

Series 1000 and 1500

- When installing a large panel, start all of the threaded fasteners, then go back and tighten each after the panel is in position.
- Test the operation of all controls and safety features in a safe place, free of obstacles and bystanders before returning the tractor to service.

6. FUEL SYSTEM

- 6.1. While the 1000 and 1500 Series tractors are built on the same frame, the fuel systems differ substantially in layout.
- 6.2. The 1000 Series tractors have the fuel tank beneath the hood, with the battery located under the seat. See Figure 6.2.



Figure 6.2

- 6.3. This positioning is necessary to provide easy service access to the CVT drive system used on the 1000 series tractors. The rear mounted battery, and the tray that supports it are easily removable.
- 6.4. The battery of the 1500 Series tractor is located under the hood, with the fuel tank mounted under the rear fenders.

Series 1000 and 1500

- 6.5. On current models of the 1000 and 1500 Cub Cadet, the fuel is moved from the tank to the carburetor by a vacuum-driven fuel pump that is mounted to the engine. See Figure 6.5.

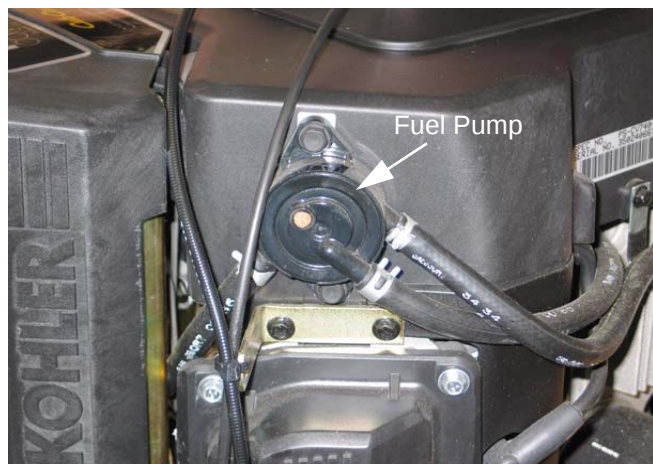


Figure 6.5

- 6.6. The fuel line runs from a barbed fitting on the bottom of the fuel tank to the fuel pump.
- 6.7. The 1500 series fuel line should be routed as shown. See Figure 6.7.

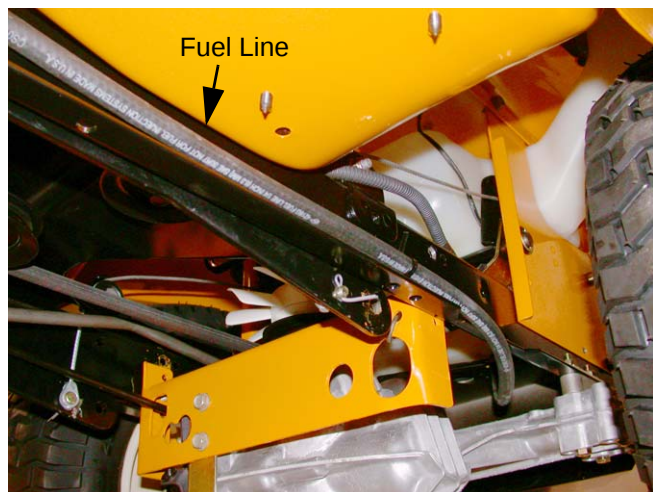


Figure 6.7

- 6.8. The fuel cap is vented.
- There are a few non-vented fuel caps that will fit the filler neck of the 1000 and 1500 Series tractor.
 - Non-vented caps are used on the Cub Cadet Big Country line of utility vehicles.
 - Use of a non-vented cap on a 1000 or 1500 Series tractor will cause fuel supply issues.

- 6.9. In the event that it is necessary to remove the fuel tank, begin by removing the fenders as described in the REAR FENDER REMOVAL section of this manual.
- 6.10. Make provisions for draining any fuel that remains in the gas tank: 24" of 1/4" fuel line, and a suitable catch pan will be sufficient.
- 6.11. Pinch the fuel line about 6" from the fuel tank to prevent the line from emptying (unless it needs to be drained or replaced).
- Position the catch pan under the fitting on the fuel tank.
 - Have the extra length of fuel line handy.
- 6.12. Remove the hose clamp that secures the fuel line to the fitting on the gas tank. See Figure 6.12.



Figure 6.12

- 6.13. Quickly pull the fuel line off of the fitting, and replace it with the extra hose. Direct the hose into the catch pan.
- 6.14. When the tank is empty, dispose of any unusable fuel in a safe and responsible manner.

- 6.15. Remove the plate that supports the seat brackets using a 1/2" wrench. See Figure 6.15.

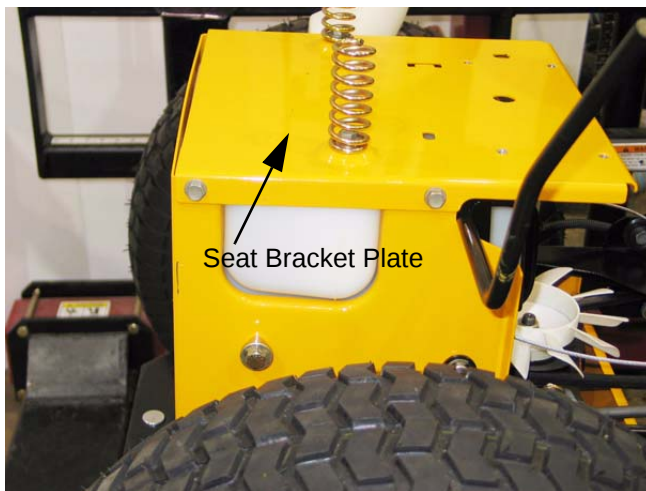


Figure 6.15

- 6.16. Lift the fuel tank out of the tractor.

7. FUEL SHUT-OFF SOLENOID

- 7.1. In all models of the 1000 and 1500 Series Cub Cadet riders, there is a fuel shut-off solenoid mounted to the carburetor. See Figure 7.1.

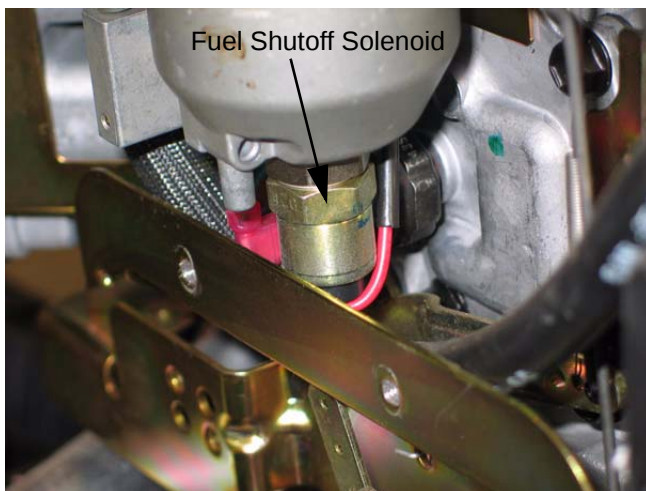


Figure 7.1

- 7.2. The fuel shut-off solenoid is a valve that is actuated by an electric coil.
- The fuel shut-off solenoid helps prevent "after-boom" when a hot engine is turned-off.
 - The solenoid has power when the key is in the run position and the safety switches on the tractor do not sense any unsafe conditions. When it has power, the solenoid opens, allowing fuel to reach the carburetor.

- When the solenoid does not have power, it closes, stopping the flow of fuel.
- The solenoid usually emits an audible "click" when power is applied or discontinued.
- If the solenoid does not click, it is not working. If it does click, it cannot be assumed to be working properly.

8. FUEL RELATED NO-START ISSUES

- 8.1. The leading industry cause of no-start and engine performance problems is stale or outdated fuel.

- In temperate regions of the country, fuel purchased during the summer may not be volatile enough to ignite during the winter months.
 - Similarly, "Winter" fuel may cause performance issues if used into the summer months. The gasoline companies tailor the contents of their fuel blends to optimize performance, taking climate and geography into account.
 - As fuel goes stale, the lighter end hydrocarbons (more volatile elements) tend to evaporate, leaving the fuel less volatile.
 - In extreme cases, semi-solid residue will accumulate, damaging the fuel system.
 - If a piece of equipment will sit unused during the dormant season, the fuel system should be drained completely, or preservative should be added to the fuel according to the preservative manufacturer's instructions.
- 8.2. Alcohol content of the fuel should not exceed 10%.
- Small amounts of ethanol are fairly common in fuel.
 - Methanol is more destructive than ethanol, and should be avoided.
 - Alcohol absorbs water. Fuel that contains alcohol will also contain a certain amount of water. The water will corrode any metallic parts of the fuel system, and may cause freezing damage in low temperatures.
 - Products that purport to "dry" the fuel system are generally isopropyl alcohol. The object is to re-suspend the water that has settled out of the alcohol the fuel already contains.