FUEL TANK AND EXHAUST

33 THROUGH 86 SERIES

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FUEL SYSTEM

DESCRIPTION (Figs. 8-1 through 8-3 & 8-7 through 8-9)

All 33 through 38 Series fuel tanks have a capacity of 20 gallons and all 52 through 86 Series have a capacity of 25 gallons. The filler cap is located behind the license plate on all models except station wagons. On station wagons, the filler cap is located in the left quarter panel. Venting on the 33 through 38 Series is provided by a single hose and pipe on all models except station wagons. On station wagons, the venting is through...
a hose to the top of the filler neck. All station wagon gas tank caps are vented. On 52 through 86 Series, venting is provided by two hoses routed up to and ending behind the right rear coil spring seat.

The tank gauge units on all models have a Saran fuel filter on the end of the suction pipe which prevents entry of dirt or water into the fuel lines. Three different gas tank units are used on the 33 through 38 Series; one unit for 330 cu. in. engine, either with or without air conditioning; two units are used on the 400 cu. in. engine, one for air conditioning and one without air conditioning. Two different gas tank units are used on 52 through 86 Series; one unit has the long filter on fuel return connection for air conditioning; the other unit has a short filter and no fuel return connection.

A fuel return system is used on all 400 cu. in., engines equipped with air conditioning. The 330 cu. in. engines do not have a fuel return system, regardless of equipment. The 54 through 86 Series 425 cu. in. engine will have a fuel return system if equipped with air conditioning.

The gas tank on all 52 through 86 Series is designed with a single baffle running laterally through the tank. The tanks used on 33 through 38 Series do not contain a baffle except in station wagons. On 33 through 38 Series, insulation strips are used between the fuel tank and the body.

NOTE: If a car is to be stored for any appreciable length of time, the gasoline should be drained from the complete system, including carburetor, fuel pump, all fuel lines and fuel tank in order to prevent gum formations and resultant improper engine performance.
FUEL GAUGE TANK UNIT

NOTE: For checking and testing of fuel gauges, refer to ELECTRICAL, Section 12.

Removal

1. Drain tank to a level below tank unit.
   
   NOTE: It is sometimes possible, depending upon the amount of fuel in the tank, to avoid draining by raising the front of the car higher than the rear.
2. Disconnect gauge wire at connector.
3. Disconnect fuel and vent hoses.
4. Remove fuel gauge retainer using Tool J-21518. (Fig. 8-4)
5. Remove fuel gauge.

Installation

1. Position fuel gauge in tank as shown in Fig. 8-5.
2. Install gauge retainer using Tool J-21518.
3. Connect fuel gauge wire and hoses.

FUEL TANK

Draining Fuel Tank

1. Using approximately 10 feet of 3/8" ID hose, cut a slit 18" from one end. Make the slit towards the short end. (Fig. 8-6)
2. Insert a pipe nipple into the opposite end of the hose.
3. Insert the nipple end of the hose into the tank until the nipple rests on the bottom of the tank.
4. Insert an air hose in the downward position into the slit. A short blast of air will cause the fuel to flow.

NOTE: The tank can be siphoned rapidly by raising the car several feet higher in the front than the rear.

Removal (All except station wagons)
1. Drain tank,
2. Disconnect gas hose from fuel line.

Installation (All except station wagons)
1. Position tank gauge wire to the rear of tank.
2. Install tank and position the two tank straps and tighten bolts to 10 ft. lbs,
3. Feed gas gauge wire through floor and connect at the connector in the rear compartment,
4. Connect gas hoses at tank.
Fig. 8-8 Fuel Tank - 52 through 86 Series

Fig. 8-9 Fuel Return System - 54 through 86 Series
FUEL TANK

Removal and Installation - Station Wagons

The fuel tank on station wagons is attached as shown in Fig. 8-3. Torque tank attaching bolts to 10 ft. lbs. and tank support attaching screws to 24 ft. lbs.

FUEL AND FUEL RETURN LINE

REPAIR PROCEDURE

1. Cut out damaged portion of fuel line.
2. Cut a piece of hose 4" longer than portion of line removed.

   NOTE: Fuel hose 5/16" ID and fuel return hose 1/4" ID.
3. Slide clamps onto pipe and push hose 2" onto each portion of fuel pipe.
4. Clamp hose to pipe on each side of repair.

EXHAUST SYSTEM

DESCRIPTION (Figs. 8-10 through 8-17)

All 54 Series and 400 cu. in. engines are equipped with dual exhaust systems consisting of two mufflers and two resonators on the 54 Series and two mufflers and chambered tail pipes on the 400 cu. in. engines. The 250 cu. in. L-6 exhaust system consists of a muffler and a resonator. The 330 cu. in. 2 bbl. engine exhaust system consists of an exhaust pipe, a muffler and a tail pipe. The 330 cu. in. 4 bbl. engine uses one muffler and a resonator as standard equipment with a dual exhaust system consisting of two mufflers offered as an option. Dual exhaust system is not available on station wagons.

Periodic maintenance of the exhaust system is not required; however, if the car is raised for other service, it is advisable to check that the drain holes in the mufflers and resonators are in the down position and open to prolong their life.
Fig. 8-11 Exhaust System - 33 through 38 Series 4 BBL. Exc. Ext. S.W.

Fig. 8-12 Exhaust System - Ext. S.W. Only
Fig. 8-13 Dual Exhaust System - 400 cu. in. Engine

Fig. 8-14 Exhaust Clearances - 33 through 38 Series
The exhaust system is suspended by hangars attached to the frame members by self-tapping screws along the length of the car. If the attaching screws should become stripped or the screw hole become oversize, new self-tapping hex head screws, 3/8"-16 x 1-1/8", should be used.

NOTE: Annoying rattles and noise vibrations in the exhaust system are usually caused by misalignment of parts. Aligning the system should be done only when the system is cold, as heat causes the complete system to expand rearward, sometimes as much as 3/4".

For servicing the exhaust manifold heat valve, refer to ENGINE, Section 6.
Fig. 8-16 Exhaust Fastening - 52 through 86 Series

Fig. 8-17 Exhaust Clearances - 53 through 86 Series