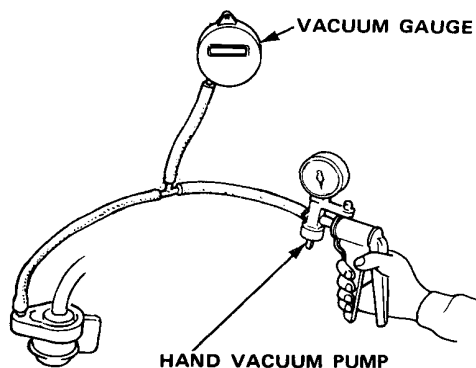




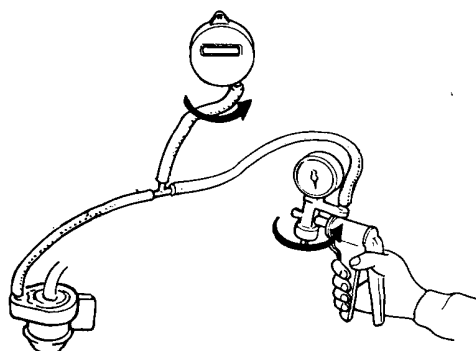
## Emission Controls

### Two-way Valve

1. Remove the fuel filler cap.
2. Remove the vapor line from the frame, and connect to a T-fitting from the vacuum gauge and the vacuum pump as shown.



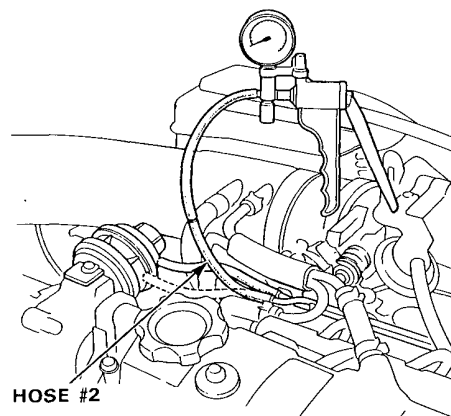
3. Slowly draw a vacuum while watching the gauge. Vacuum should stabilize at 15 to 30 mmHg (0.6 to 1.2 in. Hg).
  - If vacuum stabilizes momentarily (Two-way Valve opens) between 15 and 30 mmHg (0.6 and 1.2 in. Hg), go on step 4.
  - If vacuum stabilizes (valve opens) below 15 mmHg or above 30 mmHg (1.2 in. Hg), install new valve and retest.
4. Move hand pump hose from vacuum to pressure fitting, and move vacuum gauge hose from vacuum to pressure side as shown.



5. Slowly pressurize the vapor line while watching the gauge. Pressure should stabilize at 5 to 15 mmHg (0.2 to 0.6 in. Hg).
  - If pressure momentarily stabilizes (Valve opens) at 5 to 15 mmHg (0.2 to 0.6 in. Hg), the valve is OK.
  - If pressure stabilizes below 5 mmHg (0.2 in. Hg) or above 15 mmHg (0.6 in. Hg), install a new valve and re-test.

### Ignition Timing Control

1. Disconnect vacuum hose #2 from the vacuum advance diaphragm A on the distributor and connect a vacuum pump/gauge to the hose.



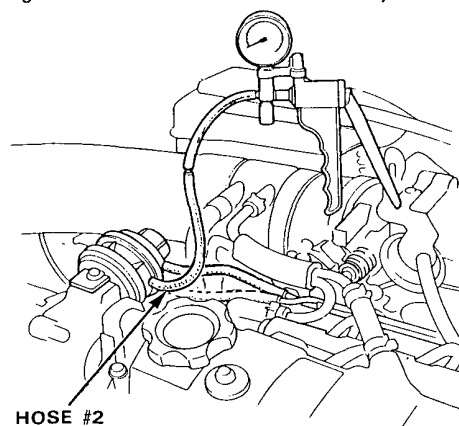
2. Start the engine, allow it to idle and check for vacuum.

There should be vacuum.

- If there is no vacuum, check the vacuum line for leaks, blockage or a disconnected hose and re-test.

3. Apply 500 mmHg (20 in.Hg) vacuum to the diaphragm A.

Timing should advance and remain steady.



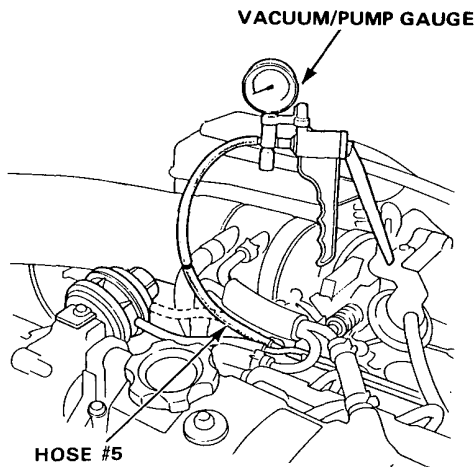
- If timing does not advance, stop the engine and remove distributor cap. Turn breaker plate right and left to check for freedom of movement. If there is no evidence of binding, replace advance diaphragm and re-test.

(cont'd)

# Emission Controls

## Ignition Timing Control (cont'd)

4. Warm-up the engine until the cooling fan comes on.
5. Disconnect vacuum hose #5 from the vacuum advance diaphragm B on the distributor and connect a vacuum pump/gauge to the hose.



6. Allow the engine to idle and check for vacuum.

There should be vacuum.

- If there is vacuum, check for voltage at the cold advance solenoid valve.
  - If there is voltage, replace the ECU and re-test.
  - If there is no voltage, replace the cold advance solenoid valve.

7. Rapidly open and release the throttle and check for vacuum.

There should be no vacuum.

- If there is no vacuum, check for voltage at the cold advance solenoid valve after checking the vacuum line for leaks, blockage or a disconnected hose.
  - If there is voltage, replace the cold advance solenoid valve and re-test.
  - If there is no voltage, replace the ECU and re-test.

## Cold Advance Solenoid Valve

The cold advance solenoid valve is activated by commands from the ECU. When the solenoid valve opens, this causes vacuum in the #12 vacuum hose and sends vacuum to Diaphragm B to improve cold engine performance under the following conditions:

KS modern

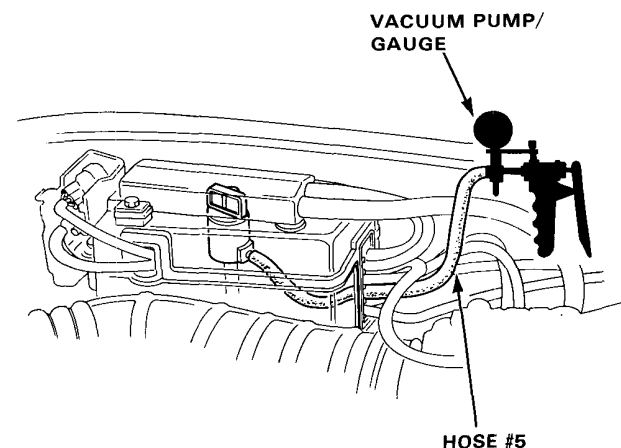
- At idle, the coolant temperature is below 60°C (160°F) and the intake air temperature is below 20°C (68°F).

Except KS model

- Whenever the coolant temperature is below 60°C (160°F).
- When the coolant temperature is 60–100°C (160–212°F), it is operated by the control unit which receives signals from the engine speed and manifold vacuum.

When the valve is open, 9V or more should be available between the Black/Yellow terminal (+) and White/Yellow terminal (–) of the main harness at the control box.

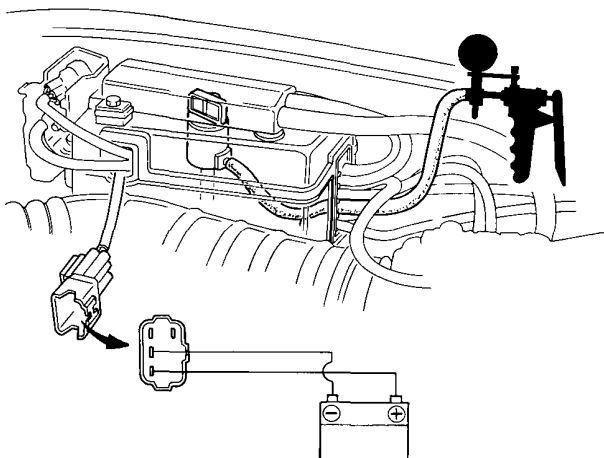
1. Disconnect the 6 cavity rectangular connector from the control box.
2. Disconnect the vacuum hose #5 from the vacuum tank.
3. Apply vacuum to the hose #5. It should hold vacuum.



- If it does not hold vacuum, replace the valve.



4. Connect the battery positive and negative terminals to the control box connector.
5. Apply vacuum to the hose #5 . It should not hold vacuum.

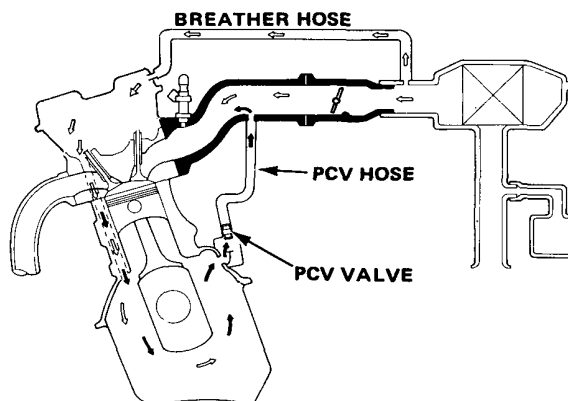


- If it holds vacuum, replace the valve.

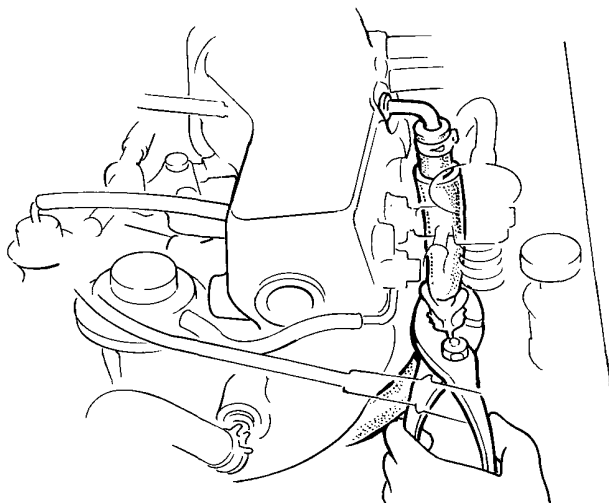
## Crankcase Controls

### PCV Valve

1. Check the crankcase ventilation hoses and connections for leaks and clogging.



2. At idling, make sure there is a clicking sound from the PCV valve when the hose between PCV valve and intake manifold is lightly pinched with your fingers or pliers.



- If there is no clicking sound, check the PCV valve grommet for cracks or damage.
- If the grommet is OK, replace the PCV valve and recheck.

# Emission Controls

## Catalytic Converter [KX model only]

If excessive exhaust system back-pressure is suspected, remove the catalytic converter from the car and make a visual check for plugging, melting or cracking of the catalyst. Replace the catalytic converter if more than 50% of the visible area is damaged or plugged.

