

1974-79 EXHAUST EMISSION SYSTEMS

Jensen-Healey Thermostatic Air Cleaners

1974 Interceptor

DESCRIPTION

System consist of an air cleaner which incorporates a vacuum diaphragm, air control valve, and thermostat. Air cleaners have 2 intakes, one for fresh air and one for heated air. Heated air is taken from shroud (heat stove) located on exhaust manifold.

OPERATION

When underhood temperature reaches 10°F (-12°C) or lower, air will flow through heat stove, into flexible connector, and into adapter on bottom of snorkel and into air cleaner. When underhood temperatures is above 100°F (38°C), air will flow directly through snorkel and into air cleaner. When under hood temperature is between 10°F (-12°C) and 100°F (38°C), air will flow through both air intakes. The amount of air flowing through each intake is controlled by a heat door in snorkel to maintain a constant temperature of about 95-105°F (35-41°C) at temperature sensor.

Regulation of induction air temperature is accomplished by intake manifold vacuum, a temperature sensor (thermostat), and a vacuum diaphragm (which operates control door). A vacuum hose is connected to carburetor base and to sensor. Another vacuum hose is connected between sensor and snorkel vacuum diaphragm. The sensor bimetallic strip, controls a small air valve at opposite end. This air valve is connected to the same vacuum chamber that the 2 hoses connect into.

When temperature at sensor is less than 95°F (35°C), valve is closed and intake manifold vacuum is routed to diaphragm, which lifts control door and permits heated air to enter air cleaner. When temperature at sensor is over 105°F (41°C), valve in sensor opens and decreases vacuum at diaphragm and spring in diaphragm housing pushes air control door downward closing off heated air intake.

TESTING

1) With engine cold and underhood temperature below 90°F (32°C), check that heat control door (valve plate) in snorkel is in up (heat on) position.

2) With engine warm and running, check air temperature entering snorkel at sensor. When air temperature entering snorkel is about 110°F (43°C), door should be in down (heat off) position.

3) Remove air cleaner from engine and allow to cool down to 90° (32°C). With 20 in. Hg of vacuum applied to sensor, door should be in up (heat on) position. If door does not open, check diaphragm by applying vacuum directly to diaphragm using a hand-held vacuum pump.

4) Slowly apply vacuum to diaphragm and observe door operation. Door should begin to move at no less than 5 in. Hg of vacuum and be fully open at 9 in. Hg of vacuum. Now apply 20 in. Hg of vacuum to diaphragm. Diaphragm should hold vacuum for at least 5 minutes.

5) If diaphragm does not perform as indicated, it must be replaced. If diaphragm works properly, but proper temperature is not maintained, replace sensor and repeat test procedure.

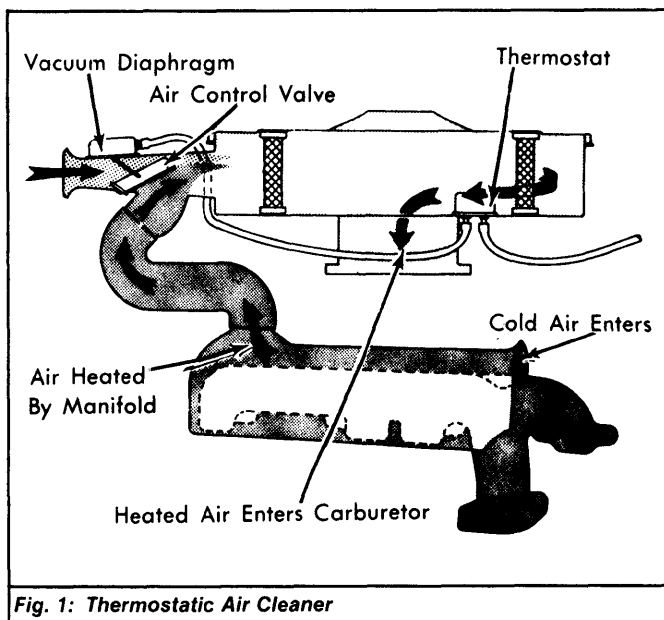


Fig. 1: Thermostatic Air Cleaner