INTERNATIONAL HARVESTER CO. THERMOSTATIC AIR CLEANER

DESCRIPTION

Thermostatic Air Cleaner assembly is installed to reduce amount of carbon monoxide (CO) in exhaust gases. This reduction is accomplished by regulating air temperature at air cleaner inlet. System consists of air cleaner assembly with integral damper assembly, temperature sensor, vacuum motor, vacuum hoses and exhaust shroud with connecting pipe.

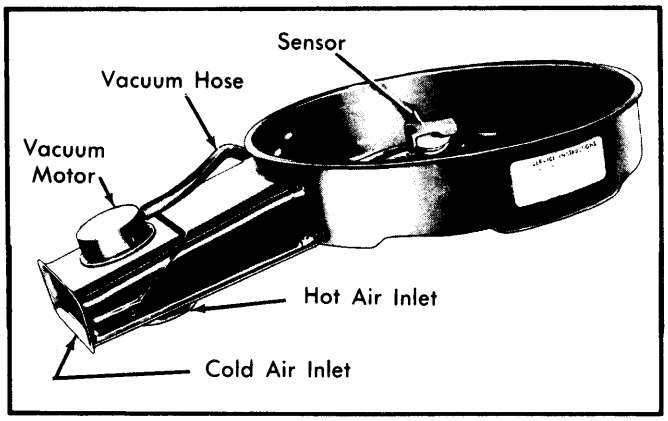

Fig. 1 IHC Thermostatic Air Cleaner

OPERATION

When temperature of air entering air cleaner is less than setting of temperature sensor, sensor closes to allow engine vacuum to operate vacuum motor which closes damper assembly to outside air. Air is then drawn from around exhaust manifold, through shroud and into cleaner as heated air. As air inside air cleaner warms, sensor valve begins to open bleeding off vacuum to vacuum motor. This allows damper to begin to open to outside air. When temperature of air entering air cleaner reaches specified temperature, damper opens completely, closing off heated air inlet.

TESTING

1) Start test with engine cold and at room temperature of 75°F or less. Ensure air cleaner, all hoses and components are in place.

2) Start engine and note that damper (air door) has rotated up to close off cold air inlet. If damper did not immediately close off cold air, shut off engine and disconnect two hoses from sensor.

3) Connect the two hoses together. Restart engine and again check damper door. If damper fully closes cold air inlet, temperature sensor is defective and must be replaced.

4) If damper did not close cold air inlet, sensor is okay, but damper has a mechanical bind or vacuum motor is defective.

5) After a cold start, operate engine for 10 minutes at medium RPM until normal operating temperatures are reached. Slow to idle and observe damper. It should have moved all or part way down to open cold air inlet. If not, replace sensor.

MAINTENANCE

Check all hoses and fittings at 15-month or 12,000-mile intervals (whichever comes first). Ensure proper fit and no leaks. No other maintenance is required except testing for proper operation.