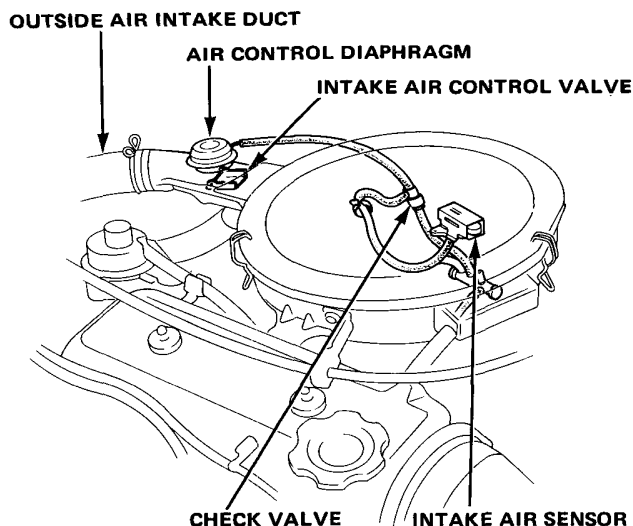


# Intake Air Control

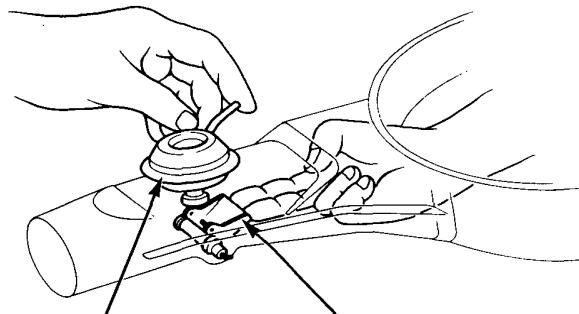
## Inspection

### Cold engine inspection

1. Remove air cleaner cover and filter element. Disconnect the air intake and hot air ducts.
2. With the engine cold, start the engine for about 5 seconds and stop. Air control valve should rise on start up and remain fully open for at least 3 seconds after stopping engine.



- If valve rises, intake air control is OK; reinstall filter element and air cleaner cover. Connect the air intake and hot air ducts. Go on to step 1 for hot engine inspection.
  - If valve does not rise, check to see if valve is binding. If valve still fails to rise, or fails to stay up for 3 seconds after cold engine cranking test, go on to step 3.
3. Disconnect and plug hose leading to intake air sensor.
  4. Crank starter for approximately 5 seconds.
    - If the air control valve does not rise or stay open for at least 3 seconds, proceed to Step 5.
    - If valve rises and stays up for at least 3 seconds replace the air bleed valve, and re-test (steps 2 thru 4).
  5. Disconnect vacuum hose from air control diaphragm.
  6. Raise air control valve manually and while blocking the inlet pipe, release the valve.



AIR CONTROL DIAPHRAGM      AIR CONTROL VALVE

- If the valve stays up, replace check valve and re-test.
- If the valve drops to the closed position, replace the air control diaphragm and re-test.

7. Reinstall filter element and air cleaner cover.

### Hot engine inspection

**NOTE:** As the outside air temperature drops, the bimetal spring in the intake air sensor closes, causing the air control valve to rise and allowing pre-heated air into the air cleaner; consistent intake air temperature (approximately 100°F) is maintained this way.

1. With engine running and cooling fan on, remove air cleaner cover and filter element and immediately check control valve position.

The air control valve should be down.

- If the control valve has dropped down to fully close the hot air intake duct: stop engine, reinstall filter element and air cleaner cover. Test is complete.
  - If control valve has not dropped to the fully closed position, go to step 2.
2. Disconnect the vacuum hose to the air control diaphragm.
    - If the control valve now closes, replace the intake air sensor and re-test.
    - If the control valve does not close, correct whatever is causing the valve to bind, and/or replace air control diaphragm. Re-test.
  3. Stop engine, reinstall filter element and air cleaner cover. Test is complete.