

# 1974-79 EXHAUST EMISSION SYSTEMS

## Triumph Thermostatic Air Cleaners

### Spitfire & TR7

### DESCRIPTION

An air cleaner with a bimetallic valve is used to control intake air temperature. Some TR7 models use a vacuum operated, temperature controlled air cleaner. The air cleaner consists of flap valve, vacuum motor, temperature sensor, and vacuum check valve.

### OPERATION

The thermostatic air cleaner is designed to maintain air temperature entering carburetor at a constant 99°F (37°C) temperature by blending hot and cold air. A temperature sensitive bimetallic valve controls cold air from underhood area and hot air intake from exhaust pipe/manifold, depending on temperature of bimetallic strip. To avoid engine stalling when accelerating rapidly with a cold engine, a one-way check valve is installed near heat sensor on TR7. Check valve prevents flap from moving to the cold position.

### TESTING

#### THERMOSTATIC AIR CLEANER

**Spitfire & TR7** - With engine cold, make sure flap valve blocks air entry from engine compartment. With engine at normal operating temperature, make sure flap valve block entry from exhaust pipe.

**TR7 (Vacuum Operated System)** - 1) Disconnect vacuum line from vacuum motor and apply a minimum of 9 in. Hg of vacuum to motor. Flap should move to fully closed (hot) position. Remove vacuum, flap should move to fully open (cold) position.

2) Disconnect sensor vacuum supply line and apply a minimum of 9 in. Hg of vacuum to sensor. Flap should move to closed position and hold vacuum until it is released.

3) Apply a minimum of 9 in. Hg of vacuum to one-way check valve. See Fig. 1. Flap should close and hold closed position for 20 seconds after vacuum is released.

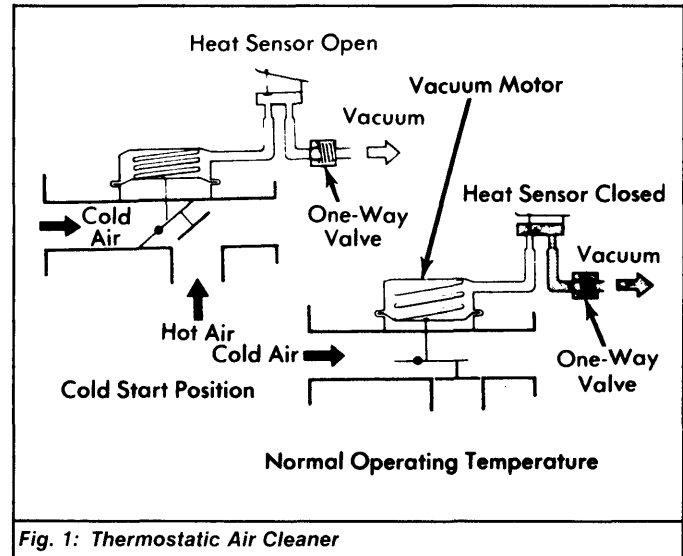


Fig. 1: Thermostatic Air Cleaner