

## SECTION 8

# FUEL TANK AND EXHAUST

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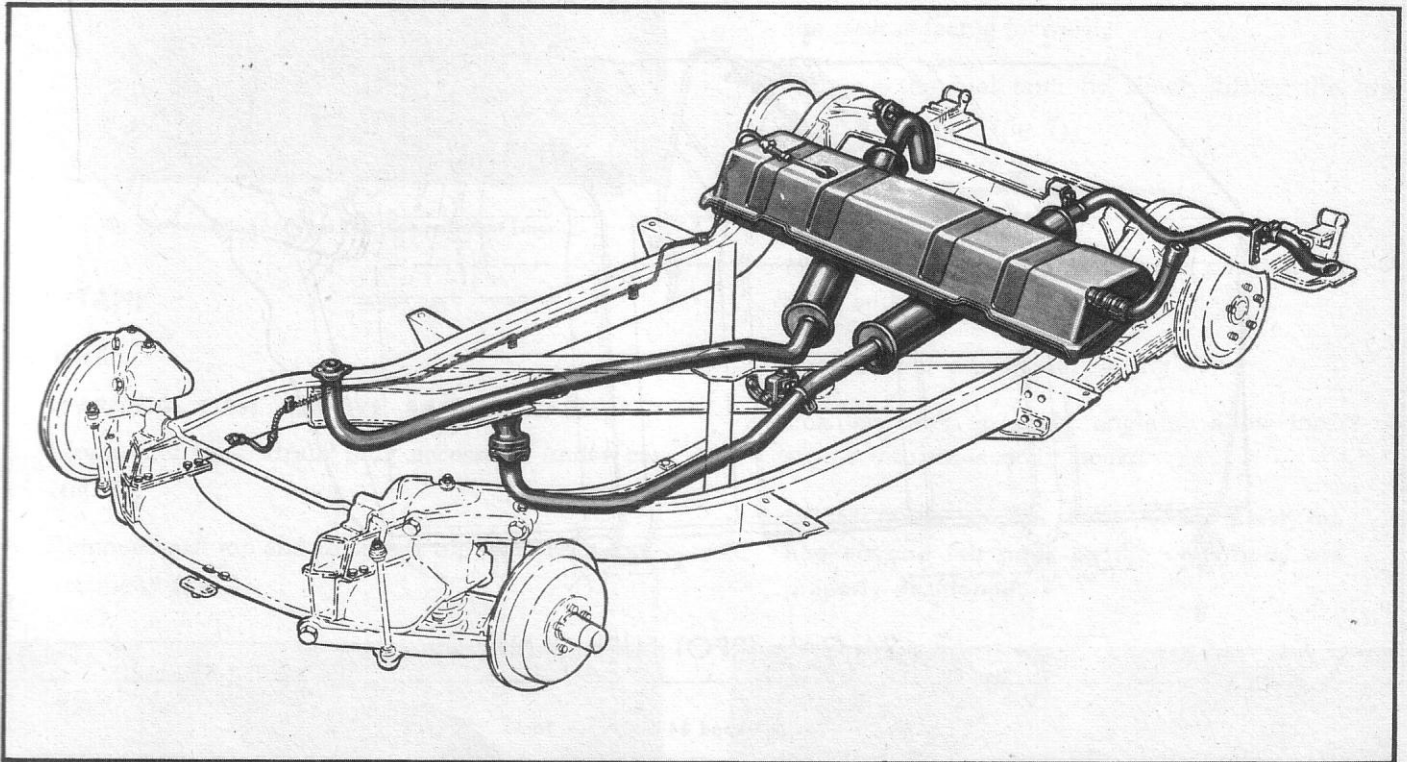


Fig. 1—Fuel Tank (16 Gal. Shown) and Exhaust System

### FUEL TANK

The Corvette is available with a standard 16 gallon fuel tank or an RPO 24 gallon fiberglass fuel tank (see fig. 2). The 16 and 24 gallon tanks are installed directly in back of the bucket seats. The 16 gallon fuel tank is basically the same construction and attached in a similar manner as other metal fuel tanks. The tanks are held in place by two metal straps attached individually to the body. The 16 gallon tank straps are hinged to the underbody at the front of the fuel tank

and secured at the rear with lockwashers and bolts. The 24 gallon tank metal straps are hinged at both the front and rear of the tank and bolted together at the center top. The tanks rest on two felt pads against the underbody. The fuel tanks are equipped with a gas gauge metering unit, a fuel pickup, fuel strainer and vent line. A fuel tank drain plug is accessible under the car.

**CAUTION:** Care should be exercised to avoid denting or puncturing the fuel tank when installing or removing.

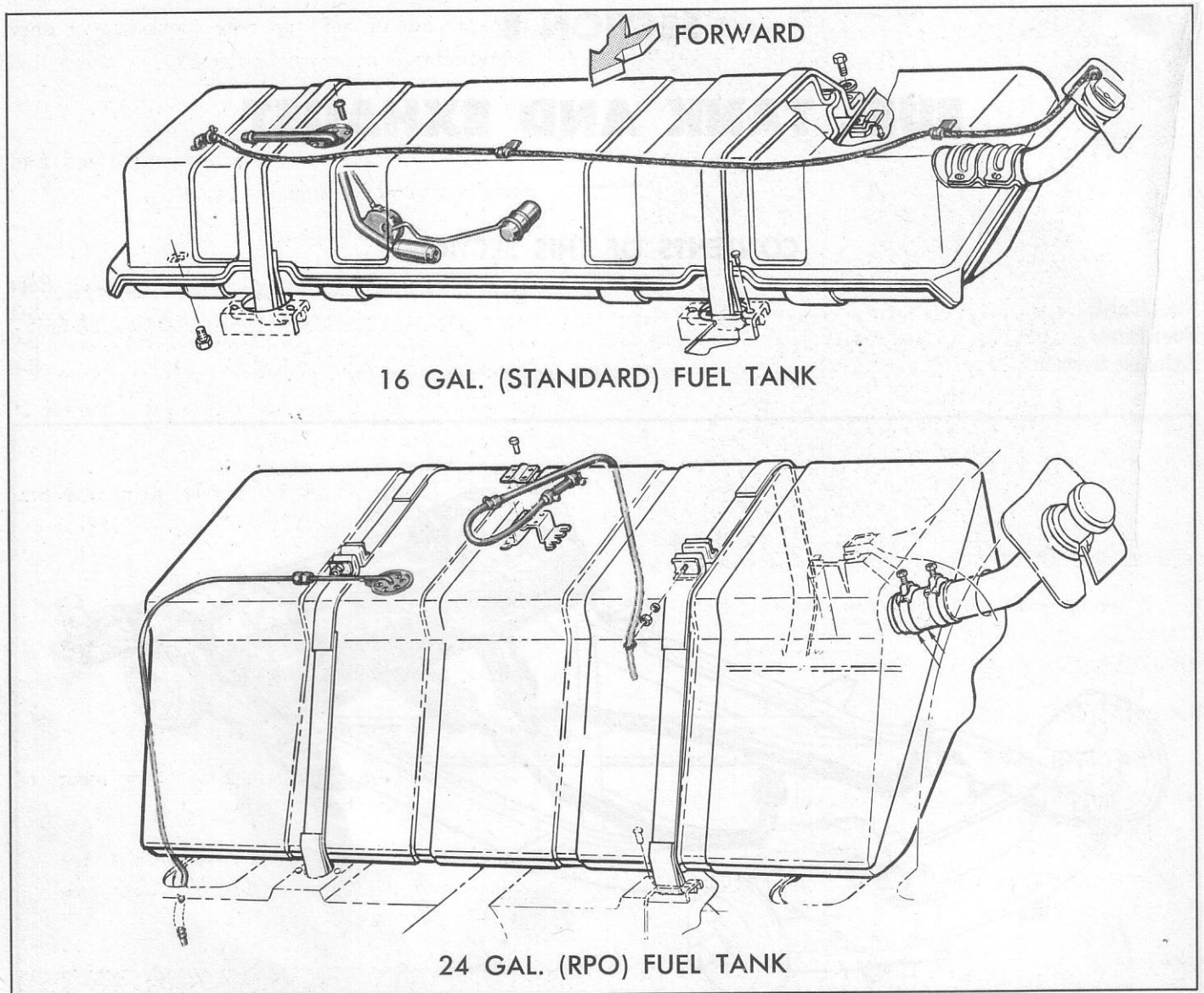


Fig. 2—Corvette 16 and 24 Gallon Fuel Tanks

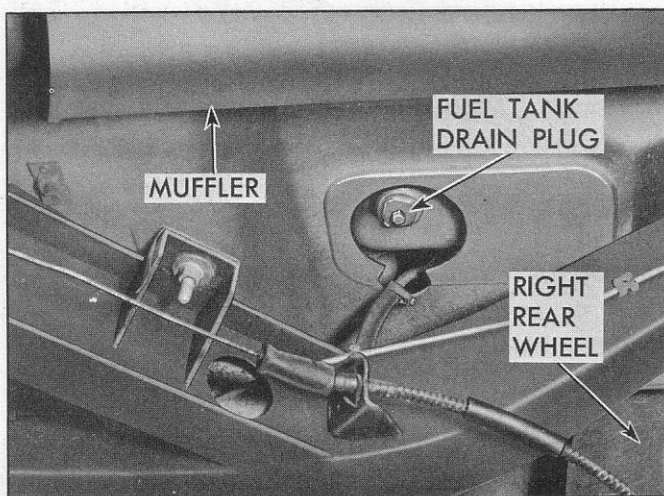


Fig. 3—Fuel Tank Drain Plug

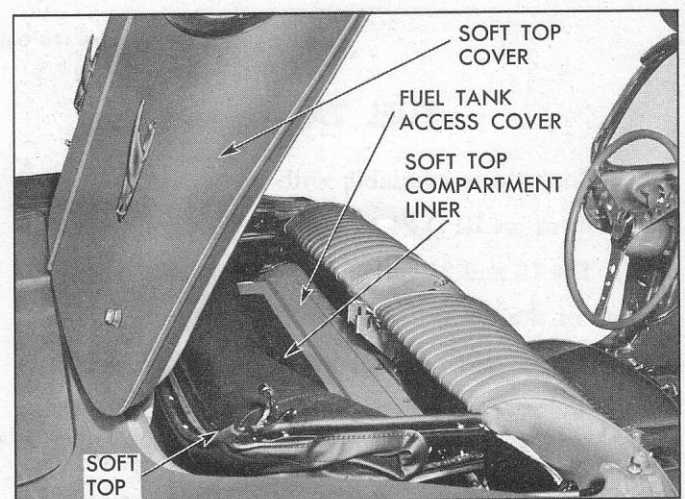


Fig. 4—Fuel Tank Location





Fig. 5—Removing Soft Top Rear Compartment Liner

## FUEL TANK

### Removal

**WARNING: FIRST REMOVE BATTERY CABLE.**

1. Drain fuel tank—drain plug accessible under car (fig. 3).
2. Remove hard top and raise soft top from rear compartment (fig. 4).

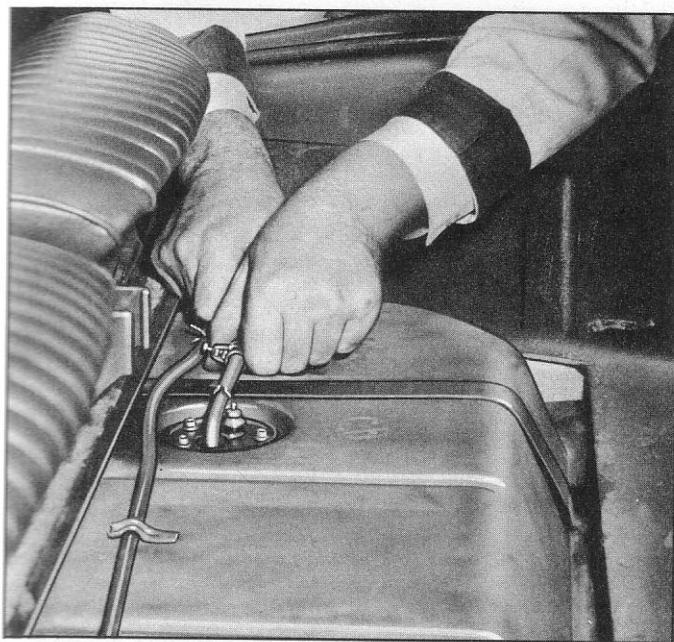


Fig. 6—Removing Fuel Tank Lines

3. Remove folding soft top rear compartment liner from fuel tank access cover (fig. 5).
4. Remove fuel tank access cover.
5. Remove fuel tank metering unit wires and fuel lines (vent and fuel pickup) (fig. 6).
6. Remove filler neck clamp.
7. Remove two fuel tank metal strap reinforcements and retaining bolts located at rear (16 gallon tank) and top center (24 gallon tank).
8. Lift slightly and rotate fuel tank so that the top of the tank is facing forward.
9. Remove the fuel tank by slowly lifting the fuel tank straight up (fig. 7).

### Installation

**NOTE: Place hoses to the side and position felt pads on underbody (see fig. 8).**

1. Replace fuel tank in vehicle (fig. 9).
2. Position tank on slight angle to allow insert of straps into underbody hooks.

**NOTE: Make certain strap ends (pins) are hooked and felt pads on the underbody are properly positioned.**



Fig. 7—Removing Fuel Tank

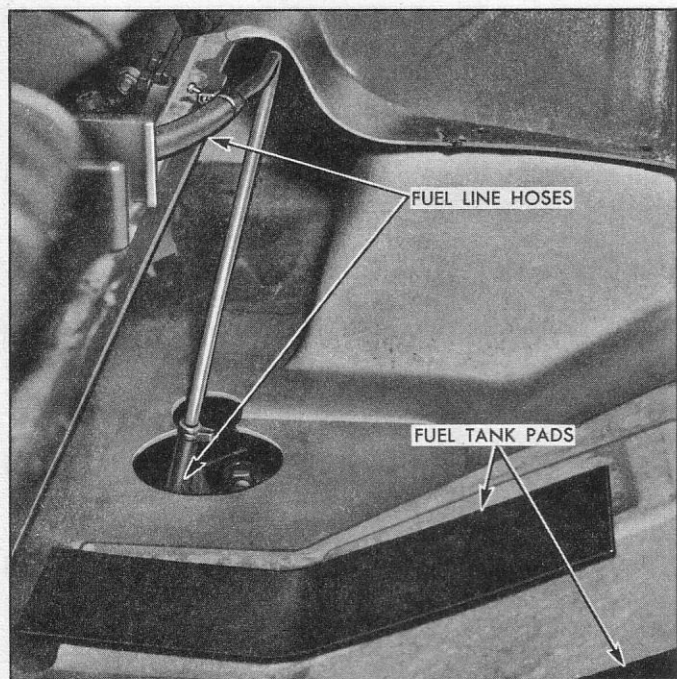


Fig. 8—Fuel Tank Compartment

3. Reposition the tank and install two strap end reinforcements, lockwashers and bolts.
4. Connect filler neck hose and clamp.
5. Connect metering unit wires and fuel tank lines (vent and fuel pickup).
6. Recement the fuel tank cover to the underbody.
7. Screw the access cover securely and cement the folding soft top compartment liner to access cover.
8. Reinstall hard top.

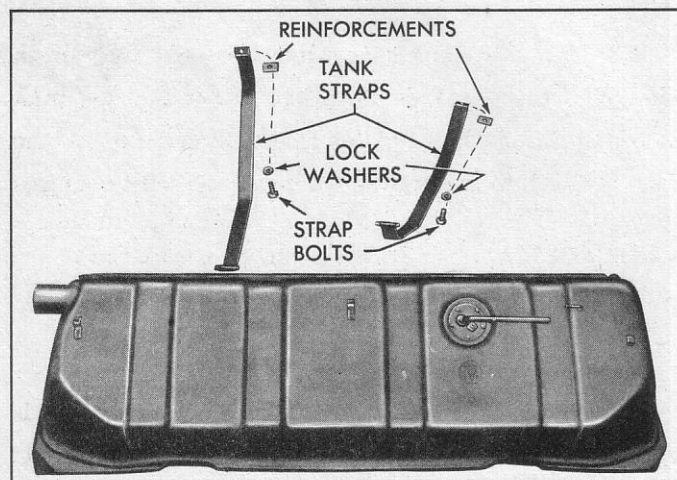


Fig. 9—Fuel Tank and Attachments

9. Install fuel tank drain plug and replace fuel in tank. Check for possible leaks.

## FUEL TANK METERING UNIT OR GAUGE SENDING UNIT AND STRAINER

The sending unit is located on the top right side of the tank in the installed position. The fuel strainer is located at the end of the sending unit inside the tank.

### Replacement (No special tools required)

1. Follow fuel tank removal procedure through step 5. It is not necessary to completely drain the tank, only to a level below the unit.
2. Remove metering unit bolts. Remove unit and rubber gasket.

**CAUTION:** Carefully remove unit so as not to damage screen on the end of the pipe.

3. Clean screen by blowing out with compressed air.
4. Reverse procedure to install.

## FUEL TANK FILLER CAP

Latest pressure vacuum type caps are available for service with vent holes on the underside of cap.

**IMPORTANT:** Follow latest service recommendations for filler cap replacement.

## FUEL LINES

The fuel lines (fig. 10) are conveniently located along the outside of the right frame rail. The lines extend from the fuel tank pickup, down through the access hole in the underbody for the drain plug, along the frame rail to the flexible hose at the fuel pump.

### Maintenance

**CAUTION:** Always drain gasoline from the complete fuel system including carburetor, fuel pump and all fuel lines and fuel tank if the vehicle is to be stored for any great length of



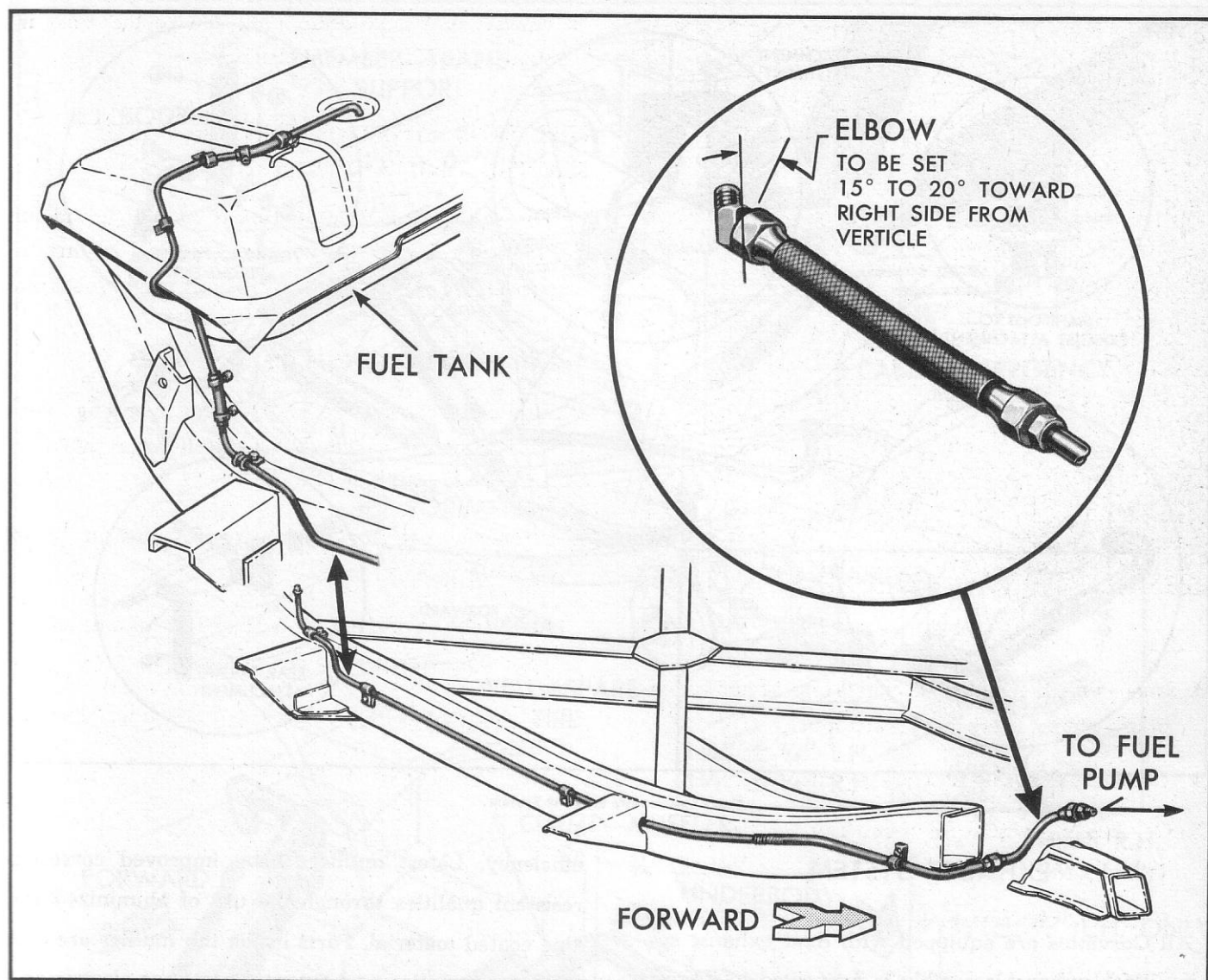


Fig. 10—Fuel Lines

*time. This precaution will prevent accumulation of gum formation and resultant poor engine performance.*

The fuel lines should occasionally be inspected for leaks, kinks or dents, especially when work has been done on the underside of car or after the car has been traveling over rough or stone roads at higher speeds. If evidence of dirt is found in the carburetor or fuel pump at disassembly, the lines should be disconnected and blown out. Check the fuel tank strainer for damage or omission. Fuel lines are beaded-type ends for connection to hoses and flared ends for secure metal to metal line connections.

### FUEL TANK VENT LINE

The 16 gallon tank is vented from the filler neck opening which extends along the top of the fuel tank to the opening. The 24 gallon fuel tank is vented at the rear of the tank extending from the top tank opening.

**IMPORTANT:** *It is necessary to be assured that the vent line is free from dirt, etc. and that the tank vent line remains open at all times.*

At the 16 gallon fuel tank filler neck the vent line is attached with a clip and screw and a rubber grommet secures the line at the body side entrance to the filler neck.

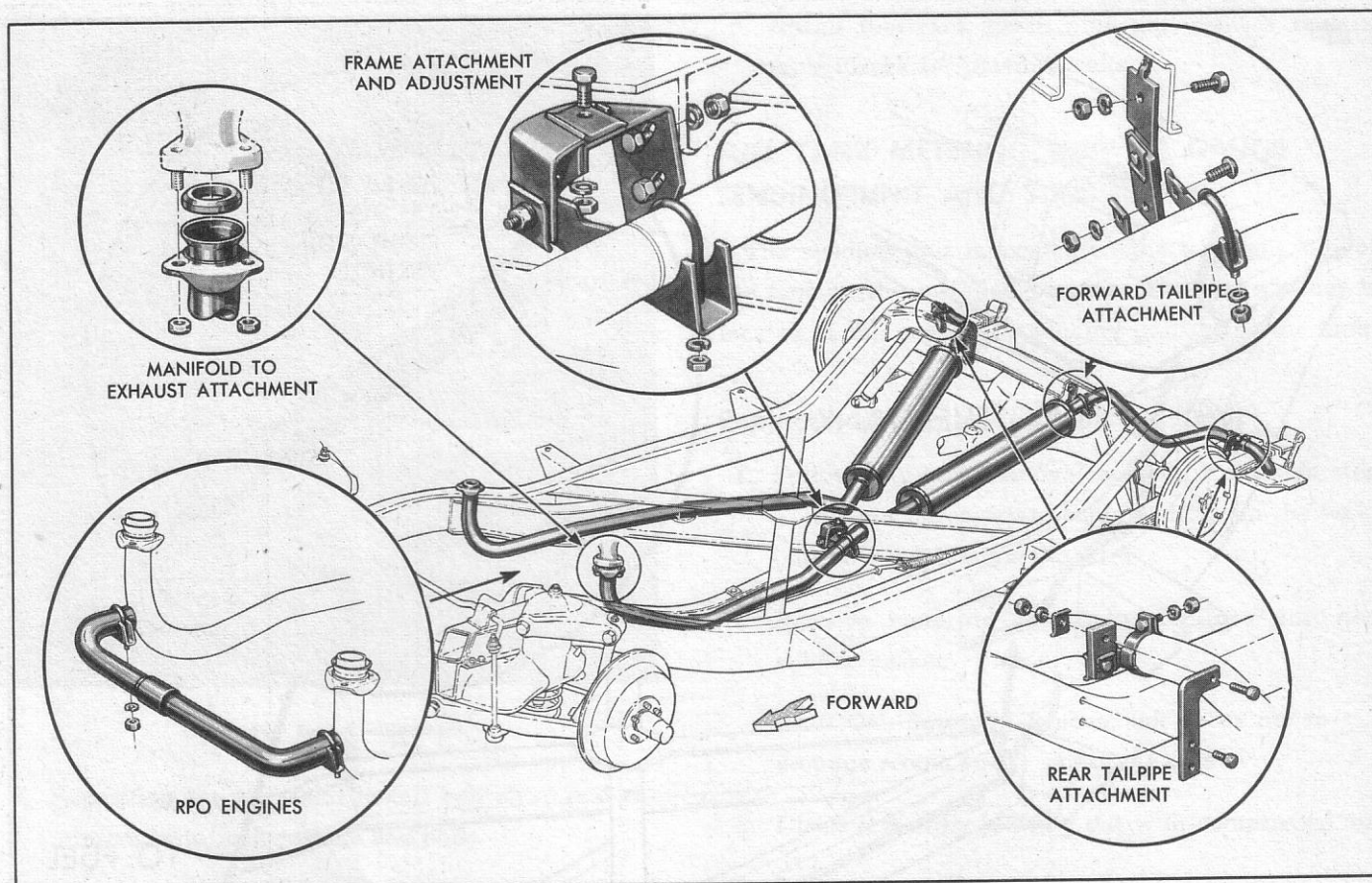


Fig. 11—Corvette Exhaust System

## EXHAUST SYSTEM

All Corvettes are equipped with dual exhaust systems. Each exhaust assembly is connected to its own exhaust manifold and carries the exhaust gases to the rear, discharging them on each side of the rear bumper. These two assemblies are joined together with a cross-over or balance tube when used with either of the two higher compression V-8 RPO engines. See Figure 11.

The dual exhaust system includes two exhaust pipes, mufflers, tail pipes and attaching hardware. Slotted holes in the X crossmember provide adjustment of the brackets on the frame for exhaust pipe clearances. The system is suspended on brackets with insulators for rattle free operation.

The mufflers are an all-welded construction with a capacity for muffling the exhaust and, at the same time, minimizing back pressure for maximum engine

efficiency. Latest mufflers have improved corrosion resistant qualities through the use of aluminized and zinc coated material. Parts inside the muffler are spot welded in position and external parts are electric arc-welded to eliminate a chance of premature failure or rattle.

## SERVICE OPERATIONS

Proper relationship of parts is necessary in the exhaust system for carefree operation. Annoying rattles are usually a result of incorrect alignment of the exhaust system due to incorrect clearances. See Figure 12.

### MUFFLER ASSEMBLY

#### Replacement (Also Exhaust and Tail Pipes)

**NOTE:** OVAL-shaped mufflers are "low noise" regular street and road operation mufflers.



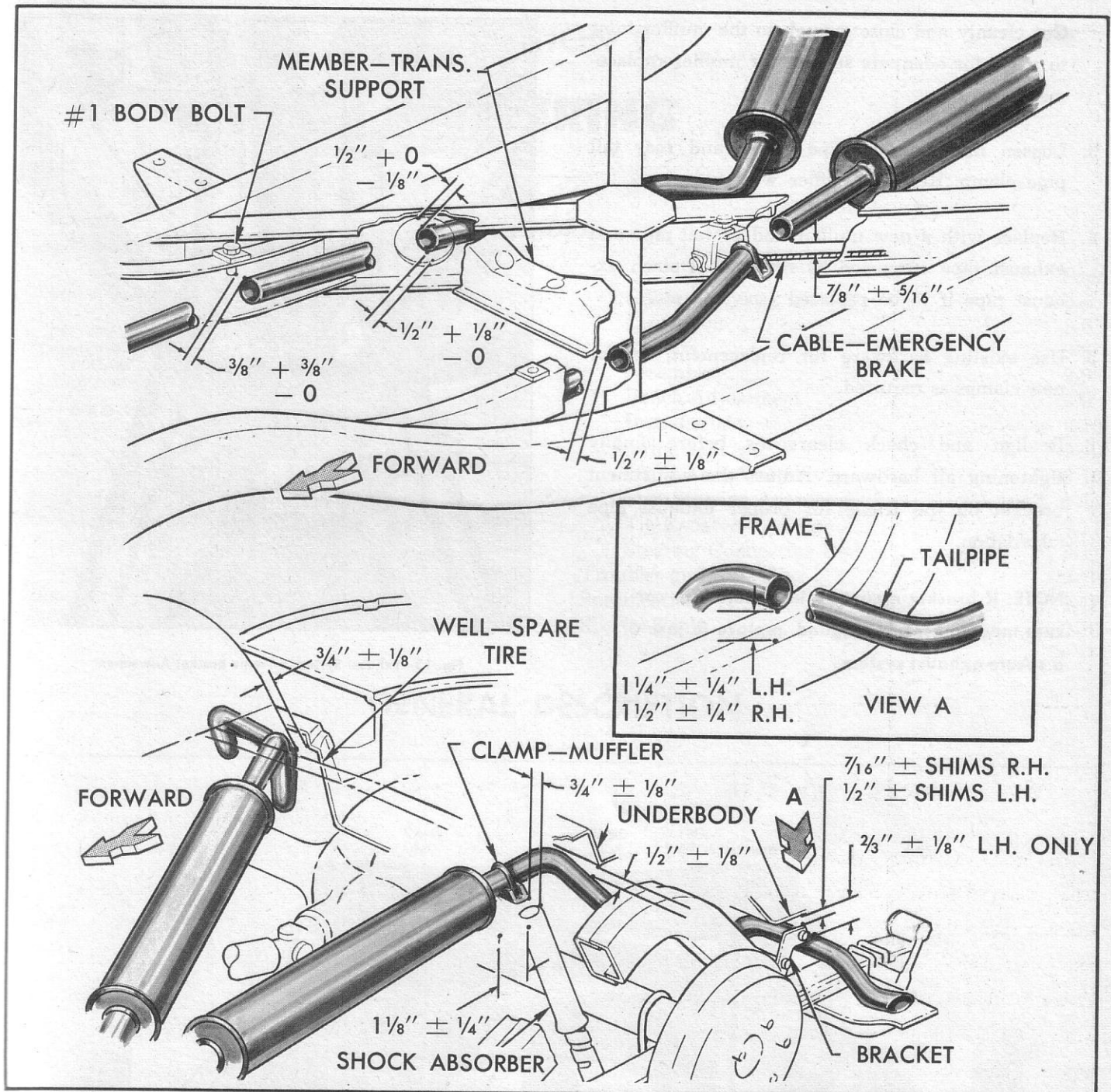


Fig. 12—Exhaust System Clearances

1953-1955 service mufflers are equipped with welded exhaust extensions.

1955-1962 service mufflers require an exhaust extension piece and clamp.

ROUND-shaped mufflers are straight through and/or off road service or track mufflers.

1955-1962 service mufflers are equipped with welded exhaust extensions.

1. Remove "U" clamp at X crossmember (see Figure 11).
2. See above note to see if this Step 2 is applicable. Remove muffler from exhaust pipe by cutting pipe with a cutting torch or hacksaw if required.

Cut cleanly and close enough to the muffler inlet to allow for adequate surface for muffler replacement.

3. Loosen muffler-to-tail-pipe clamp and rear tail pipe clamp. Remove muffler with hammer.
4. Replace with a new muffler and/or tail pipe and exhaust pipe extension as required. Detach exhaust pipe if to be replaced (see Figure 11).
5. Use existing hardware for replacement, and/or new clamps as required.
6. Realign and check clearances before finally tightening all hardware. Adjust the adjustment bracket on the frame for proper exhaust pipe installation.

**NOTE:** If bracket mounting insulators (tire carcass mountings) are fatigued, replace to insure a secure exhaust system.

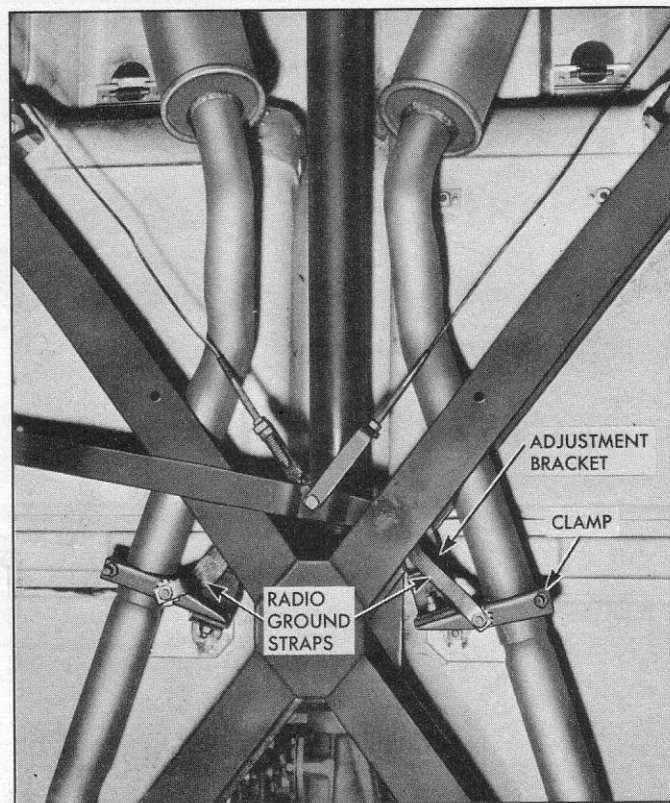


Fig. 13—Exhaust System X-Frame Bracket Adjustment