HONDA THERMOSTATIC AIR CLEANER

Honda Civic (1973)

DESCRIPTION

The Honda thermostatic air cleaner supplies heated air to engine at a temperature of about 102°F. Air cleaner consists of a vacuum motor, an air control valve door, a manifold air heating stove, a hot air pipe, a temperature controlled air bleed valve, a check valve, and a fixed orifice.

OPERATION

When air cleaner temperature is below 102°F, the air bleed valve, which consists of a bi-metal strip and a rubber seal, remains closed. Intake manifold vacuum is then directed to a vacuum motor on snorkel of air cleaner housing. Vacuum motor moves air control valve door allowing only pre-heated air to enter air cleaner. When temperature in air cleaner rises higher than 102°F, air bleed valve opens and air control valve door returns to open position allowing only unheated air through snorkle. Check valve prevents air from backflowing into intake manifold when air bleed valve is open.

MAINTENANCE

1) With engine cold, inspect for loose, disconnected or deteriorated vacuum hoses and replace as necessary. Remove air cleaner cover and disconnect vacuum line from vacuum motor.

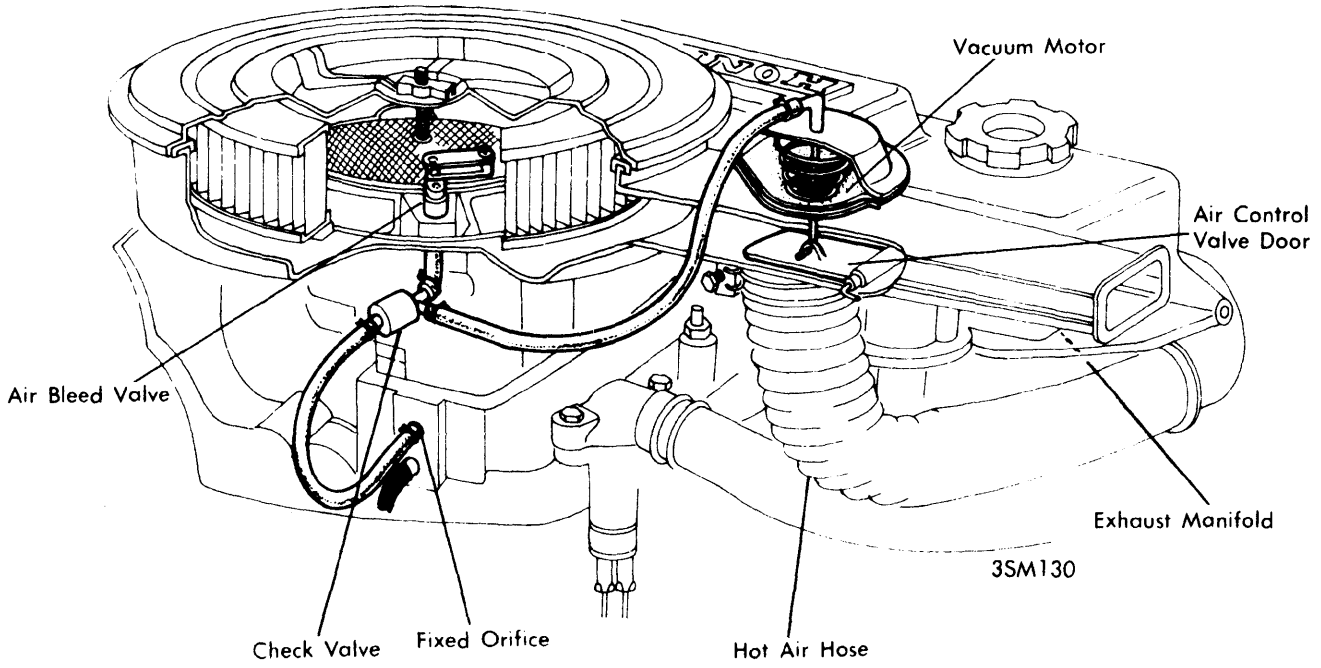
2) Open air control valve door fully and block vacuum motor inlet pipe with finger. Release valve door, it should remain open. If not, vacuum motor diaphragm is defective. Unblock inlet pipe and make sure that valve door closes fully without sticking or binding.

3) Disconnect vacuum line at intake manifold and plug. Open valve door fully and reconnect vacuum line to vacuum motor. Release valve door and check that it stays open. If not, air bleed valve is leaking and should be replaced.

4) Unplug vacuum line at manifold, valve door should stay open. If not, check valve is leaking and should be replaced.

5) Check that fixed orifice is clear by passing a No. 78 (.016" diameter) drill or compressed air through orifice. Reconnect vacuum hose.

6) Replace air cleaner cover and tee a vacuum gauge into vacuum line leading to vacuum motor. Start engine and raise idle to 1500-2000 RPM. As engine warms, vacuum gauge reading should drop to zero. If vacuum gauge does not drop to zero before engine reaches normal operating temperature (cooling fan cycling), air bleed valve is defective and should be replaced.



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