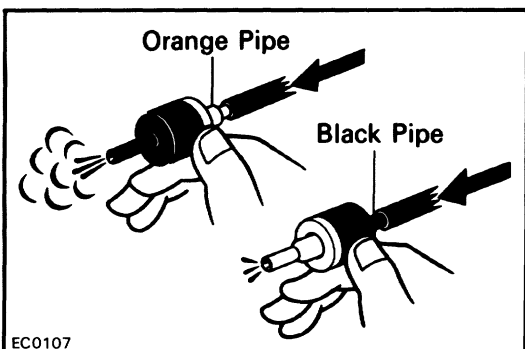
If a problem is found, replace the VSV.



## INSPECTION OF CHECK VALVE (A)

### CHECK VALVE BY BLOWING AIR FROM EACH SIDE

- (a) Check that air does not flow from manifold side to ASV side.  
(b) Check that air flows from ASV side to manifold side.  
If a problem is found, replace the valve.



## INSPECTION OF CHECK VALVE (B)

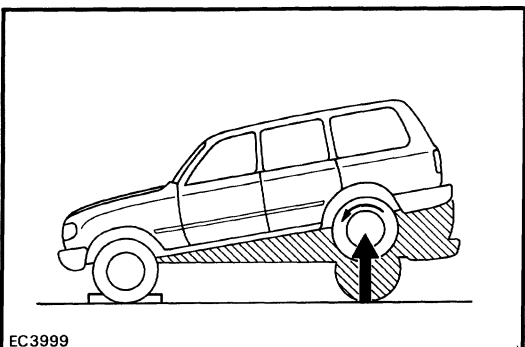
### CHECK VALVE BY BLOWING AIR FROM EACH SIDE

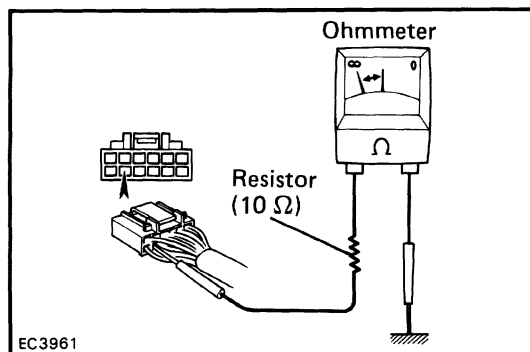
- (a) Check that air flows from the orange pipe to the black side.  
(b) Check that air does not flow from the black pipe to the orange pipe.

## INSPECTION OF SPEED SENSOR

1. JACK UP ONE REAR WHEEL TO CLEAR GROUND AND CHECK FRONT WHEELS
2. RELEASE PARKING BRAKE
3. SET SHIFT LEVER INTO NEUTRAL
4. FOUR WHEEL DRIVE CONTROL LEVER TO H
5. CENTER DIFFLOCK SWITCH TO OFF
6. UNPLUG WIRING CONNECTOR FROM EFI ECU

EFI ECU location: Behind the glove box





## 5. CHECK ON-OFF CYCLES OF SPEED SENSOR

- Place the positive (+) terminal of the ohmmeter on the wiring connector terminal and the negative (-) terminal on ground.
- Turn the rear wheel.
- Check that the ohmmeter needle deflects consistently.

**NOTICE:** 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 backside of the speedometer air properly connected. If the connection is proper, replace the speedometer assembly.

## 6. RECONNECT WIRING CONNECTOR TO COMPUTER

## INSPECTION OF WATER TEMPERATURE SENSOR

(See page [FI-86](#))

## INSPECTION OF THROTTLE POSITION SENSOR

(See page [FI-76](#))

## INSPECTION OF AIR FLOW METER

(See page [FI-74](#))