Section 6C Engine Fuel

CAUTION: This vehicle is equipped with Supplemental Inflatable Restraint (SIR). Refer to Cautions in Section 9J under "On-Vehicle Service" and the SIR Components and Wiring Location view in Section 9J before performing service on or around SIR components or wiring. Failure to follow Cautions could result in possible air bag deployment, personal injury, or otherwise unneeded SIR system repairs.

Notice: When fasteners are removed, always reinstall them at the same location from which they were removed. If a fastener needs to be replaced, use the correct part number fastener for that application. If the correct part number fastener is not available, a fastener of equal size and strength (or stronger) may be used. Fasteners that are not reused, and those requiring thread-locking compound, will be called out. The correct torque values must be used when installing fasteners that require them. If the above procedures are not followed, parts or system damage could result.

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General Description

The fuel supply is stored in the fuel tank. An electric fuel pump, attached to the top of the fuel tank, pumps fuel through an in-line fuel filter to the throttle body injection unit. The pump is designed to provide fuel at a pressure above the regulated pressure needed by the fuel injector. A pressure regulator keeps fuel available to the injector at a regulated pressure. Unused fuel is returned to the fuel tank by a separate hose and pipe.

This vehicle's engine is designed to use only unleaded fuel. Unleaded fuel must be used for proper emission control system operation. Using unleaded fuel will also decrease spark plug fouling and extend engine oil life. Leaded fuel can damage the emission control system, and its use can result in loss of emission warranty coverage.

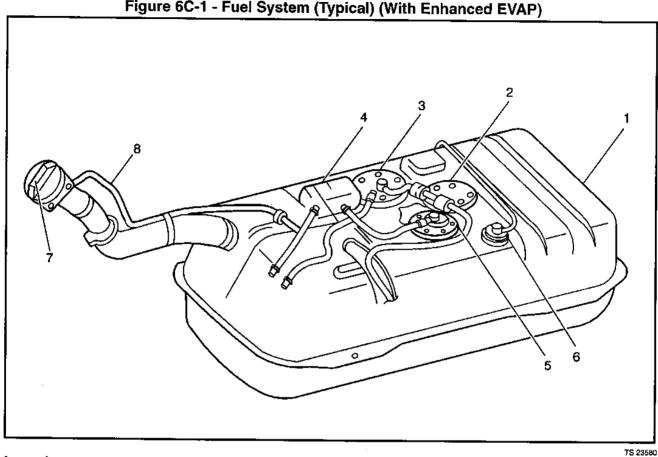
This vehicle is also equipped with an evaporative emission system that minimizes the escape of fuel vapors to the atmosphere. For more information on this system, refer to *Section 6E3-C3*.

Fuel Tank

Figure 6C-1

The fuel tank is used to store fuel for the vehicle. It has a 45 liter (11.1 gallon) fuel capacity. The tank is molded from steel and is located in back of the rear wheels below the rear seat. The tank is held in place with five bolts. The tank's shape allows for a constant supply of fuel around the fuel pump strainer during low fuel conditions and also during aggressive vehicle maneuvers. The fuel inlet port on the tank is equipped with an inlet valve. This fuel tank inlet valve prevents fuel from spewing into the fuel filler neck during aggressive vehicle maneuvers or vehicle rollovers.

The fuel tank along with its pipes and hoses should be checked for road damage which could result in leakage. Also inspect the fuel filler cap for a correct seal and any indications of physical damage.



Legend

- 1. Fuel Tank
- 2. Fuel Level Sensor (fuel gage sending unit)
- 3. Fuel Pump
- 4. Fuel Separator
- 5. Fuel Cut Off Valve
- 6. Fuel Tank Pressure Sensor
- 7. Fuel Filler Cap
- 8. Breather Hose

Fuel Tank Filler Neck

To prevent refueling with leaded fuel, the fuel filler neck has a built-in restrictor and deflector. The opening of the restrictor only admits the smaller unleaded fuel nozzle. The nozzle must be fully inserted to bypass the deflector. Any attempt at refueling with leaded fuel will result in fuel splashing out of the filler neck.

Fuel Filler Cap

Figure 6C-2

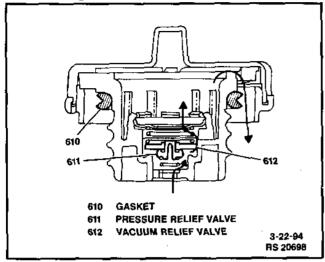
The fuel filler cap is a pressure-vacuum type. A built-in torque limiting device on the cap prevents overtightening and also eliminates the escape of fuel vapors. To install, turn the cap clockwise until a clicking noise is heard. This indicates that the cap is fully seated.

A vacuum relief valve is incorporated into the fuel filler cap (Figure 6C-2). If the pressure in the fuel tank becomes negative (vacuum), the relief valve opens to release the pressure created within the fuel tank. Only when vacuum becomes excessive within the tank does this occur. Vacuum pressure is also vented through the Tank Pressure Control valve which is located on the top of the fuel tank.

A pressure relief valve is also located in the fuel filler cap. If the pressure of fuel vapor within the tank should exceed that for which the fuel system is designed, the pressure relief valve opens, and excess pressure is vented to the atmosphere.

Notice: If a fuel filler cap is to be replaced, use only a cap with the same features. Failure to use the correct cap can result in incorrect operation of the fuel delivery system.

Figure 6C-2 - Fuel Filler Cap

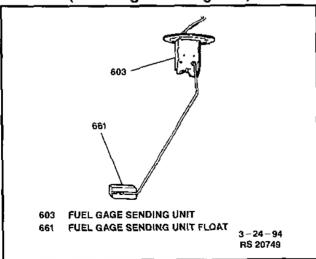


Fuel Level Sensor

Figure 6C-3

The fuel level sensor (fuel gage sending unit) consists of a float, float arm and a variable resistor (Figure 6C-3). Fuel level is measured by the position of the float in the fuel tank, and is indicated by a gage in the instrument panel cluster assembly. When the fuel level changes, the float position changes. The change in float position increases/decreases the resistance of the variable resistor. The change in resistance causes the position of the fuel gage needle to change.

Figure 6C-3 - Fuel Level Sensor (Fuel Gage Sending Unit)



Fuel Level Sensor-with Enhanced EVAP

This signal is sent from the fuel level sensor (fuel gage sending unit) in the fuel tank. This fuel level sensor is the same as that of other vehicles. The fuel level sensor sends a signal to the ECM. If the fuel level is higher than the specified level, the ECM makes the EVAP Tank Pressure Control Solenoid Vacuum valve operate so as to prevent fuel liquid from flowing from the fuel tank to the EVAP canister. Thus the Tank Pressure Control valve shuts the vapor line off.

Fuel Pump

Figures 6C-4 and 6C-5

The fuel pump is an electric pump that is controlled by the Engine Control Module (ECM) through the fuel pump relay (Figures 6C-4 and 6C-5). When the ECM commands the fuel pump to operate, an impeller turns with the motor in the pump assembly. This causes fuel within the fuel tank to be drawn into the fuel pump inlet port. Fuel is pumped out to the throttle body and fuel injector under pressure through the fuel feed pipe and hose. The fuel pressure is retained when the fuel pump is not running by means of a pressure control valve located within the pump. Excess fuel is returned to the fuel tank by means of a fuel return pipe and hose.

Figure 6C-4 - Fuel Pump Cross Section

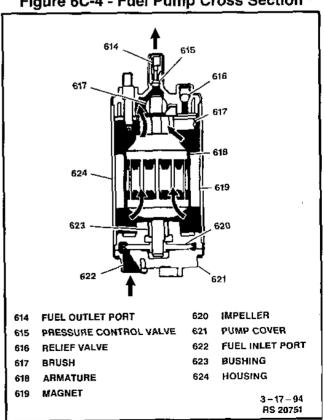
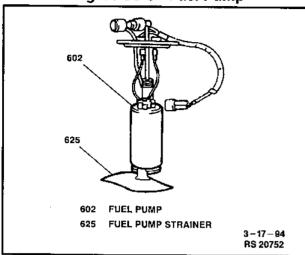


Figure 6C-5 - Fuel Pump

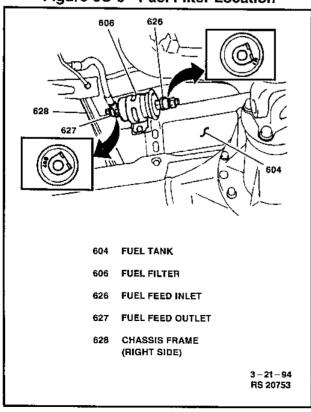


Fuel Filter

Figure 6C-6

A steel in-line fuel filter is used in the fuel feed pipe ahead of the fuel injector. The filter housing is constructed to withstand maximum fuel system pressure, exposure to fuel additives and changes in temperature. The filter element is made of paper and is designed to trap particles in the fuel that may damage the fuel injection system. The fuel filter is located at the right front side of the fuel tank (Figure 6C-6).

Figure 6C-6 - Fuel Filter Location



Fuel Feed and Return Pipes and Hoses

The fuel feed and return pipes and hoses carry fuel from the fuel tank to the throttle body and back to the fuel tank. These pipes and hoses are attached to the underbody of the vehicle and should be inspected for kinks or dents which may restrict fuel flow.

Fuel Vapor Pipe and Hoses

The fuel vapor pipe and hoses carry fuel vapors from the fuel tank to the evaporative emission canister located in the engine compartment. The fuel vapors are stored in the canister when the engine is not running. When the engine is running at normal operating temperature and the accelerator pedal is depressed, the Engine Control Module (ECM) will command the evaporative emission canister purge valve to open and allow the stored fuel vapors to be purged into the intake manifold and absorbed into the combustion process. For more detailed explanation of the evaporative emission control system, refer to Section 6E3-C3.

Accelerator Controls

The accelerator control system is cable-operated. When the accelerator pedal is depressed the cable pulls the throttle lever open (increasing the throttle plate opening), and when the accelerator pedal is released the throttle lever returns to the idle position and the throttle plate opening decreases.

Diagnosis

Alcohol-In-Fuel

Alcohol-in-fuel can be detrimental to fuel system components and may cause driveability problems such as hesitation, lack of power, stall, no start, etc. These conditions may also exist due to fuel system corrosion and subsequent fuel filter plugging, deterioration of rubber components and/or air-fuel mixture leaning.

Various types and concentrations of alcohol are used in commercial fuel. Some alcohol is more detrimental to fuel system components than others. If an excessive amount of alcohol in the fuel is suspected as the cause of a driveability problem, the following procedure may be used to detect its presence. This procedure uses water to extract the alcohol from the fuel, but the specific type of alcohol contamination cannot be determined from this test.

Testing Procedure:

The fuel sample should be drawn from the bottom of the fuel tank so that any water present in the tank will be detected. The sample should be bright and clear. If the sample appears to be cloudy or contaminated with water (as indicated by a water layer at the bottom of the sample), this procedure should not be used and the fuel system should be cleaned. For fuel system cleaning procedures, refer to "Fuel System Cleaning" later in this section.

- Using a 100 ml cylinder with 1 ml graduation marks, fill with fuel sample to the 90 ml mark.
- 2. Add 10 ml of water to bring the total fluid volume to 100 ml and install a stopper.
- 3. Shake vigorously for 10 to 15 seconds.
- 4. Carefully loosen the stopper to release pressure.
- Close the stopper and shake vigorously again for 10 to 15 seconds.
- Put the graduated cylinder on a level surface for approximately 5 minutes to allow adequate liquid separation.

If alcohol is present in the fuel, the volume of the lower layer (which would now contain both alcohol and water) would be greater than 10 ml.

For instance, if the volume of the lower layer is increased to 15 ml, it will indicate at least 5% alcohol in the fuel. The actual amount of alcohol may be somewhat greater because this procedure does not extract all of the alcohol from the fuel.

Fuel Tank Leak Check

Important:

- Place a dry chemical (Class B) fire extinguisher near work area.
- Before removing the fuel tank for a suspected leak, make sure that fuel pipes are not leaking onto the tank. Once removed, make sure that fuel is not leaking around the fuel pump or fuel gage sending unit gaskets.
- Relieve fuel system pressure. Refer to "Fuel System Pressure Relief" later in this section.
- Drain fuel tank, Refer to "Draining Fuel Tank" later in this section.
- 3. Remove fuel tank. Refer to "Fuel Tank Replacement" later in this section.
- Plug fuel feed hose, fuel return pipe and fuel vapor pipe on the fuel tank.
- Plug fuel filler neck opening.
- Connect a piece of hose to the breather hose nipple on the fuel tank; secure with one clamp.
- Submerge fuel tank in water or apply a soapy solution to the outside of the tank.
- Apply 7 to 15 kPa (1 to 2 psi) air pressure to the breather hose.
- Air bubbles appearing from the fuel tank indicate a leak. Replace the fuel tank if it is leaking; refer to "Fuel Tank Replacement" later in this section.

Fuel System Pressure Test

For fuel system pressure test procedures, Refer to Section 6E3.

Fuel Level Sensor Diagnosis

For fuel level sensor diagnosis procedures, Refer to Section 6E3.

Fuel Pump Electrical Diagnosis

For fuel pump electrical diagnosis procedures, Refer to Section 6E3.

On-Vehicle Service

Fuel System Pressure Relief

Figure 6C-7

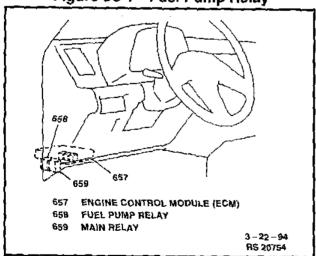
CAUTION: To reduce the risk of fire and personal injury, it is necessary to relieve the fuel system pressure before servicing fuel system components.

After relieving fuel system pressure, a small amount of fuel may be released when servicing fuel pipes or connections. In order to reduce the chance of personal injury, cover fuel pipe fittings with a shop towel before disconnecting to catch any fuel that may leak out. Place the towel in an approved container when disconnect is completed.

Important: Do Not perform this procedure if the engine is hot, for possible damage could be caused to the catalyst converter.

- 1. Loosen fuel filler cap to relieve fuel tank pressure.
- 2. Disconnect fuel pump relay electrical connector (Figure 6C-7).
- 3. Crank engine and allow to stall. Crank engine for an additional three seconds to assure relief of any remaining fuel pressure.
- 4. Remove negative (-) battery cable to avoid possible fuel discharge if an attempt is made to start the
- Reconnect fuel pump relay electrical connector.
- Tighten fuel filler cap.

Figure 6C-7 - Fuel Pump Relay



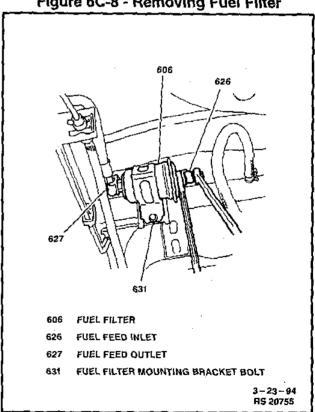
Fuel Filter

Figures 6C-8 and 6C-9

Remove or Disconnect

- Relieve fuel system pressure. Refer to "Fuel System Pressure Relief" earlier in this section.
- Raise and suitably support vehicle. Refer to Section 0A.
- 1. One bolt and fuel feed inlet hose from fuel filter (Figure 6C-8).
- 2. One bolt and fuel feed outlet hose from fuel filter. (Figure 6C-8).
- 3. Two bolts and fuel filter mounting bracket from underbody (Figure 6C-8).
- One bolt and fuel filter from fuel filter mounting bracket.

Figure 6C-8 - Removing Fuel Filter



install or Connect

 Fuel filter mounting bracket-to-fuel filter; secure with one bolt.

Tighten:

- Fuel filter mounting bracket-to-fuel filter bolt to 20 Nem (15 lb. ft.).
- Fuel filter mounting bracket to underbody; secure with two bolts (Figure 6C-9).

Tighten:

- Fuel filter mounting bracket bolts to 25 Nem (18 lb. ft.).
- Fuel feed outlet hose to fuel filter; secure with one bolt (Figure 6C-9).

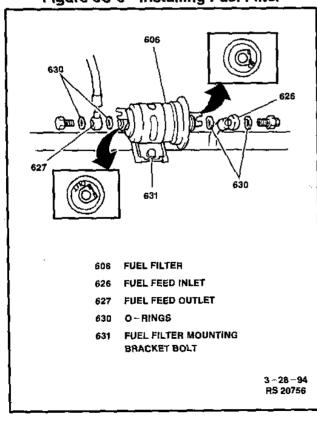
Tìghten:

- Fuel feed inlet hose-to-fuel filter bolt to 35 N•m (26 lb. ft.).
- Fuel feed inlet hose to fuel filter; secure with one bolt (Figure 6C-9).

Tighten:

- Fuel feed inlet hose-to-fuel filter bolt to 35 Nem (26 lb. ft.).
- 5. Lower vehicle.
- 6. Negative (-) battery cable.

Figure 6C-9 - Installing Fuel Filter



Tighten:

- Negative (-) battery cable-to-negative (-) battery terminal retainer to 15 N•m (11 lb. ft.).
- Turn ignition switch to "ON" and then back to "LOCK" to pressurize the fuel system. Check for any fuel leaks.

Draining Fuel Tank

Caution: Never drain or store fuel in an open container due to the possibility of fire or explosion.

- 1. Remove fuel filler cap.
- Remove one clamp and fuel filler neck hose from fuel tank.
- Remove fuel tank inlet valve from fuel filler neck hose opening on the fuel tank.
- Use a hand operated pump device to drain fuel through the fuel filler neck opening on the fuel tank.
- 5. Reinstall fuel tank inlet valve to fuel tank.
- Reinstall fuel filler neck hose to fuel tank; secure with one clamp.
- 7. Reinstall fuel filler cap.

Fuel Tank Replacement

Figures 6C-10 through 6C-12

Caution: To help avoid personal injury when a vehicle is on a hoist, provide additional support for the vehicle on the opposite end from which components are being removed. This will reduce the possibility of the vehicle falling off the hoist.

Remove or Disconnect

- Relieve fuel system pressure. Refer to "Fuel System Pressure Relief" earlier in this section.
- Drain fuel tank. Refer to "Draining Fuel Tank" earlier in this section.
- Raise and suitably support vehicle. Refer to Section 0A.
- Four bolts and rear crossmember from underbody.
- 2. Fuel level sensor (fuel gage sending unit) and fuel pump electrical connectors (Figure 6C-10).
- Fuel tank pressure sensor electrical connector (enhanced EVAP only).
- 4. One bolt and fuel feed inlet hose from fuel filter.
- 5. One clamp and fuel breather hose from fuel tank (Figure 6C-11).
- 6. One clamp and fuel filler neck from fuel tank (Figure 6C-11).
- One clamp and fuel return hose from fuel return pipe (Figure 6C-11).
- One clamp and fuel vapor hose from fuel vapor pipe (Figure 6C-11).
- 9. Five bolts and fuel tank protector and fuel tank from vehicle (Figure 6C-12).
- Support fuel tank while lowering from vehicle.

Figure 6C-10 - Electrical Connectors

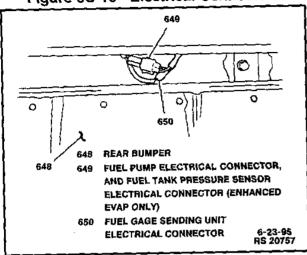


Figure 6C-11 - Fuel Tank Pipe and Hose Connections

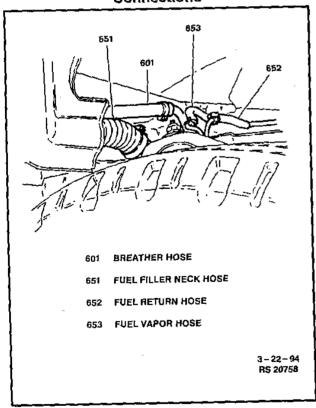
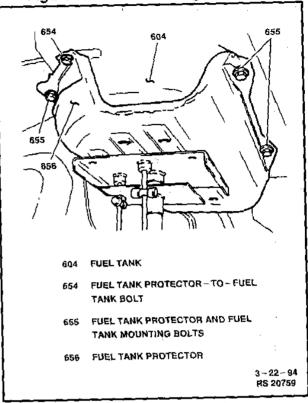


Figure 6C-12 - Removing Fuel Tank



Disassemble:

- 1. One bolt and fuel tank protector from fuel tank.
- Five screws and fuel level sensor (fuel gage sending unit) from tank.
- 3. Six screws and fuel pump from fuel tank.
- Two screws and Fuel Tank Pressure Sensor and hoses from fuel tank.
- Two clamps, two screws and fuel vapor separator and hoses from fuel tank.
- 6. Fuel tank inlet valve from fuel tank.

Assemble:

- 1. Fuel tank inlet valve to fuel tank.
- Fuel vapor separator and hoses to fuel tank; secure with two screws and two clamps.
- Fuel Tank Pressure Sensor and hoses to fuel tank, secure with two screws.
- Fuel pump to fuel tank, secure with six screws.
- Fuel level sensor (fuel gage sending unit) to fuel tank, secure with five screws.
- 6. Fuel tank protector to fuel tank, secure with one bolt.

Tighten:

 Fuel tank protector-to-fuel tank bolt to 25 Nom (18 lb. ft.).

Install or Connect

- · Raise and support fuel tank protector and fuel tank.
- Fuel tank protector and fuel tank to underbody, secure with five bolts.

Tighten:

- Fuel tank protector and fuel tank mounting bolts to 35 Nem (26 lb. ft.).
- 2. Fuel vapor hose to fuel vapor pipe, secure with one clamp.
- Fuel return hose to fuel return pipe, secure with one clamp.
- 4. Fuel filler neck to fuel tank, secure with one clamp.
- 5. Fuel breather hose to fuel tank, secure with one clamp.
- 6. Fuel feed inlet hose to fuel filter, secure with one bolt.

Tighten:

- Fuel feed inlet hose-to-fuel filter bolt to 35 N•m (26 lb. ft.).
- 7. Fuel pump and fuel level sensor electrical connectors.
- Fuel tank pressure sensor electrical connector (enhanced EVAP only).
- Rear crossmember to underbody, secure with four bolts.

Tighten:

- Rear crossmember bolts to 70 N•m (51 ib. ft.).
- Lower vehicle.
- Refill fuel tank.
- 10. Negative (-) battery cable.

Tighten:

- Negative (-) battery cable-to-negative (-) battery terminal retainer to 15 Nom (11 lb. ft.).
- Turn ignition switch to "ON" and then back to "LOCK" to pressurize the fuel system. Check for any fuel leaks.

Fuel Level Sensor Replacement

Remove or Disconnect

- 1. Fuel tank from vehicle. Refer to "Fuel Tank Replacement" earlier in this section.
- Five screws and fuel level sensor (fuel gage sending unit) from fuel tank.

Install or Connect

- Fuel level sensor (fuel gage sending unit) to fuel tank, secure with five screws.
- Fuel tank to vehicle. Refer to "Fuel Tank Replacement" earlier in this section.

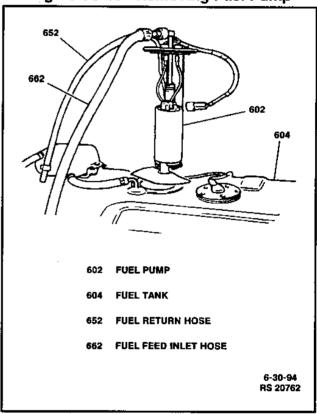
Fuel Pump Replacement

Figure 6C-13

Remove or Disconnect

- 1. Fuel tank from vehicle. Refer to "Fuel Tank Replacement" earlier in this section.
- One clamp and fuel return hose from fuel pump (Figure 6C-13).
- 3. One bolt and fuel feed inlet hose from fuel pump (Figure 6C-13).
- Six screws and fuel pump from fuel tank (Figure 6C-13).

Figure 6C-13 - Removing Fuel Pump



Install or Connect

- 1. Fuel pump to fuel tank, secure with six screws.
- Fuel feed inlet hose to fuel pump, secure with one bolt.

Tighten:

- Fuel pump-to-fuel feed inlet hose bolt to 45 N•m (33 lb. ft.).
- Fuel return hose to fuel pump, secure with one clamp.
- 4. Fuel tank to vehicle. Refer to "Fuel Tank Replacement" earlier in this section.

Fuel System Cleaning

If a fuel system problem is due to contaminated fuel or foreign material in the fuel tank, the tank must be cleaned. If the tank is rusted or is still contaminated after cleaning, the tank must be replaced.

Remove or Disconnect

- Fuel tank from vehicle. Refer to "Fuel Tank Replacement" earlier in this section.
- 2. One bolt and fuel tank protector from fuel tank.
- Five screws and fuel level sensor (fuel gage sending unit) from fuel tank.
- 4. Six screws and fuel pump from fuel tank.
- Two screws and Fuel Tank Pressure Sensor from fuel tank.
- Two clamps, two screws and fuel vapor separator from fuel tank.
- 7. Fuel tank inlet valve from fuel tank.

Clean:

- Fuel tank by filling with hot water and shaking vigorously for five minutes.
- Fuel tank by draining it. Make sure that all of the water is removed from the fuel tank.

Important: If the inside of the fuel tank contains any traces of rust after cleaning, replace the tank.

Install or Connect

- Fuel tank inlet valve to fuel tank.
- Fuel vapor separator and hoses to fuel tank, secure with two screws and two clamps.
- Fuel Tank Pressure Sensor and hoses to fuel tank, secure with two screws.
- 4. Fuel pump to fuel tank, secure with six screws.
- Fuel level sensor (fuel gage sending unit) to fuel tank, secure with five screws.
- Fuel tank protector to fuel tank, secure with one bolt.

Tighten:

- Fuel tank protector-to-fuel tank bolt to 25 N•m (18 ib. ft.).
- Fuel tank to vehicle. Refer to "Fuel Tank Replacement" earlier in this section.

Fuel Feed, Return and Vapor Pipes and Hoses Repair/Replacement

Figures 6C-14 through 6C-16

Remove or Disconnect

- Relieve fuel system pressure. Refer to "Fuel System Pressure Relief" earlier in this section.
- Raise and suitably support vehicle. Refer to Section 0A.
- One clamp and fuel return hose from fuel return pipe by fuel tank (Figure 6C-14).
- 2. One bolt and fuel feed outlet hose from fuel feed pipe by fuel tank (Figure 6C-14).
- 3. One clamp and fuel vapor hose from fuel vapor pipe by fuel tank (Figure 6C-14).
- One bolt and fuel feed hose from fuel feed pipe in engine compartment (Figure 6C-15).
- One clamp and fuel return hose from fuel return pipe in engine compartment (Figure 6C-15).
- 6. One clamp and fuel vapor hose from fuel vapor pipe in engine compartment (Figure 6C-15).
- Ten pipe retaining clamps and fuel pipes from underbody (Figure 6C-16).

Figure 6C-14 - Fuel Tank Fuel Pipe and Hose Connections

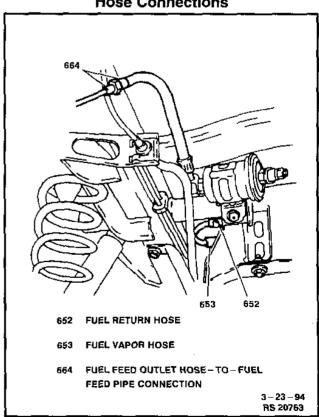


Figure 6C-15 - Engine Compartment Fuel Pipe and Hose Connections

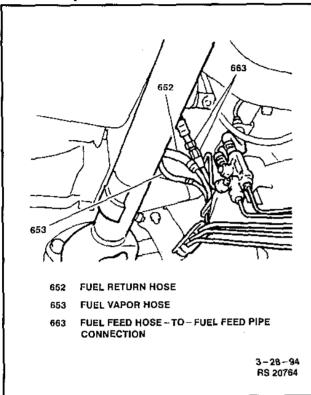
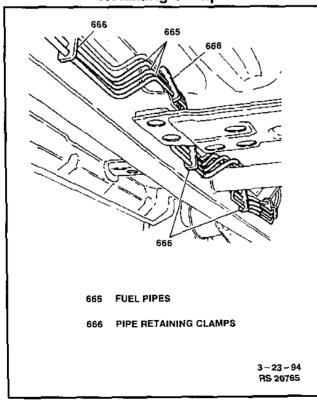


Figure 6C-16 - Fuel Pipes and Pipe Retaining Clamps



Install or Connect

- Fuel pipes to underbody, secure with ten pipe retaining clamps.
- Fuel vapor hose to fuel vapor pipe in engine compartment, secure with one clamp.
- 3. Fuel return hose to fuel return pipe in engine compartment, secure with one clamp.
- Fuel feed hose to fuel feed pipe in engine compartment, secure with one bolt.

Tighten:

- Fuel feed nose-to-fuel feed pipe bolt to 45 N•m (33 lb. ft.).
- Fuel vapor hose to fuel vapor pipe by fuel tank, secure with one clamp.
- Fuel feed outlet hose to fuel feed pipe by fuel tank, secure with one bolt.

Tighten:

- Fuel feed outlet hose-to-fuel feed pipe bolt to 45 Nem (33 lb. ft.).
- Fuel return hose to fuel return pipe by fuel tank, secure with one clamp.
- Lower vehicle.
- 8. Negative (-) battery cable.

Tighten:

- Negative (-) battery cable-to-negative (-) battery terminal retainer to 15 N•m (11 lb. ft.).
- Turn ignition switch to "ON" and then back to "LOCK" to pressurize the fuel system. Check for any fuel leaks.

Accelerator Control Cable Replacement

Figure 6C-17

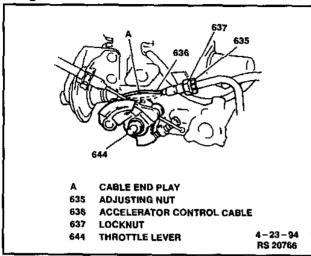
Remove or Disconnect

- 1. Accelerator control cable from accelerator pedal.
- Push accelerator control cable through bulkhead grommet.
- Accelerator control cable from throttle lever by toosening cable locknut and adjusting nut (Figure 6C-17).
- 3. Accelerator control cable from vehicle.

Install or Connect

- Accelerator control cable to throttle lever, secure with cable locknut and adjusting nut. Do Not tighten fully.
- Push accelerator control cable through bulkhead grommet.
- 2. Accelerator control cable to accelerator pedal.
- Adjust accelerator control cable. Refer to "Accelerator Control Cable Adjustment" later in this section.

Figure 6C-17 - Accelerator Control Cable



Accelerator Control Cable Adjustment

Figure 6C-17

Inspect:

 Accelerator control cable end play (Figure 6C-17). If the cable end play is not 10 to 15 mm (0.4 to 0.6-inch), loosen the adjusting nut and the cable locknut at the Throttle Body Injection (TBI) unit.

Adjust:

 Accelerator control cable end play until it is within specification. Be sure to tighten cable locknut and adjusting nut after adjustment is complete.

Tighten:

 Accelerator cable locknut adjusting nut to 25 Nem (18 lb. ft.).

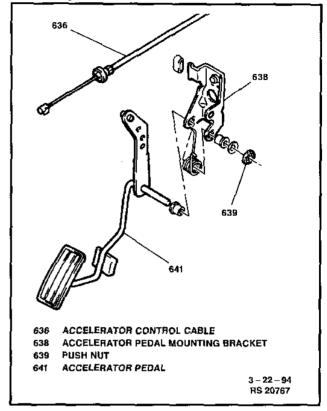
Accelerator Pedal Replacement

Figure 6C-18

Remove or Disconnect

- 1. Accelerator control cable from accelerator pedal.
- Accelerator pedal push nut and accelerator pedal from mounting bracket (Figure 6C-18).

Figure 6C-18 - Accelerator Pedal



Install or Connect

- Accelerator pedal to mounting bracket, secure with a new accelerator pedal push nut.
- Be sure to install spring while sliding accelerator pedal into mounting bracket.
- 2. Accelerator control cable to accelerator pedal.

Specifications

Torque Specifications

Engine Fastener Tightening Specifications

Application	Nm	Lb Ft	Lb In
Fuel Filter Mounting Bracket-to-Fuel Filter Bolt	20	15	
Fuel Filter Mounting Bracket Bolt	25	18	
Fuel Feed Outlet Hose-to-Fuel Filter Bolt	35	26	
Fuel Feed Inlet Hose-to-Fuel Filter Bolt	35	26	
Negative (-) Battery Cable-to- Negative (-) Battery Terminal Retainer	15	11	
Fuel Tank Protector-to-Fuel Tank Bolt	25	18	
Fuel Tank Protector and Fuel Tank Mounting Bolts	35	26	
Rear Crossmember Bolts	70	51	<u> </u>
Fuel Pump-to-Fuel Feed Inlet Hose Bolt	45	33	
Fuel Feed Outlet Hose-to-Fuel Feed Pipe Bolt	45	33	<u> </u>
Accelerator Cable Locknut and Adjusting Nut	25	18	

Fuel Specifications

The fuel must meet ASTM Standard: D4814 (U.S.), CGSB 3.5-M87 (Canada).

Octane Requirements

Minimum octane recommended: 87 [(R+M)/2] octane where R=research octane number and M=motor octane number.

Gasoline with Alcohol

Notice: Do Not spill fuel containing alcohol on the vehicle. Alcohol can cause damage to the paint finish and trim.

Methyl Tertiary-butyl Ether (MTBE)

Fuel containing Methyl Tertiary-butyl Ether (MTBE) may be used, providing that there is no more than 15% MTBE by volume.

Ethanol

Fuel containing ethanol (ethyl) or grain alcohol may be used, providing that there is no more than 10% ethanol alcohol by volume.

Methanol

Fuel containing methanol (methyl) or wood alcohol may be used, providing that there is no more than 5% methanol by volume.

Notice: Do Not use fuel that contains more than 5% methanol. Use of fuel (gasohol) that contains more than 5% of methanol can corrode metal fuel system components and damage plastic and rubber parts.