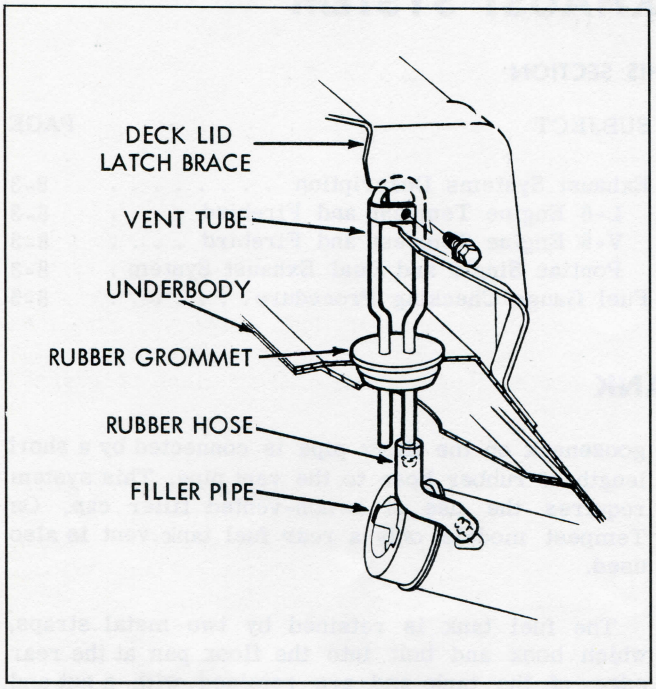

Fig. 8-3 External Vent Tube (Pontiac and Tempest)

panel. It is retained at its upper end by a formed section in the left rear quarter panel and held secure at the bottom with one wide metal strap; one end hooks into the outer side of the quarter panel, the other end is retained with a special hook which attaches to a bracket on the inner wheel well.

The tank filler for all station wagons is at outer side of left rear fender. A spring hinge is used on the inner side of the door assembly to assure rattle-free retention when closed.

FUEL TANK FILLER CAP

Non-vented filler caps are used on all models except station wagons. Because of its location and design, the filler cap for station wagons is attached directly to the tank. No filler pipe, as such, is used. When the tank is full or nearly so, possibility of fuel overflow out a vent is checked by a dual purpose filler cap. This cap is designed to vent the tank and to check overflow of fuel (Fig. 8-4).

A floating check valve (designed like a dished welch plug) is housed in the lower portion of the filler cap. When fuel level in the tank is below the bottom of the filler cap, the tank is vented through a hole in the bottom of the filler cap, under an opening at the bottom of the check valve and out an opening within the valve to the outside. When the fuel tank is full or fuel is sloshed onto the cap, fuel can enter into the hole at the bottom of the cap and enter the check valve area. This forces the check valve to seat and seal off any attempted escape of fuel. If, however, fuel or vapor pressure builds up 3/4 to 1 1/4 psi, the spring-loaded safety valve opens to relieve excess pressure.

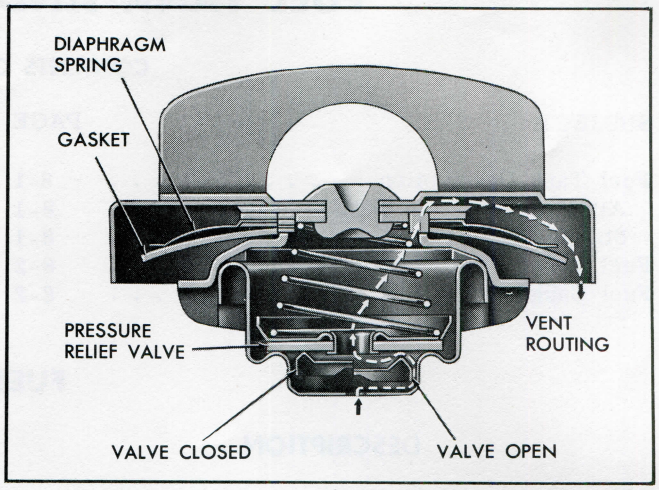

Fig. 8-4 Fuel Tank Filler Cap - Station Wagon

TANK GAUGE UNIT

The fuel tank filter and tank gauge unit are one assembly. The tank filter has a mesh sufficiently fine to prevent passage of water and assures that the particles that pass through are too small to interfere with valve operation in the fuel pump. The filter is of double plastic wrap construction with a heat-sealed end (on all models except station wagons) and offers a large filtering area and does not require cleaning. It is so designed that it will not rattle on the bottom of the tank.

Fuel tank gauge units for station wagons have an all plastic filter end, which rests just above the bottom of the tank.

Because of the difference in construction and location of the fuel tanks, two different fuel tank gauge units are required for standard and station wagon models. Two additional fuel tank gauge units are required (one for standard, one for station wagons) to accomodate cars equipped with air conditioning. In all air conditioned cars, a vapor return line runs alongside the gas line to the vapor separator in the fuel pump, to the fuel tank and prevents vapor from entering the fuel line to the carburetor by bleeding off or separating the vapor from the gas and returning it to the fuel tank, greatly reducing the possibility of vapor lock.

The fuel gauge tank unit consists of a float with linkage connecting the float to a variable resistor. As the float raises or lowers according to the fuel level, the resistor varies the resistance for electrical current to flow through the tank unit and the amount of current flowing through the dash unit (see Section 12 for operation of the dash unit). When the fuel tank is empty, the float is positioned so the resistor has almost zero resistance. This causes the dash unit to register empty. As the fuel level increases, the float moves up and the resistance in the resistor increases. This causes the indicator on the dash unit to move toward the full mark.