HONDA

Accord
Civic
Prelude

DESCRIPTION

Honda Evaporative Emission Control System prevents gasoline vapors from escaping into the atmosphere from fuel tank and carburetor. System consists of a pressure/vacuum relief fuel filler cap, a liquid/vapor separator, a 2-way valve, a charcoal canister, air vent cut-off diaphragm, power valve control solenoid, and purge control unloader solenoid valve. Hoses connect the valves, canister and fuel tank.

OPERATION

When gasoline and vapor in the fuel tank expand, they force open the 2-way valve. Liquid fuel is separated and returned to the tank, while vapors pass to the canister and are adsorbed by the charcoal filter. Excess air is vented to the atmosphere.

When engine is started, the primary main fuel cut-off solenoid valve opens, allowing manifold vacuum to purge control valve and vacuum holding solenoid valve. Vacuum is sent to air vent cut-off diaphragm so it will open and vent the float bowls. When engine is warn, the thermoswitch opens and operates the purge control solenoid; vacuum flows to canister purge diaphragm and air is drawn through to purge the canister. See *Fig. 1*.

TESTING

Purge Control Diaphragm Valve and Thermosensor – 1) With engine cold, there should be continuity across the terminals of thermosensor. Disconnect upper hose at purge control valve on canister. Connect a vacuum gauge to hose and start engine. No vacuum should be present.

2) With engine at normal operating temperature, disconnect upper hose at purge control diaphragm valve. Connect a

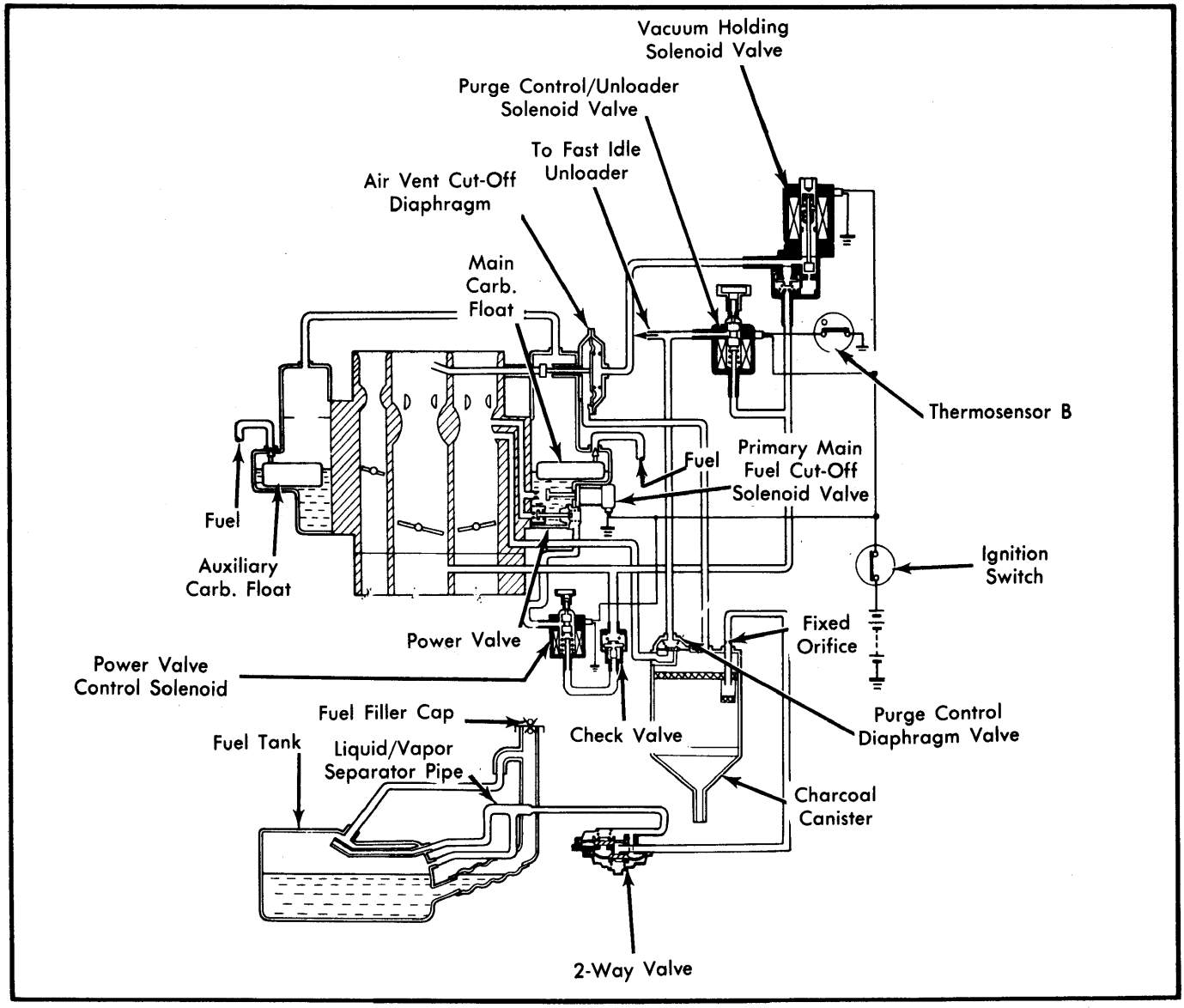

Fig. 1 Honda Evaporative Control System (California Models)

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vacuum gauge to hose and start engine. Vacuum should appear on gauge. If not, check for voltage at purge control/unloader solenoid valve connector. Test between Black/Yellow (+) and Blue (−) wires on California models, and between Yellow (+) and ground on Federal models.

Charcoal Canister − 1) Remove fuel filler cap. Remove canister purge air hose from frame near canister and connect vacuum gauge. Run engine at 3500 RPM.

2) Vacuum should appear on gauge within 1 minute. If not, disconnect vacuum gauge and reinstall fuel filler cap. Check charcoal canister for damage or defects. If canister is okay, stop engine and disconnect PCV hose from canister. Connect vacuum pump to canister purge fitting and draw vacuum. Vacuum should remain steady. If vacuum drops, replace canister.

3) If vacuum remains steady, reconnect PCV hose to canister and start engine. Purge side vacuum should drop to zero. If not, replace canister and retest.

Two-Way Valve − 1) Remove gas cap and disconnect fuel vapor hose from liquid/vapor separator. Attach vacuum pump with gauge reading from 0-5 in. Hg. Slowly draw vacuum while observing gauge.

2) Vacuum should stabilize at .2-.6 in. Hg as 2-way valve opens. Reverse pump and gauge connections and slowly pressurize vapor hose. Pressure should momentarily stabilize at 1.4-2.8 in. Hg as 2-way valve opens. If not, check hose connections or replace valve.

Air Vent Cut-Off Diaphragm and Vacuum Holding Solenoid Valve − 1) Disconnect hose at air vent cut-off diaphragm (on carburetor) and connect a vacuum pump to hose. Turn ignition "ON" and draw a vacuum; it should hold steady. When ignition is turned "OFF" vacuum should drop to zero.

2) Start engine and allow to idle. Vacuum should appear on gauge of pump. Stop engine and connect vacuum pump to air vent cut-off diaphragm tube and draw vacuum. If vacuum does not hold, replace diaphragm.

Power Valve Control Solenoid (Calif. Only) − 1) Remove hose from power valve (on carburetor), connect vacuum pump to hose and draw vacuum with ignition key "OFF". Vacuum should remain steady. If not, replace check valve. If vacuum remains steady, remove check valve and connect vacuum pump to hose and draw vacuum. Vacuum should remain steady. If not, replace power valve control solenoid.

2) Connect vacuum gauge to hose from power valve. Start engine and run at idle, vacuum should be present. When engine is warm vacuum will drop.

MAINTENANCE

Inspect system, hoses, and connections and test all components at 60,000 miles or every 5 years.

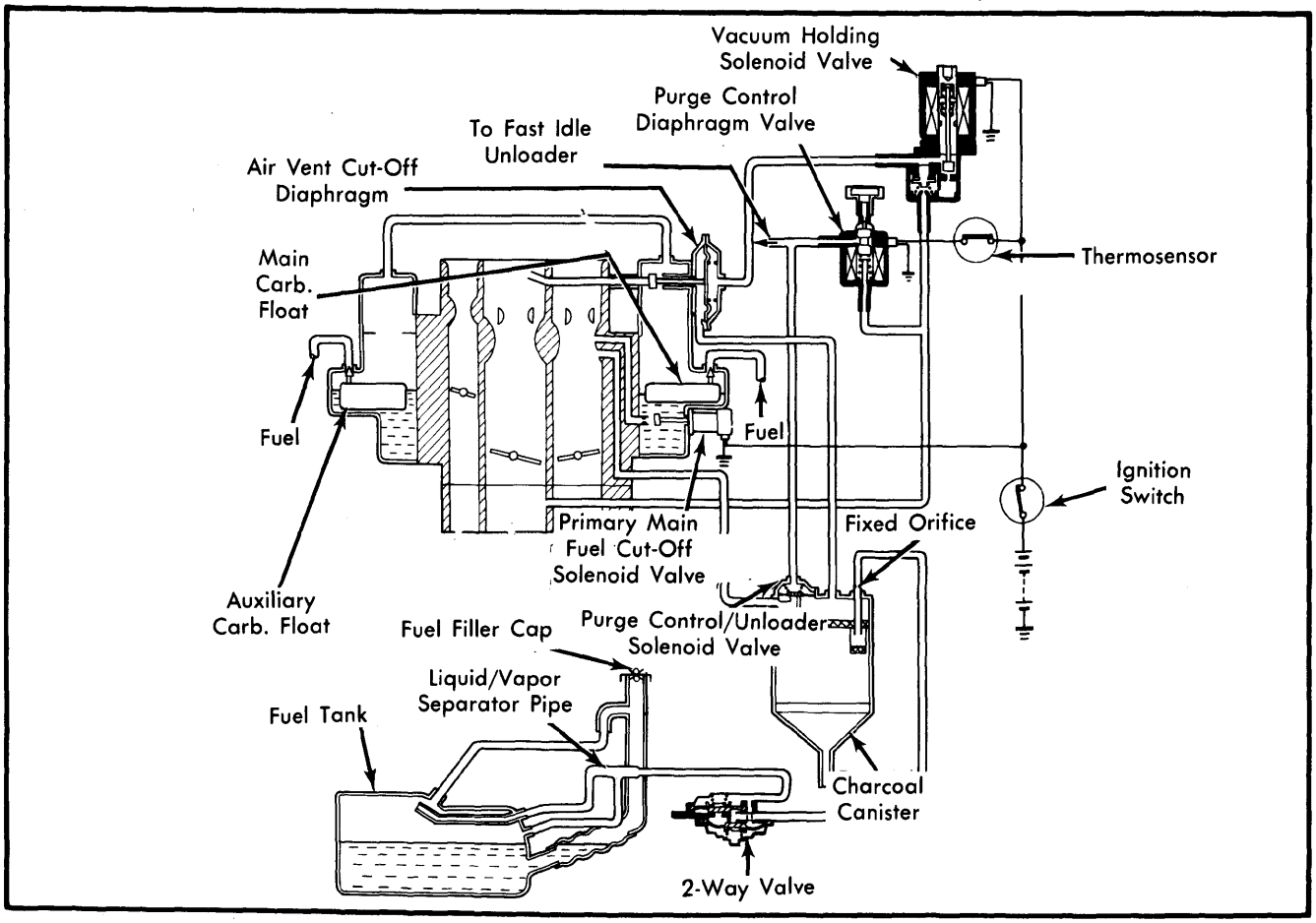

Fig. 2 Honda Evaporative Control System (Federal Models)