SECTION FS

Fuel System

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Electronic Fuel Injection System

http://www.kohlerengines.com/onlinecatalog/pdf/tp_2527.pdf

General Instructions

IMPORTANT

Detailed engine service and maintenance is NOT included in this service manual. For a complete guide of Kohler service instruction refer to Kohler Engine Service Manual TP-2527-A available from an authorized Kohler dealer or available for download from their website at www.kohlerengines.com

WARNING

Detailed information on standard workshop and safety procedures, and general servicing operations is not included in this manual, which has been prepared to assist qualified service personnel. ODG assumes no responsibility or liability for PERSONAL INJURY or VEHICLE DAMAGE which results from any servicing procedure performed, including those instructions outlined in this manual. Before performing a servicing operation, an individual must have determined to his/her satisfaction that a personal injury or vehicle damage will not result from the servicing procedure or tools selected.

WARNING

Keep all open flame or spark away from the Argo while servicing the fuel system. Gasoline is extremely flammable, and can cause serious PERSONAL INJURY or DEATH.

Before servicing the fuel tank or fuel line, drain or siphon the fuel tank.

Perform all service work on the fuel system in a well ventilated area.

Fueling the Vehicle

WARNING

Gasoline is extremely flammable and can explode under certain conditions. Do not add fuel while the engine is running or hot. If fuel is spilled in, on or around the vehicle, wipe it up immediately. Flush out any fuel spilled in the vehicle with water and allow it to drain out through the drain plug holes. Do not smoke when filling the fuel tank.

Use clean, fresh, unleaded gasoline in all models of the ARGO. Minimum 87 octane fuel is recommended. **The use of Briggs & Stratton Fuel Stabilizer is also recommended with each tankful.**

Leaded gasoline can be used as a substitute fuel. However, if leaded gasoline is used, the engine will require more frequent servicing.

Never use gasoline containing methanol or white gas since engine or fuel system damage could occur.

All Argo models are equipped with a 27 litre (5.9 Imp. Gal, 7.1 U.S. Gal.) "see-thru" polyethelene fuel tank located under the driver's seat. Depending on loading and driving conditions, an ARGO can be driven for 7 to 12 hours on one tank of fuel. Verify your vehicle's actual fuel consumption *before* attempting any long trips. Never travel in remote areas or set out on long trips *without* a full tank of fuel and adequate spare fuel stored in approved watertight fuel containers.

The fuel filler neck and fuel cap are located on the right side of the vehicle behind the driver's seat. Replace the fuel cap if fuel leakage occurs, or if moisture is detected in the fuel. Use ARGO Part No. 126-46 fuel cap or 126-100 for tethered fuel cap.

Never fill the tank to the point where the fuel level rises into the filler neck. If the tank is overfilled, heat may cause the fuel to expand and overflow through the vent.

Portable fuel containers may contain contaminants (dirt, water, etc.) that will cause engine operating problems. Use only clean, approved gasoline containers.

After filling the fuel tank, be sure the fuel cap is replaced securely. Do not drive the vehicle unless the fuel cap is properly in place.

CAUTION

Never use untreated gasoline that has been stored for more than 45 days. Stale gasoline can cause deposits to form in the fuel lines and carburetor. These deposits clog the fuel system and cause engine starting and operating problems.

When storing the ARGO for 45 days or more, use ARGO Part No. 127-77 Fuel Stabilizer to treat fuel in the fuel tank and fuel containers.

Vented Fuel System - Prior to Serial # 31239

The fuel system is vented through a special hose connected to the filler neck assembly that runs along the upper body to a fitting at the left rear.

From Serial # 31239

Newer models have vent line connected to allow vacuum purge port on the engine via a roll over valve, fumes are burned in the engine. California models also include a carbon canister to collect fumes when vehicle is not running.

WARNING

When installing the Handrail Kit, Convertible Top Kit or Outboard Motor Bracket; Since the fuel vent hose runs along the under side of the upper body, care must be taken when drilling mounting holes. The fuel vent hose could be pierced during the drilling process, resulting in a dangerous fuel leak into the vehicle and a costly repair procedure.

CAUTION

Never use gasoline or other harsh solvents to clean the Argo body. All Camouflage material is especially vulnerable to damage and peeling if it comes into contact with gasoline. Take precautionary action when refueling to protect the body from any such occurances.

Fuel Filter - Avenger and HDi

HDi and Avenger EFI models have 1 fuel filter, located in the rear compartment at the fuel tank (Part No. 24 050 03). ***Figure 6-6.***

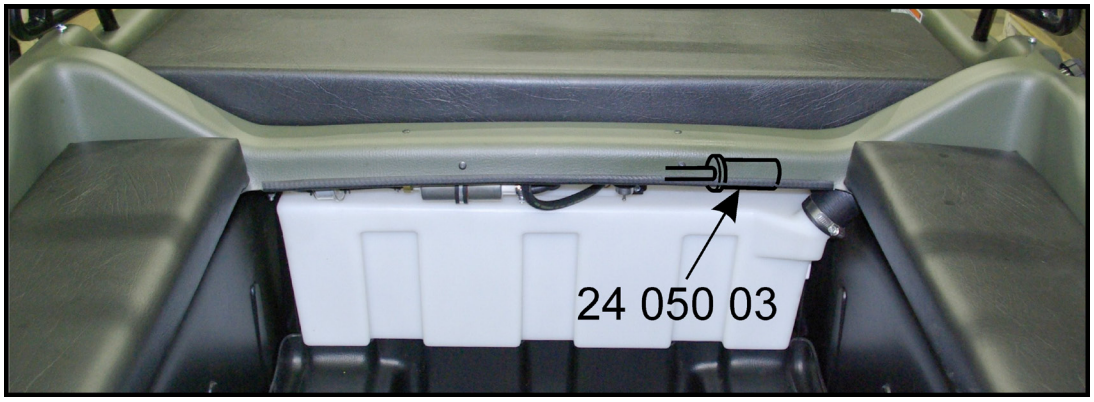
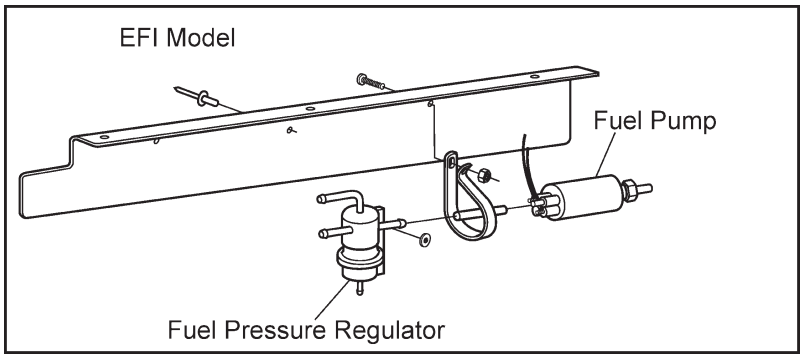


Figure 6-6. HDi and Avenger EFI fuel filter location.



Fuel Pump and Pressure Regulator Configuration (HDi and Avenger EFi)

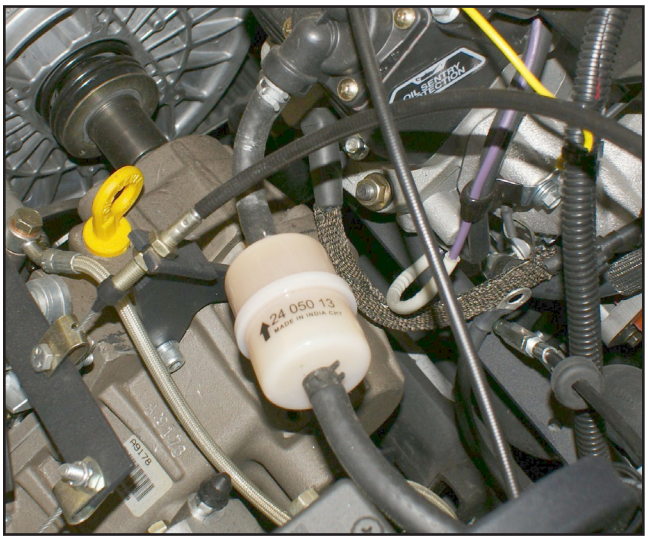


Figure 6-6a. Avenger 700 fuel filter location.

Replace the Kohler high pressure fuel filter after every 1000 hours of operation or once a year. To replace the filter, loosen the gear clamps with a standard screw driver and pull the rubber fuel lines off of the filter. Install the new filter with the flow arrow pointing toward the engine. Tighten the clamps securely. Start the engine and check for fuel leaks.

Vented Fuel System - Prior to Serial # 31239

The fuel system is vented through a special hose connected to the filler neck assembly that runs along the upper body to a fitting at the left rear.

From Serial # 31239

Newer models have vent line connected to allow vacuum purge port on the engine via a roll over valve, fumes are burned in the engine. California models also include a carbon canister to collect fumes when vehicle is not running.

IMPORTANT

Ensure that the vent line is not pinched, or becomes kinked between filler neck and rear outlet fitting. Check the outlet fitting at the lower body occasionally for any dirt or debris that may be plugging the venting system. Vehicle performance can be drastically affected when fuel tank venting becomes restricted.

Removing the Fuel Tank

1. Drain any fuel that may be present in the fuel tank.
2. Remove the seat to expose the storage tray & battery.
3. Remove screws holding pump/filter assembly. Lower bracket with mounted components.
4. Drill heads of body rivets securing tool box to top of fuel tank and lift up and out of vehicle.

WARNING

Exercise extreme caution when drilling out the rear rivets. Placement of a piece of sheet metal between seat frame and polyethelene fuel tank is advised to avoid accidentaly drilling into the fuel tank. ***Photo A***

5. Remove the battery.
6. Drill out the 11 rivets that secure the tool box to the seat frame and remove.
7. Disconnect the fuel line at the pickup tube on the fuel tank.
8. Remove the tank from the vehicle. The tank will come forward into the drivers compartment (earlier Avenger Models). ***Photo 1 & 2*** Later models/HDi may be more easily removed into the rear compartment.

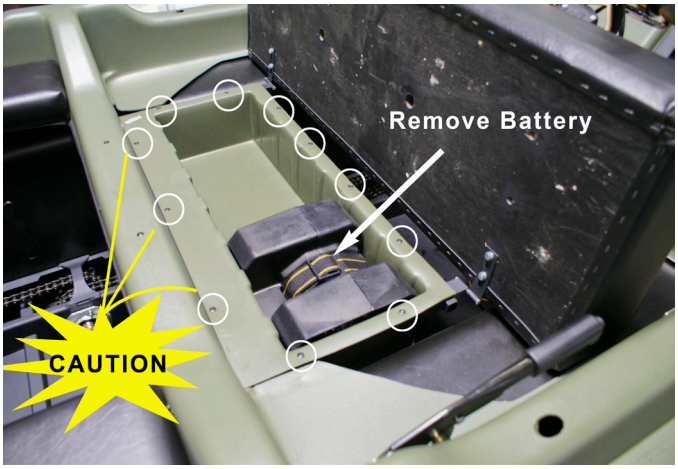


Photo A

NOTE

Fill neck hose must be disconnected. On older models with vent tube in fill neck, fill neck may need to be removed.

Photo 1

Photo 2

CAUTION

Ensure that the vent tube does not pull out from the filler neck and that it is not kinked in any way when the filler neck assembly is reassembled to the new tank.

9. Remove fuel pickup tube from tank and discard if contaminated.

NOTE

Vehicles manufactured prior to 25950 utilize a PICKUP, FUEL, 1/4 x 11.75 that threads into the top portion of the fuel tank.

Vehicles manufactured from 25950 utilize PICKUP, FUEL, 5/16" x 11.75" G Dapco grommet style pickup tube.

Fuel Tank Assembly

IMPORTANT

Before installing the fuel tank, ensure all foreign matter has been removed from inside the tank using compressed air.

CAUTION

Compressed air is dangerous. Take precautions and wear protective gear when using.

Vehicles manufactured from 25950:

1. Locate the **Fuel Tank** and install the **Rubber Grommet**. Insert the grommet (small end first) into the unthreaded hole. ***Photo 3***
2. Coat **I.D** of Grommet with lubricant. ***Photo 4***

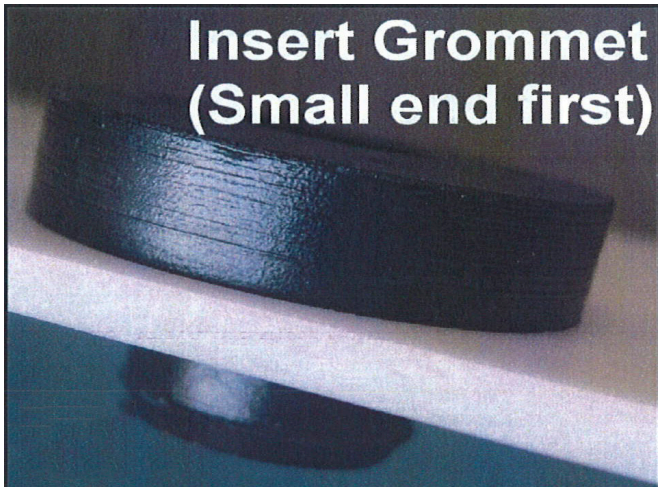


Photo 3

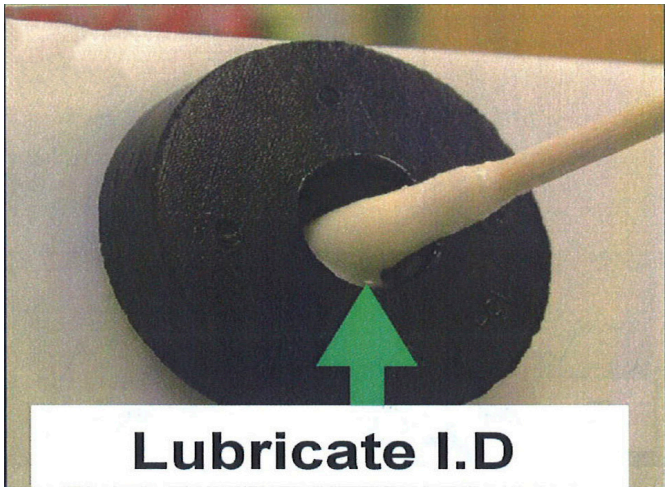


Photo 4

3. Slowly press the **Fuel Pickup Tube** through the grommet. ***Photo 5***

IMPORTANT

If the vehicle is an EFI, turn the outlet of the fitting to the 3 o'clock position as illustrated in *Photo 6.* If the vehicle being built is a carburated model, position the outlet at the 9 o'clock position as illustrated in *Photo 7*

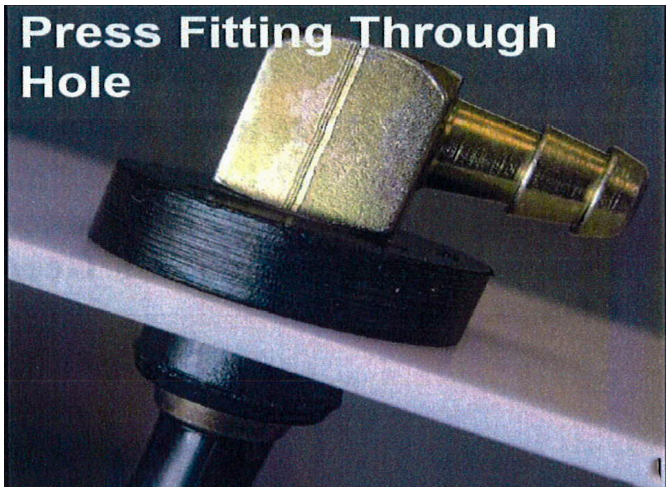


Photo 5

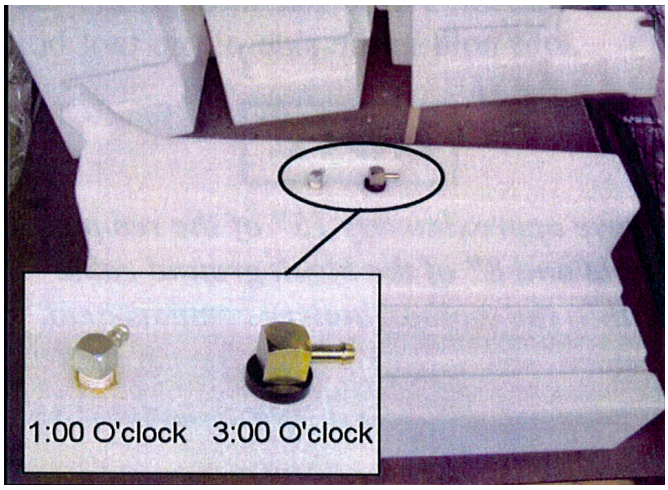


Photo 6

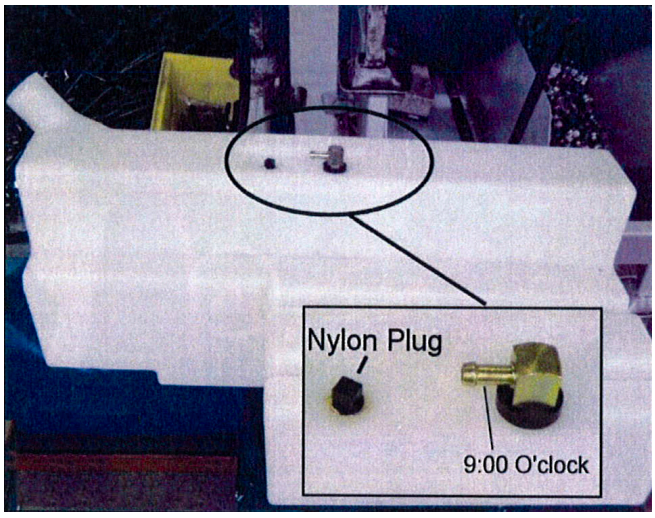


Photo 7

Avenger EFI & HDi Models: Vehicles Prior to Serial Number 31036

4. Apply teflon tape to the Return Tube and thread it to the tank at the location illustrated in ***Photo 6.***

Avenger EFI & HDi Models: Vehicles From Serial Number 31036

4a. Insert the grommet (small end first) into the unthreaded hole.

4b. Coat **I.D** of Grommet with lubricant. ***Photo 4***

4c. Slowly press the **Fuel Pickup Return Tube** through the grommet.

NOTE

Orient the return inlet to the 1 o'clock position as in ***Photo 6***

Carburated Avengers Only: Vehicles Prior to Serial Number 31036

5. Apply teflon tape to the **Nylon Plug** and install it securely to threaded hole of the tank as illustrated in ***Photo 7.***

5a. Insert the grommet (small end first) into the unthreaded hole.

5b. Coat **I.D** of Grommet with lubricant. ***Photo 4***

5c. Slowly press the **Push In Plug** through the grommet.

Vehicles manufactured prior to 25950:

1. Apply teflon tape to the threads of the pickup tube fitting and thread the new pickup tube into the top of the fuel tank. Position the outlet facing towards the fuel neck side of the vehicle.

IMPORTANT

Be sure to replace any missing or damaged cushioning required on the fuel tank frame assembly before installing the tank. All cushioning provides a secure fit for the tank, and protects the tank from wear due to vibration.

Installing the Fuel Tank

1. Slip the new or cleaned tank into the vehicle from the drivers compartment, reconnecting the filler hose to the tank at the same time and secure it with the gear clamp.

IMPORTANT

Be sure to reconnect the fuel vent hose at the filler neck and ensure that it is facing up and not kinked or pinched in any way.

2. With the tank in place, reinstall the tool box and secure with rivets.
3. Replace the fuel filter with a new one.
4. Connect hose to fuel pick-up fitting.
5. On EFI models, ensure hose from pressure regulator is connected to return fitting.
6. Secure fuel pump/filter/regulator assembly back in place.
7. Reinstall the battery & seat.

Inspecting the Fuel Tank and Fuel Line

WARNING

Leakage in the fuel system is very dangerous! A spark or open flame can ignite gas line fumes, causing serious injury or death. Extensive vehicle damage will also occur.

Regular inspection of the fuel tank and fuel line is essential to personal safety and good vehicle performance. Inspect the fuel tank for:

- cracks or leaks
- loose or broken clamps
- loose connection in pick-up pipe
- cracks, breaks or punctures in all fuel lines and hoses
- cracked fuel filter casing

If any of these conditions exist, replace the affected component parts immediately.