HONDA

Honda Civic (1973)

DESCRIPTION

The Honda Evaporative Emission Control System prevents gasoline vapors from escaping into the atmosphere from fuel tank and carburetor. System consist of a pressure and vacuum relief fuel filler cap, a fuel tank with a built in expansion chamber, a liquid/vapor separator, a one-way valve, a charcoal canister with an idle cut-off valve and various hoses connecting the system.

OPERATION

Fuel vapor is stored in expansion chamber in fuel tank, and in vapor line up to one-way check valve. When vapor pressure becomes higher than set pressure of one-way valve, valve opens allowing vapor into charcoal canister. While engine is stopped or idling, idle cut-off valve is closed and vapor is adsorbed by charcoal. At partially opened throttle, idle cut-off valve is opened by manifold vacuum. Vapor, stored in charcoal canister and vapor line, is then purged into intake manifold and burned in the engine. In addition, any excessive pressure or vacuum which might build up in fuel tank is relieved by two-way valve in fuel filler cap.

MAINTENANCE

Every 12,000 miles, check the system as follows:

1) Check for loose, disconnected or deteriorated hoses and replace as necessary.

2) Pull free end of purge air guide hose out of body frame and plug securely. Disconnect fuel vapor line from canister and connect a vacuum gauge. Start engine and allow to idle.

3) Vacuum reading should be zero. If not, replace charcoal canister assembly as either diaphragm is broken or canister idle cut-off valve is stuck open.

4) Open throttle and check that idle cut-off valve is opening by watching for a vacuum indication on gauge. If no vacuum is available, check for vacuum at carburetor vacuum port. If no vacuum is available, clean port with compressed air and recheck. If vacuum is still not available, disconnect solenoid valve vacuum line (see Honda story in Exhaust Emission Section), block hose and recheck vacuum. If vacuum is now available, solenoid valve is defective. If still no vacuum, carburetor is defective and must be repaired or replaced.

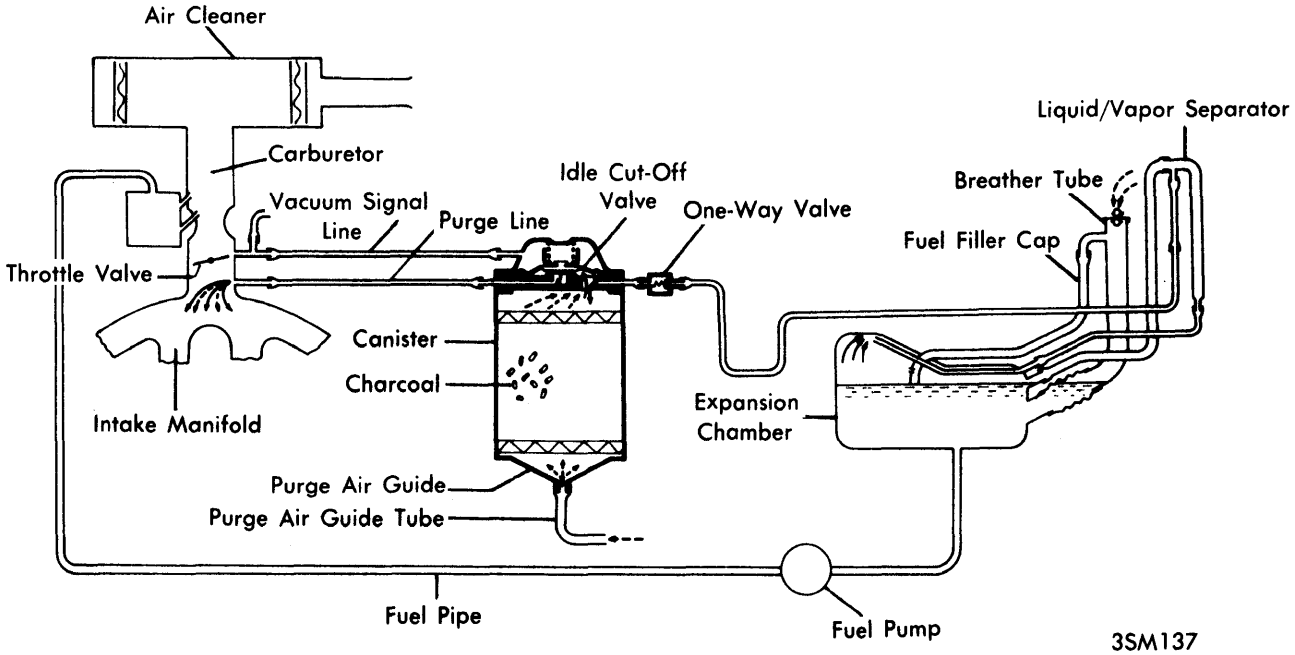
5) If canister idle cut-off valve operates properly, unplug purge air guide tube, open throttle and check for vacuum at open end of tube. If vacuum is available, replace tube in body frame. If no vacuum is available, replace charcoal canister.

6) Remove one-way valve from system and connect "F" port to pressure tester. Connect "C" port to tube which is placed in container of water. Valve should open at a pressure of .43-.71 psi (.03-.05 kg/sq. cm). If pressure is outside of this range, replace valve.

7) Disconnect vapor line from fuel tank at one-way valve and connect pressure tester. Remove fuel line from fuel pump and plug. Pressurize fuel system to 1.85-3.27 psi (.13-.23 kg/sq. cm) and stabilize. Fuel cap pressure relief valve should open within this range. Replace cap if necessary, With pressure in system, check all hoses and connections for leaks.

8) Check that vacuum relief valve in fuel filler cap opens at .42-1.00 psi (.03-.07 kg/sq. cm) using appropriate tester. Replace cap if necessary.

Charcoal Canister – Replace every 24,000 miles.



HONDA EVAPORATIVE EMISSION CONTROL SYSTEM