HONDA IGNITION TIMING CONTROL SYSTEM

Accord, Civic, Prelude

DESCRIPTION

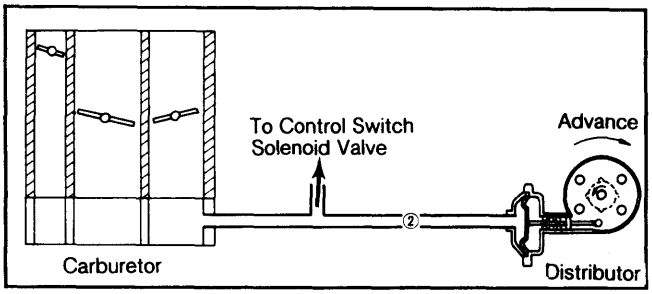
All Honda engines have ignition control systems to achieve low emission levels, maximum fuel economy, and best engine performance. The system is designed to advance and retard ignition timing as necessary.

TESTING

1) With engine at normal operating temperature, disconnect hose from distributor vacuum advance diaphragm and connect vacuum gauge to hose.

2) Start engine and run at idle. If no vacuum on gauge, check hose connections between distributor and carburetor insulator block for leaks or blockage.

Fig. 1: Honda Ignition Timing Controls



3) When vacuum appears on gauge, attach a hand vacuum pump to vacuum advance diaphragm and draw 20 in. Hg (500 mm Hg). Check that timing advances and vacuum remains steady. If not, replace advance diaphragm and retest.

HONDA ANTI-AFTERBURN VALVE

Accord, Civic, Prelude

DESCRIPTION

The anti-afterburn valve supplies fresh air to the intake manifold when manifold vacuum suddenly increases, as during sudden deceleration. This leans out the air/fuel mixture and helps maintain the proper mixture for complete combustion.

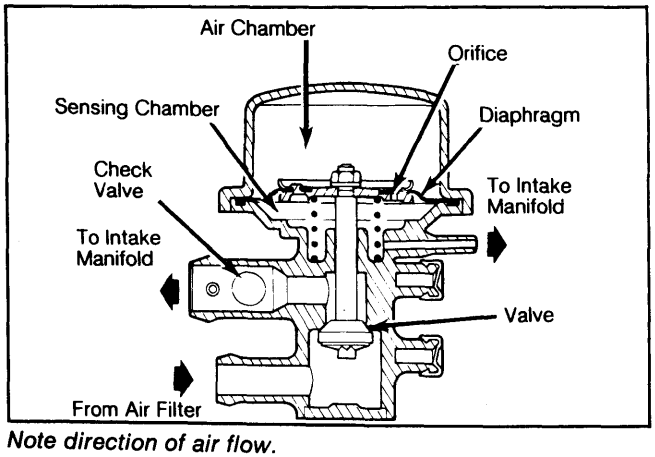
OPERATION

The anti-after burn valve is sensitive only to sudden increases in vacuum; the length of time it stays open is controlled by a diaphragm that senses change in manifold vacuum.

When manifold vacuum suddenly increases, as during sudden deceleration, the diaphragm/valve unit is pulled downward. Air flow from the air chamber to the sensing chamber is restricted by an orifice, creating a pressure differential on the diaphragm, which holds the valve open.

This unbalanced condition lasts for a few seconds until the pressure in both chambers is equalized by air entering through the orifice, then the spring pushes the diaphragm up, closing the valve.

Fig. 1: Sectional View of Honda Anti-Afterburn Valve



Note direction of air flow.

TESTING

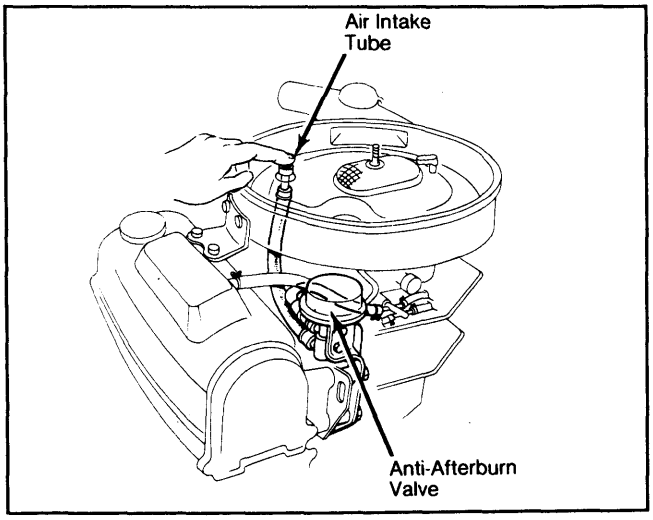
1) Remove air cleaner cover, then start engine and allow to idle. Place finger over air inlet tube and check for vacuum. There should be no vacuum.

- If there is no vacuum, proceed to next step.
- If vacuum is felt, replace anti-afterburn valve and repeat test.

2) Quickly raise engine speed to 3500 RPM and close throttle quickly. Again check for vacuum at inlet tube. There should be vacuum as throttle closes.

- If vacuum is felt, valve is okay.
- If vacuum is not felt, locate restriction or blockage and retest.
- If vacuum is still not felt, replace anti-afterburn valve and retest.

Fig. 2: Testing Anti-Afterburn Valve



Use finger to check for vacuum.