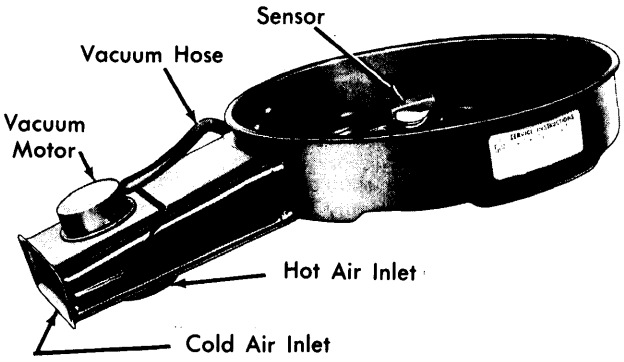
INTERNATIONAL HARVESTER CO. THERMOSTATIC AIR CLEANER

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.



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

NOTE — Tests should be conducted with engine started from cold and ambient temperature of vehicle not less than 40°F. Air cleaner must have all hoses, tubing and cover in place. No leaks permitted.

Start engine and note that damper has rotated up to close off cold air inlet. If damper did not immediately close cold air inlet, shut off engine and disconnect two hoses from sensor. Connect 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. If damper did not close cold air inlet, sensor is alright, but damper has a bind or vacuum motor is defective. After a cold start, operate engine for ten minutes at medium RPM. When engine is at normal operating temperature, slow engine to idle and observe position of damper door. If damper has not rotated all or part way down to allow some cold air to enter inlet tube, replace temperature sensor.

MAINTENANCE

Check all hoses and fittings at 12 month or 12,000 mile intervals for obstructions, loose connections and malfunction. Replace components as necessary. No maintenance is required for damper assembly, temperature sensor or vacuum motor other than testing for proper operation.