

CHRYSLER CORP. THERMOSTATIC AIR CLEANER

All Models

DESCRIPTION

All Chrysler Light Duty Truck models use a heated air inlet system. This system is part of the air cleaner and controls the temperature so that the carburetor can be calibrated leaner to control hydrocarbon emissions and improve warm-up characteristics. The system consists of an air cleaner assembly, a temperature sensor, an air control valve, a vacuum diaphragm, a duct system and a shroud on the exhaust manifold.

OPERATION

When the ambient air temperature is less than 50°F, carburetor intake air flows through the shroud, into a flexible connector, through the vacuum diaphragm and into the carburetor. When the temperature rises to operating temperature, the vacuum diaphragm shuts off the air coming from the shroud and allow fresh air to enter the carburetor. When the temperature is between the minimum and maximum, the air will flow through both circuits.

TESTING

- 1) Ensure that all vacuum hoses, flexible duct hose and air cleaner duct are in good condition. With engine cold, the heat control door in the air cleaner snorkel should be up, in the heat on position.
- 2) With engine running at normal operating temperature, the door should be in the down, or heat off position.
- 3) Turn off engine and allow to cool to 50°F. Remove air cleaner and apply 20 in. Hg vacuum with an external vacuum source to the temperature sensor. The door should be in the up position. If not, check vacuum diaphragm for proper operation.

4) Apply 20 in. Hg vacuum to diaphragm. The diaphragm should not bleed down more than 10 in. in 5 minutes. The door should not lift off the bottom at less than 5 in. Hg, and should be in the full up position at no more than 8.5 in. Hg.

5) If vacuum diaphragm does not meet specifications, replace it and repeat steps 1) and 2). If diaphragm performs as specified, but proper temperature is not maintained, replace temperature sensor and repeat temperature checks.

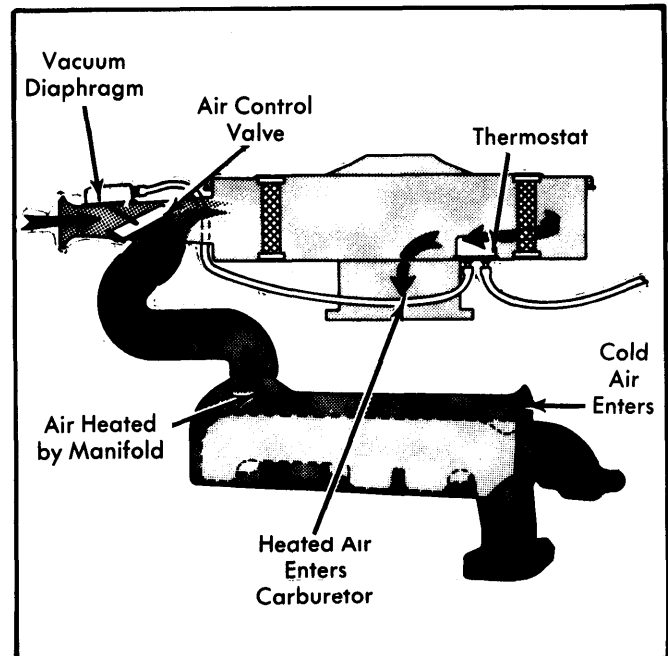


Fig. 1 Typical Chrysler Corp. Thermostatic Air Cleaner