

# FUEL TANK AND EXHAUST

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## FUEL TANK

### DESCRIPTION

The fuel tank has a 24.00 gallon capacity and is constructed of two sheet metal sections welded together. The filler pipe is attached to the tank and is removable. The fuel tank is secured to the under side of the body by metal straps (Fig. 8-1).

The tank filler pipe is located at bumper level behind the license plate. It is accessible through a spring hinge door. Fuel tanks on all models use a vented filler cap (Fig. 8-3).

### SERVICE PROCEDURES

#### TO DRAIN FUEL TANK

1. Insert a length of hose (Fig. 8-4 for details) into the gas tank, pipe nipple end first, until weighted end of hose rests on bottom of tank.
2. With chuck of air hose inserted into hose slit, a short blast of air will cause the gas to flow.

*NOTE: The tank can be drained rapidly by raising the car several feet off the floor when performing the above operation.*

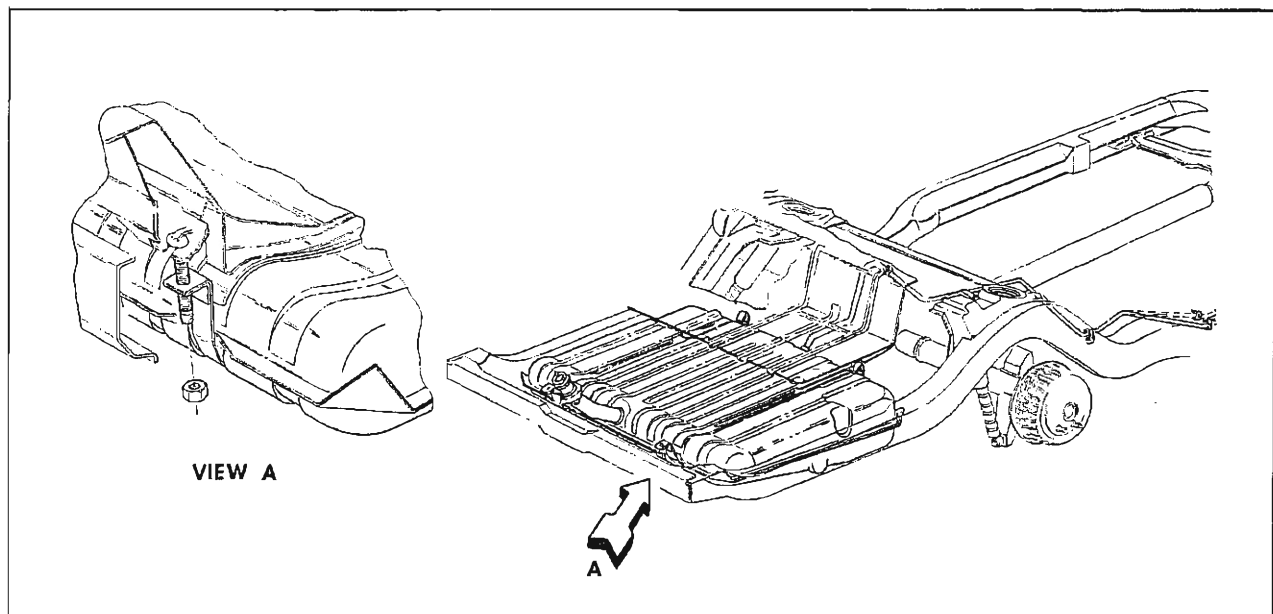


Fig. 8-1 Fuel Tank Mounting (Except Station Wagon)

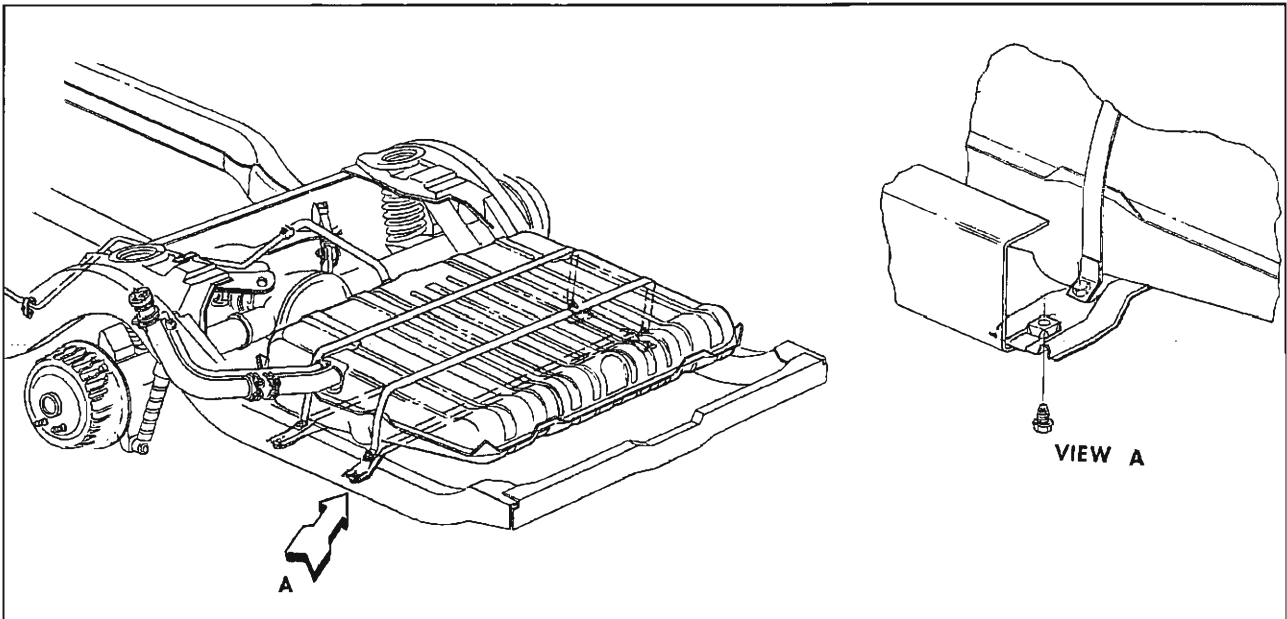


Fig. 8-2 Fuel Tank Mounting (Station Wagon)

#### REMOVE AND REPLACE FUEL TANK—SEDANS, COUPES AND CONVERTIBLES

1. Disconnect wire from tank gauge unit at the unit.
2. Raise car and support fuel tank.
3. Drain fuel tank as described on page 8-1.
4. Remove clamp connecting fuel line to tank.
5. Remove screws holding filler pipe bracket and seal to body.
6. Remove nuts securing support straps holding fuel tank to body.
7. Lower fuel tank from car.

To install, reverse above procedure.

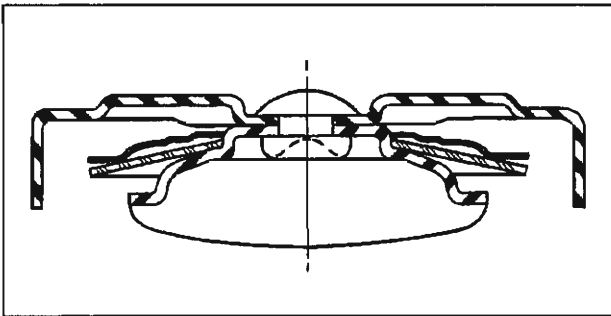


Fig. 8-3 Vent Cap

#### REMOVE AND REPLACE FUEL TANK—STATION WAGON

1. Disconnect wire from tank gauge unit at the unit.
2. Raise car and support fuel tank.
3. Drain fuel tank as described on page 8-1.
4. Remove clamp connecting fuel line to tank.
5. Remove clamp holding vent hose to filler pipe.
6. Disconnect vent hose from filler pipe.
7. Disconnect filler pipe rubber coupling by loosening clamp screws and sliding coupling toward tank.
8. Remove four nuts holding fuel tank to body and lower tank from car.
9. To install reverse removal procedure.

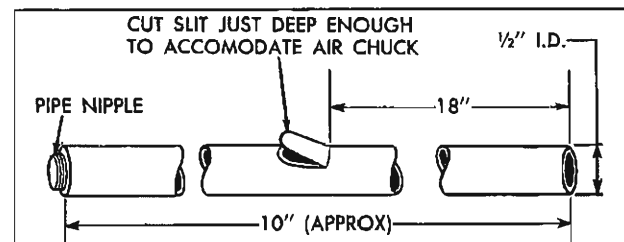


Fig. 8-4 Typical Drain Hose

## 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 the leak. So called "seam leaks" very often turn out to be loose screws at the fuel gauge tank unit. In this case 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.

### NOISES

Stones on top of the tank may be the cause and should be removed.

### TANK UNIT

Diagnosis for the fuel tank gauge unit appears in Section 11.

## EXHAUST SYSTEM

### DESCRIPTION

The major units of the exhaust system of the Six Cylinder Engine (Fig. 8-1) are the exhaust pipe, muffler and tailpipe. The exhaust gases pass into the exhaust manifold. Here if the engine is cold a thermostatically controlled valve in the exhaust manifold partially blocks the passage of exhaust gases out of the manifold. Exhaust gases then heat the manifold. As the engine is thoroughly warmed up the exhaust gases are directed out through the exhaust pipe and muffler. The major units of the V-8 exhaust system (Fig. 8-2) are the exhaust pipe, muffler and tailpipe. The fuel burned in the combustion chamber of the engine passes into the exhaust manifolds of the engine. A heat riser pipe in the right-hand manifold supplies heated air to the carburetor choke assembly. From the exhaust pipe the gases pass through the muffler and out the tailpipe.

### SERVICE PROCEDURES

#### SIX CYLINDER ENGINE (Fig. 5-8)

##### EXHAUST PIPE—REMOVE AND REPLACE

1. Remove two nuts from exhaust pipe flange at manifold.
2. Sever pipe at front of muffler with cutting torch or saw and remove pipe.
3. Replace by clamping pipe at muffler and tightening exhaust pipe flange nuts to 22-30 lb. ft. torque.

##### MUFFLER—REMOVE AND REPLACE

1. Sever exhaust pipe at front of muffler with cutting torch or saw.
2. Remove U-clamp at rear of muffler.

3. Remove muffler.

4. Replace by clamping exhaust pipe at front of muffler and tightening rear U-clamp nuts to 15-20 lb. ft. torque.

##### TAILPIPE—REMOVE AND REPLACE

1. Remove U-clamp at rear of muffler.
2. Remove tailpipe hanger clamp.
3. Remove tailpipe.
4. Replace by reversing removal procedure. Tighten U-clamp nuts to 15-20 lb. ft. torque. Tighten hanger clamp bolt to 6-10 lb. ft. torque.

### V-8 ENGINE

#### SINGLE EXHAUST SYSTEM (Fig. 8-6)

##### EXHAUST PIPE—REMOVE AND REPLACE

1. Remove two nuts from each exhaust pipe flange at exhaust manifold.
2. Remove U-clamp at front of muffler and remove exhaust pipe.
3. Replace by reversing removal procedure. Tighten exhaust pipe flange bolts to 25-35 lb. ft. torque. Tighten muffler front U-clamp nuts to 15-20 lb. ft. torque.

##### MUFFLER—REMOVE AND REPLACE

1. Remove U-clamps at front and rear of muffler.

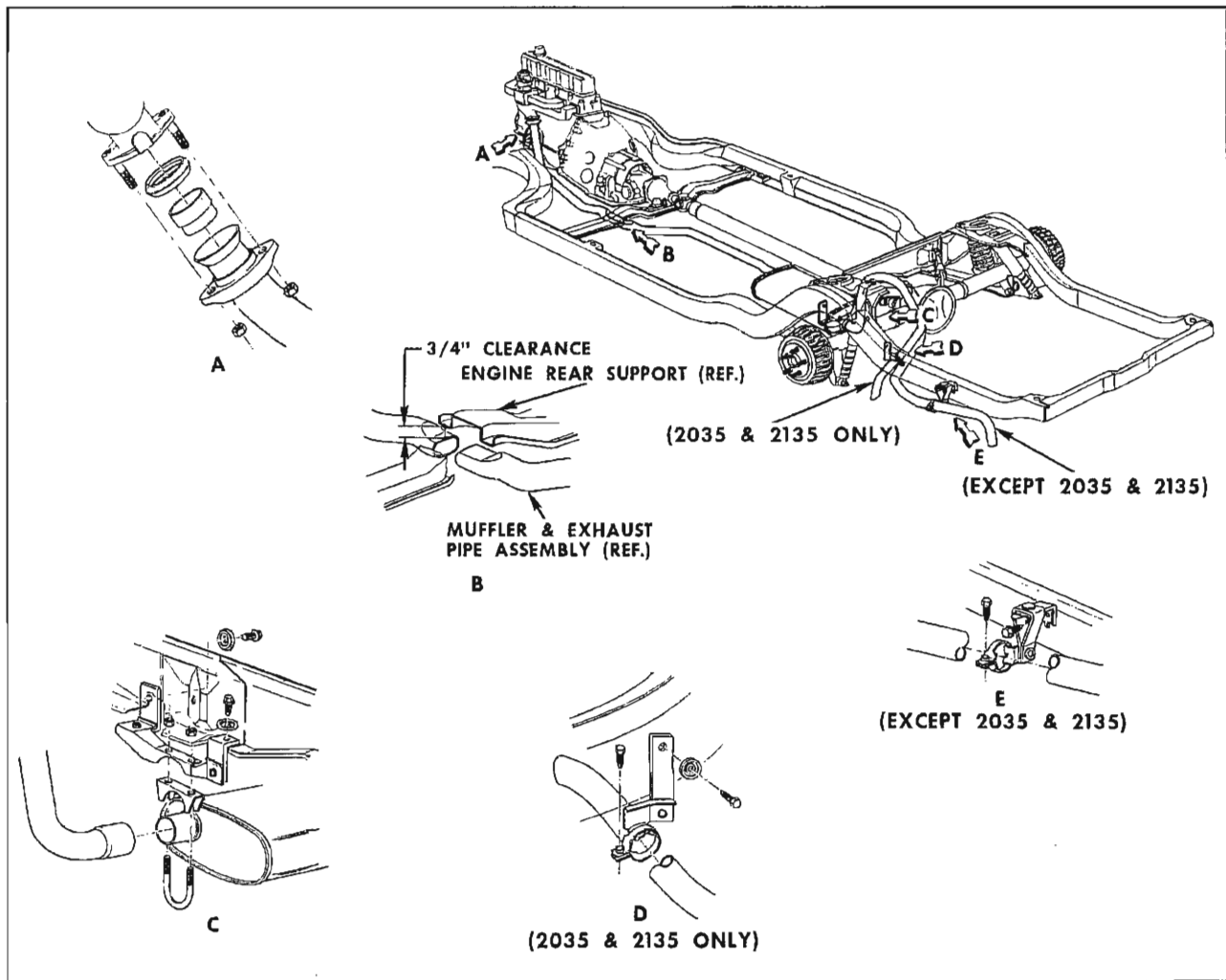


Fig. 8-5 Exhaust System - Six Cylinder Engine

2. Remove muffler.

3. Replace by reversing removal procedure. Tighten front and rear U-clamps to 15-20 lb. ft. torque.

#### **TAILPIPE—REMOVE AND REPLACE**

1. Remove U-clamp at rear of muffler.

2. Remove tailpipe hanger clamp.

3. Remove tailpipe.

4. Replace by reversing removal procedure. Tighten U-clamp nuts to 15-20 lb. ft. torque. Tighten tailpipe hanger clamp bolt to 6-10 lb. ft. torque.

#### **DUAL EXHAUST SYSTEM (Fig. 8-7)**

##### **EXHAUST PIPE—REMOVE AND REPLACE**

1. Remove two nuts from exhaust pipe flange at manifold.

2. Remove U-clamp at front of muffler and remove exhaust pipe.

3. Replace by reversing removal procedure. Tighten exhaust pipe flange bolts to 25-35 lb. ft. torque. Tighten muffler front U-clamp nuts to 15-20 lb. ft. torque.

##### **MUFFLER—REMOVE AND REPLACE**

1. Remove U-clamps at front and rear of muffler.

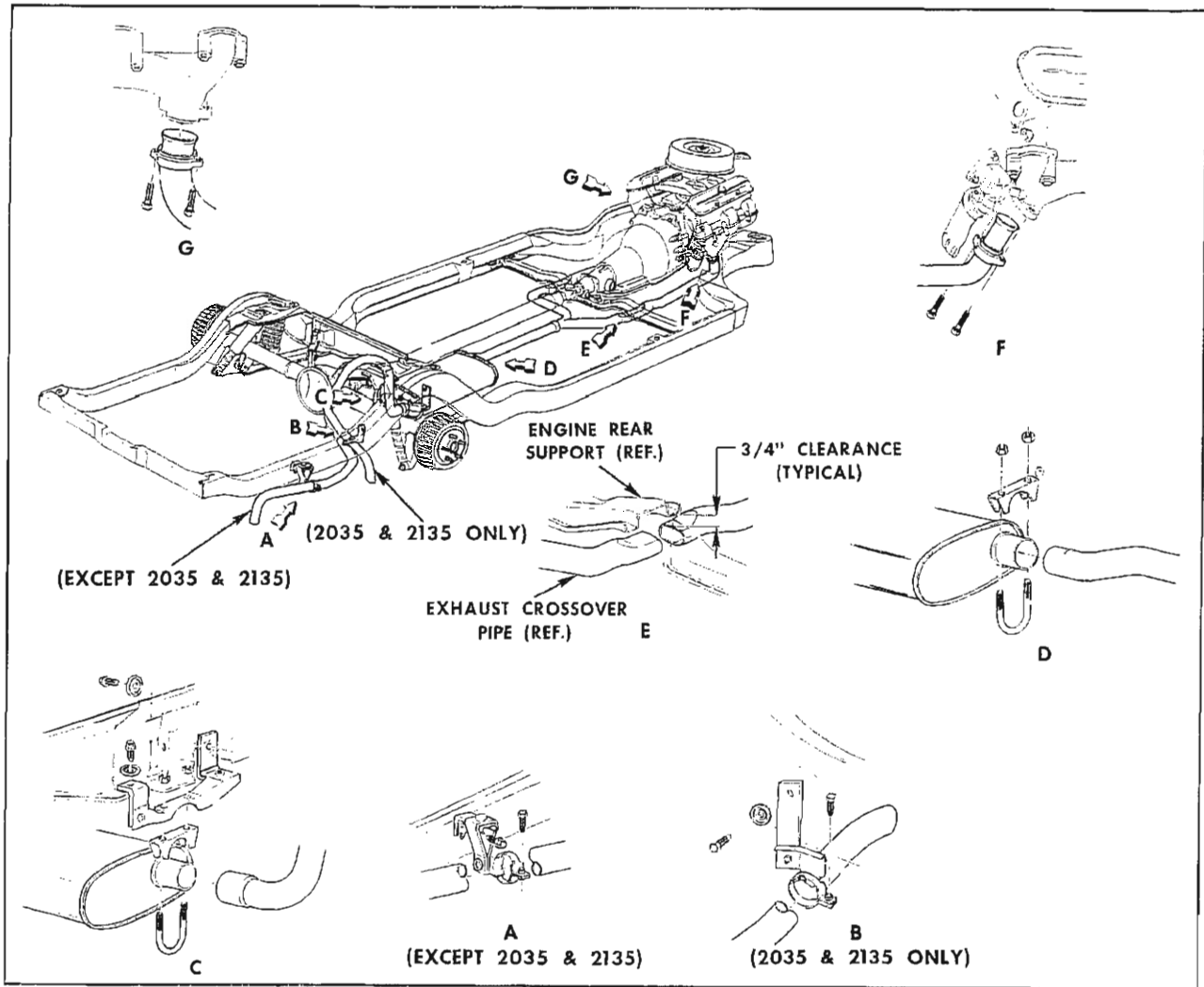


Fig. 8-6 Exhaust System - Eight Cylinder Engine, Single Exhaust

2. Remove muffler.

3. Replace by reversing removal procedure. Tighten front and rear U-clamp bolts to 15-20 lb. ft. torque.

**TAILPIPE—REMOVE AND REPLACE**

1. Remove U-clamp at rear of muffler.

2. Remove tailpipe hanger clamp.

3. Remove tailpipe.

4. Replace by reversing removal procedure. Tighten U-clamp nuts to 15-20 lb. ft. torque. Tighten tailpipe hanger clamp bolt to 6-10 lb. ft. torque.

**SPECIFICATIONS**

Fuel Tank Capacity.....	24.00 gal.
Six Cylinder Engine	
Exhaust Pipe Diameter .....	2"
Tailpipe Diameter.....	2"
V-8 Engine	
Exhaust Pipe Diameter .....	2-1/4"
Tailpipe Diameter.....	2"

**TORQUE SPECIFICATIONS**

(Torque in ft. lbs. unless otherwise specified)

APPLICATION	TORQUE
<b>FUEL TANK MOUNTING</b>	
Nut - Fuel Tank Strap to Support (Station Wagon).....	70-100 lb. in.

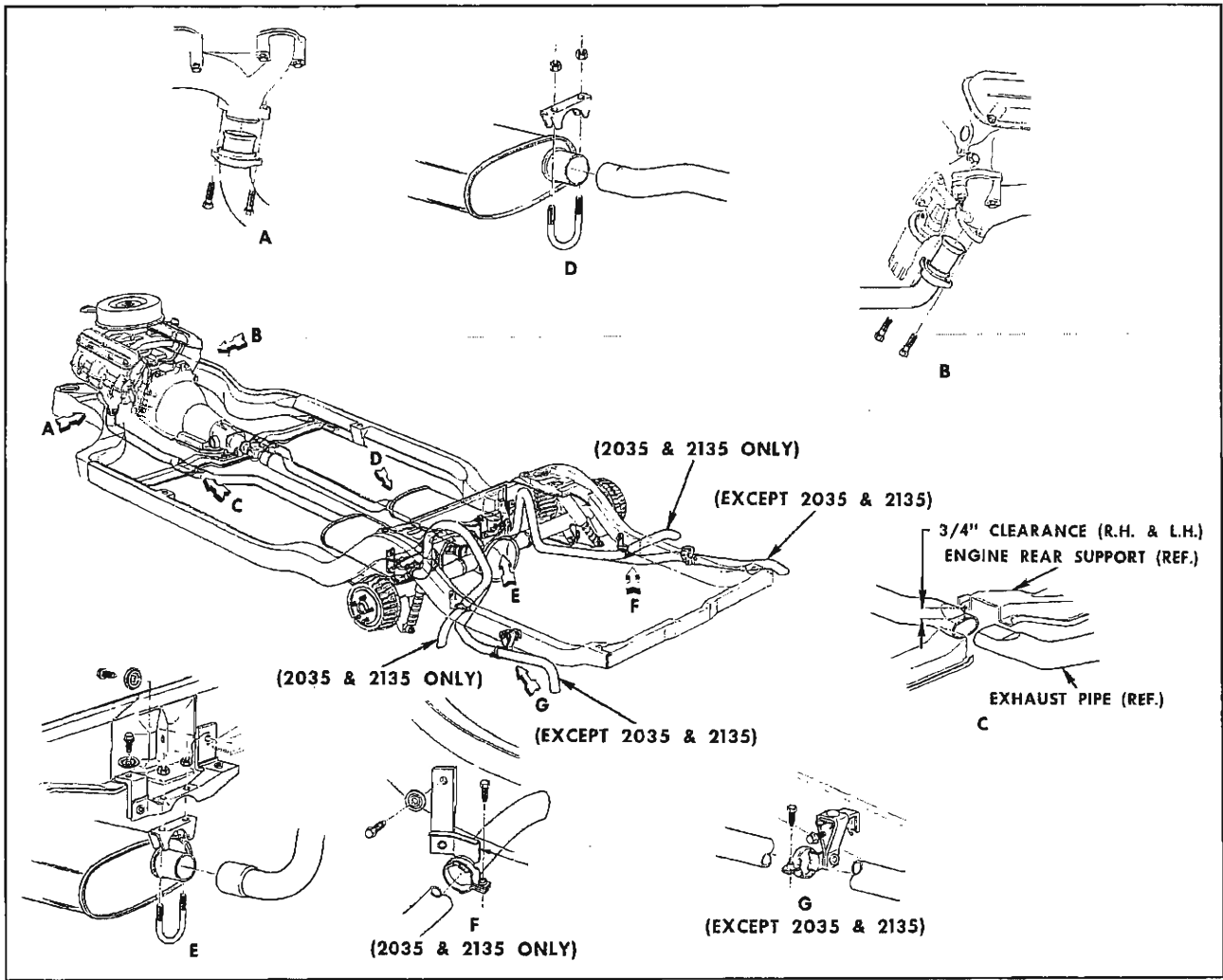


Fig. 8-7 Exhaust System - Eight Cylinder Engine, Dual Exhaust

APPLICATION	TORQUE	APPLICATION	TORQUE
Nut - Fuel Tank Strap to Underbody (Exc. Station Wagon) . . . . .	70-100 lb. in.	Nut - Tailpipe to Muffler U-Bolt . . . . .	15-20
<b>MUFFLER - EXHAUST PIPE - TAILPIPE</b>		Screw - Muffler Tailpipe Hanger to Frame . . . . .	10-15
Nut - Exhaust Pipe to Muffler U-Bolt . . . . .	15-20	Screw - Tailpipe Hanger to Frame . . . . .	10-15
		Screw - Tailpipe Clamp to Hanger Assy. . . . .	6-10
		Nut - Exhaust Pipe Manifold Stud (6 Cyl. Eng.) . . . . .	22-30