FUEL TANK AND EXHAUST SYSTEM

CONTENTS OF THIS SECTION

GENERAL DESCRIPTION

The fuel tank is made from two sheet metal sections welded together. Within the tank is a brace which supports the end of the filler pipe, and an anchor which locates the outlet pipe fitting (Fig. 8-1). Both the brace and the anchor are welded in place in the tank. A one piece filler pipe is used on all models. The pipe is retained in place by solder at the point where it enters the tank, and by a screw which passes through the top of the tank and support brace and threads into the end of the filler pipe (Fig. 8-2). Solder is used to seal the screw head to the tank. There are no baffles in the tank, with exception of the station wagon fuel tank which has a single baffle welded in place.

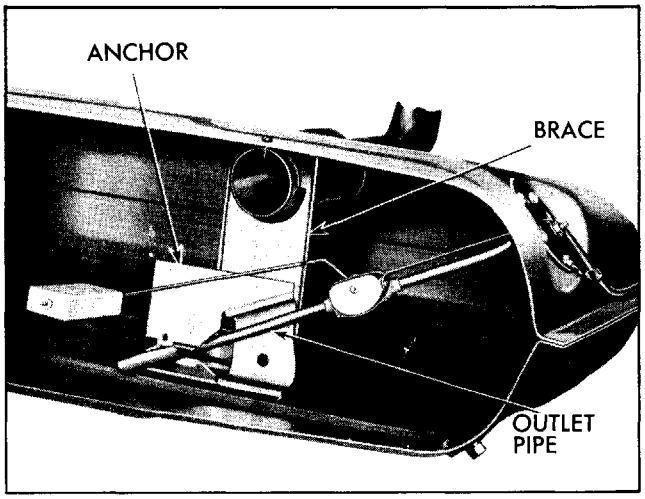

Fig. 8-1 Fuel Gauge Tank Unit Installed in Tank

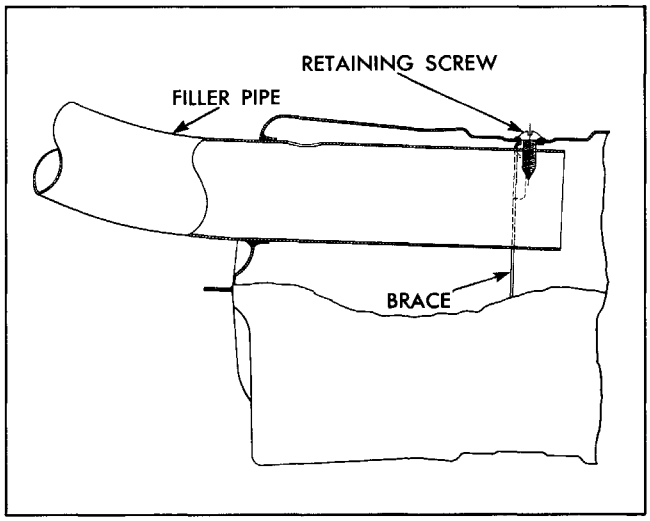

Fig. 8-2 Filler Pipe Installation in Fuel Tank

The fuel tank is mounted to the body with two metal straps and can be removed from below without disturbing any sheet metal. The tank on the station wagon differs in shape and mounts on the left side of the underbody, but method of mounting is essentially the same as on other models.

The fuel pipe from tank to engine runs principally on the outside of the left longitudinal frame member. On the station wagon, a two piece pipe is used. The fuel gauge tank unit on the station wagon differs from the tank unit on other models.

To remove a fuel gauge tank unit from a station wagon it is necessary to remove the fuel tank. On

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models other than station wagon, the gauge unit can be removed with the fuel tank installed. See "Electrical and Instruments," page 12-1.

FUEL TANK—REMOVE AND REPLACE

ALL MODELS EXCEPT STATION WAGONS

1. Remove drain plug from bottom of tank and drain tank.

2. Disconnect wire from fuel gauge tank unit.

3. Disconnect fuel pipe.

4. Disconnect support straps and lower tank, rotating as necessary to withdraw filler pipe from tunnel in body and bring it between frame and spring.

5. Replace tank by reversing above steps. When installing fuel gauge tank unit wire, make sure rubber cap is repositioned to protect connection from water and road salt. NOTE: A tire carcass rubber shim is stapled to the strap. Make certain shim is in place on strap when installing tank. When reconnecting fuel pipe, hold body of connector on gauge unit while tightening the compression nut to avoid twisting pipe of fuel gauge tank unit and also to ensure a gas-tight connection.

STATION WAGON

1. Disconnect fuel line extension from fuel line. Coupling is near front end of fuel tank.

2. Bend body flange inboard 45° for a distance of eight inches starting at a point directly above rear edge of tank filler neck.

3. Remove nut holding tank strap to rear bracket and remove rear bracket.

4. Remove strap to body nut (inner).

5. Lower tank slightly and disconnect fuel gauge wire from gauge and remove fuel tank.

To install tank reverse the above operation. Before tightening the support straps position the tank as far to the rear as possible. Insulation boot must be in place over gauge terminal.

TROUBLE DIAGNOSIS

LEAKS

Before removing fuel tank to correct a leak, a careful inspection of the tank should be made to determine as accurately as possible the source of leak. So called "seam leaks" very often turn out to be leaks at the filler neck or loose screws at the fuel gauge tank unit. In both these cases the gasoline runs down on the flange of the seam and drips off at points along the seam giving the false indication of leaking seams.

Another possible source of leaks on fuel tanks is the screw holding the filler pipe to the top of the tank (Fig. 8-2). The screw head should be sealed to the tank with solder.

NOISES

Fuel tanks which are reported to have a rattling or buzzing sound can be corrected by adding another shim on top of the original shim on each strap. This will clamp the spacing bracer more tightly when the fuel tank straps are tightened.

EXHAUST SYSTEM

GENERAL DESCRIPTION

The major units comprising the exhaust system on all 1955 model Pontiacs are: exhaust manifold crossover pipe, exhaust pipe, muffler, and muffler tail pipe. The operational description of the exhaust system in conjunction with the engine is given on page 6-6.

The exhaust manifold crossover pipe attaches to right and left bank exhaust manifolds, passes beneath the engine, and joins the exhaust pipe on the right side of the engine. The exhaust pipe runs from the crossover pipe to the muffler which is located between the right side longitudinal frame member and the frame "X" member. The tail pipe runs from the muffler, through the frame "X" member, over the rear axle housing, and out to the rear of the car on the right hand side.

All models use the same type of muffler, which is oval shaped, has multiple pipes, and operates on the reverse flow principle. Four chambers and a double jacket are utilized to accomplish muffling. Exhaust gases are directed to the third chamber, forced forward to the first chamber, from where they travel the length of the muffler and are exhausted into the tail pipe. See Fig. 8-3. Clamps are used to secure the muffler to the exhaust pipe and tail pipe.

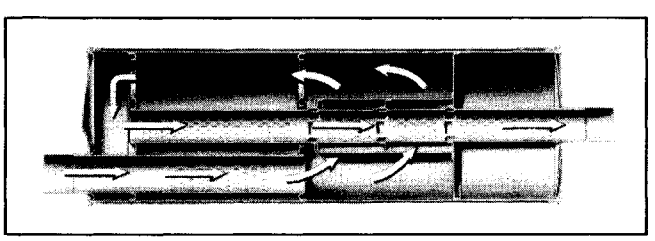

Fig. 8-3 Exhaust Gas Flow Through Muffler

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The muffler and tail pipe are supported at two points by flexible supports. One support immediately behind the muffler attaches to the right side longitudinal frame member and the "X" member; this support also serves to clamp the tail pipe to the muffler. The second support near the end of the tail pipe attaches to the frame rear cross member. (On station wagons the rear support attaches to the right longitudinal frame member.)

EXHAUST MANIFOLD CROSSOVER PIPE—REMOVE AND REPLACE

1. Remove right and left side engine aprons.
2. Disconnect exhaust pipe from crossover pipe.
3. Disconnect crossover pipe from right and left bank exhaust manifolds.
4. Remove crossover pipe by "jockeying" as necessary to clear steering linkage, frame, and engine.
5. Replace crossover pipe, using new gaskets, by reversing above steps.

EXHAUST PIPE—REMOVE AND REPLACE

1. Loosen clamp retaining exhaust pipe to muffler inlet.
2. Disconnect exhaust pipe from crossover pipe.
3. Remove exhaust pipe.
4. Replace exhaust pipe, using new gaskets, by reversing above steps.

MUFFLER—REMOVE AND REPLACE

REMOVE

1. Loosen clamp bolt at rear tail pipe support and spread clamp to allow tail pipe to slide in clamp.
2. Remove clamp from support at rear of muffler.
3. Withdraw tail pipe from muffler. Penetrating oil and a small chisel may be useful in breaking pipe loose from muffler outlet. When prying tail pipe loose, use care to prevent damage to end of tail pipe.
4. Loosen clamp retaining exhaust pipe to muffler and slide clamp forward on exhaust pipe.
5. Remove muffler.

REPLACE

1. Position muffler inlet on end of exhaust pipe making sure key on exhaust pipe indexes in slot of muffler inlet.
2. Place tail pipe on muffler outlet making sure key on tail pipe indexes in slot of muffler outlet.
3. Position muffler clamps and tighten securely.
4. Tighten clamp at rear of tail pipe.
5. Start engine and check for leaks.

TAIL PIPE—REMOVE AND REPLACE

1. Jack rear of car to allow clearance between frame and rear axle housing.
2. Remove clamp from muffler support at rear of muffler.
3. Remove tail pipe from rear support.
4. Work tail pipe loose from muffler outlet and remove from rear of car.
5. Replace tail pipe by reversing above steps. Make sure key on tail pipe fits in slot of muffler outlet.

SPECIFICATIONS

Fuel Tank Capacity (all except station wagon)	20 gal.
Station Wagon	18 gal.
Exhaust Crossover Pipe Diameter	1¾"
Exhaust Pipe Diameter	2"
Tail Pipe Diameter	1¾"

SERVICE CRAFTSMAN NEWS REFERENCE

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