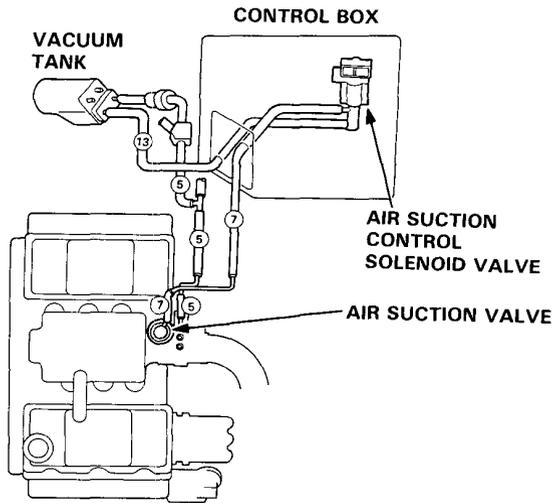


# Air Injection System (KG, KX)

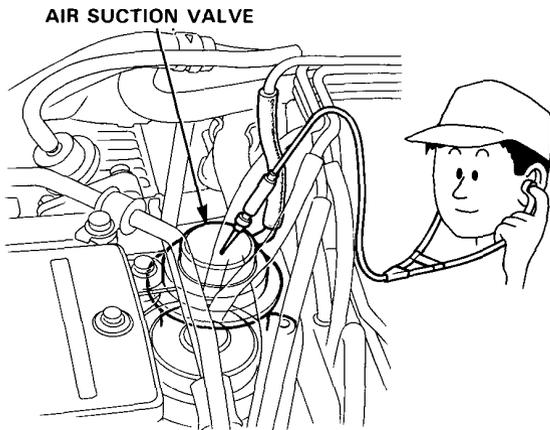
## Test

1. Check the vacuum line for proper connection, cracks, blockage or disconnected hose.

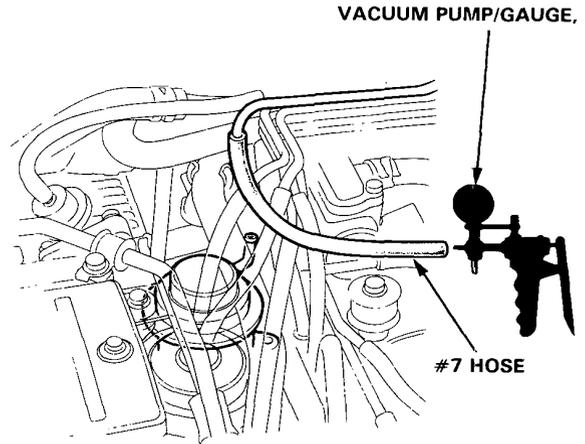


2. Warm up the engine (cooling fan comes on).
3. Stop the engine.
4. Restart the engine.
5. Within 10 seconds after restart, check for air suction noise (bubbling noise) from the air suction valve at idle.

Bubbling noise should be heard.



- If bubbling noise is not heard, disconnect #7 vacuum hose from the top of air suction valve and check for vacuum within 10 seconds after restart.



There should be vacuum.

- If there is vacuum, replace the air suction valve and retest.
- If there is no vacuum, go to air suction control solenoid valve test I (page 6-101).

6. Stop the engine.
7. Check for air suction noise from the air suction valve at idle 15 seconds after restart.

Bubbling noise should not be heard.

- If bubbling noise is not heard, test is complete.
- If bubbling noise is heard, go to air suction control solenoid valve test II (page 6-101).

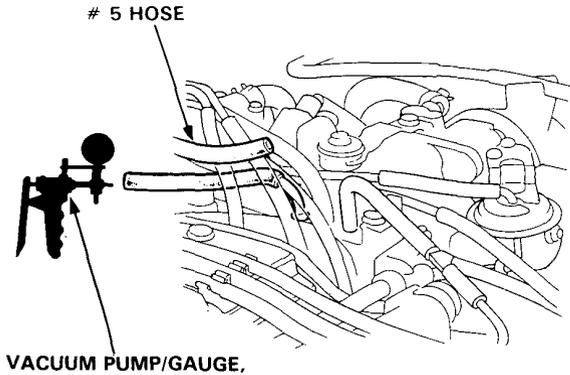
# Air Injection System (KG, KX)



## Solenoid Valve Test

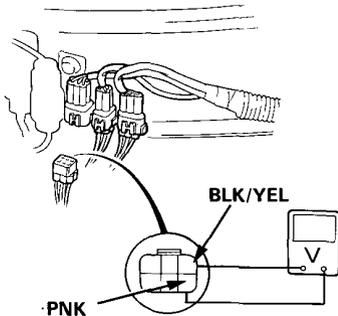
### Test I:

1. Start the engine and warm up to normal operating temperature (cooling fan comes on).
2. Disconnect the #5 vacuum hose from the intake manifold, and check the vacuum.



- If there is no vacuum, check the vacuum port.
- If there is vacuum, check the vacuum line for proper connection, cracks, blockage or disconnected hose. If the vacuum line is OK, reconnect the hose.

3. Disconnect the 6P connector.
4. Attach the positive probe of the voltmeter to BLK/YEL terminal and the negative probe to PNK terminal.

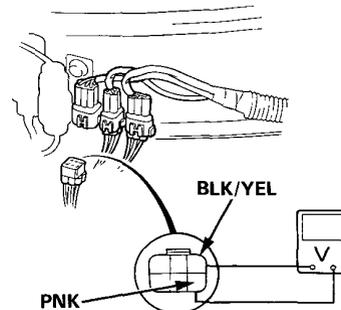


5. Within 10 seconds after restarting the engine, check the voltage at idle.
  - If there is voltage, replace the solenoid valve and retest.
  - If there is no voltage, attach the positive probe of the voltmeter to BLK/YEL terminal, and the negative probe to body ground. Within 20 seconds after restarting the engine, check the voltage.

- If there is no voltage, repair open circuit in BLK/YEL wire between the solenoid valve and No. 11 (7.5A) fuse
- If there is voltage, check for an open in PNK wire between the solenoid valve and ECU. If wire is OK, substitute a known-good ECU and retest. If symptom goes away, replace the original ECU.

### Test II:

1. Start the engine and warm up to normal operating temperature (cooling fan comes on).
2. Disconnect the 6P connector.
3. Attach the positive probe of the voltmeter to BLK/YEL terminal and the negative probe to PNK terminal.



4. Check the voltage at idle 15 seconds after starting the engine.
  - If there is voltage, check for a short in PNK wire between the solenoid valve and ECU. If wire is OK, substitute a known-good ECU and retest. If symptom goes away, replace the original ECU.
  - If there is no voltage, replace the solenoid valve and retest.