



Bio-Diesel Fuel Filter Kit

Greensmaster® 3250-D Traction Unit

Part No. 112-9182

Form No. 3357-677 Rev. B

Installation Instructions

Note: This kit is intended for use on traction units with serial numbers prior to 270000001. Also, on machines with serial numbers 260000001 and up, the fuel hoses **do not** need to be replaced.

! **Danger** !

Under certain conditions, diesel fuel and fuel vapors are highly flammable and explosive. A fire or explosion from fuel can burn you and others and can cause property damage.

- Use a funnel and fill the fuel tank outdoors, in an open area, when the engine is off and is cold. Wipe up any fuel that spills.
- Do not fill the fuel tank completely full. Add fuel to the fuel tank until the level is 1/4 to 1/2 in. (6 to 13 mm) below the bottom of the filler neck. This empty space in the tank allows the fuel to expand.
- Never smoke when handling fuel, and stay away from an open flame or where fuel fumes may be ignited by a spark.
- Store fuel in a clean, safety-approved container and keep the cap in place.

Draining the Fuel Tank

1. Park the machine on a level surface, lower the cutting units, stop the engine, engage the parking brake and remove the key from the ignition switch.

Note: If the hoses are not going to be replaced, simply close the fuel shut off valve and proceed to Replace the Fuel Separator.

2. Drain the fuel tank as follows:
 - A. Close the fuel shut off valve below the fuel tank (Fig. 1).

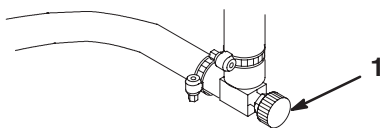


Figure 1

1. Fuel shut-off valve

- B. Disconnect the fuel hose (Item 2, Fig. 2) from the fuel separator inlet (Fig. 2). Place the hose into a suitable container which will also be used when draining the tank.
- C. Drain the fuel tank completely by opening the fuel shut off valve.

Replace the Fuel Separator

1. Loosen the hose clamps securing the fuel hoses to the fuel separator (Fig. 2).
2. Unplug the harness connector from the fuel separator.

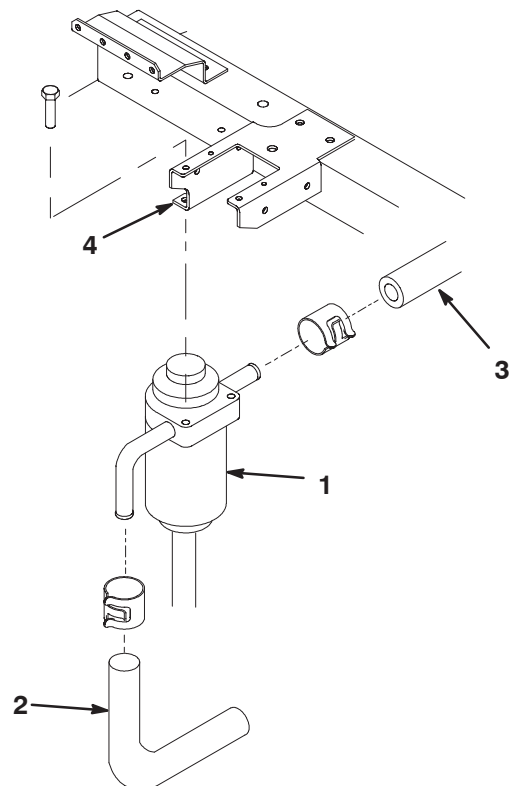


Figure 2

- | | |
|-------------------|---------------------------|
| 1. Fuel separator | 3. Fuel hose |
| 2. Fuel hose | 4. Frame mounting bracket |
-
3. Remove the (2) screws securing the fuel separator to the frame bracket (Fig. 2) Remove and discard the fuel separator.

4. Insert the new fuel filter into the mounting band (Fig. 3). Make sure filter is all the way down into the band and tighten the carriage bolt and nut. Position the filter in the mounting band as shown in figure 3.

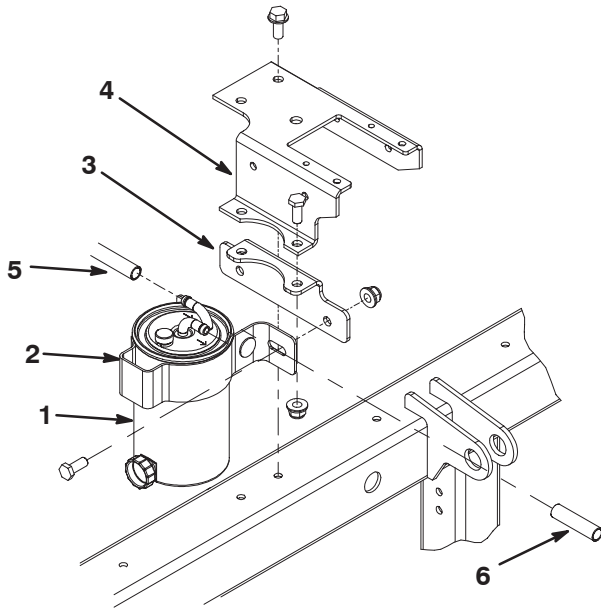


Figure 3

- | | |
|-------------------|---|
| 1. Fuel filter | 5. Fuel hose (from fuel shut off valve) |
| 2. Mounting band | 6. Fuel hose (from filter to engine) |
| 3. Filter bracket | |
| 4. Frame bracket | |

5. Secure the filter mounting band to the new filter bracket with (2) screws and locknuts (Fig. 3).
6. Secure the filter bracket to the frame bracket with (2) screws and locknuts (Fig. 3).
7. If the hoses are not to be replaced, connect the fuel hoses to the fuel filter with the clamps previously removed and skip the section on Replacing the Fuel Hoses.

Note: Use the arrows on top of the filter to determine the correct hose installation. The hose from the fuel shut off valve carries fuel to the filter.

Note: Make sure the breather valve, on top of the canister, and the drain plug, on the front of the filter, are closed.

Remove the Indicator Light

1. Unplug the harness connector from the water in fuel indicator light (Fig. 4). Discard indicator light.
2. Remove the indicator light from the control panel.
3. Insert the hole plug into the vacant control panel hole (Fig. 5).
4. Secure each end of the disconnected harness to the frame.

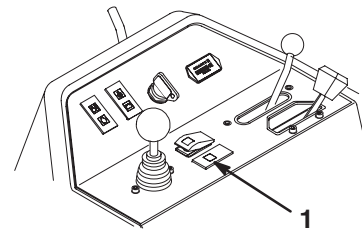


Figure 4

1. Water in fuel indicator light

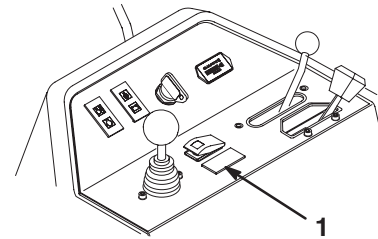


Figure 5

1. Hole plug

Replacing the Fuel Hoses

Note: Before removing the fuel hoses from the machine, note how the hoses are routed and where they are secured to the machine.

1. To gain access to the fasteners securing the fuel tank to the mounting plate proceed as follows:
 - A. Remove the (3) capscrews and washers securing the fuel tank mounting plate to the frame and the support bracket (Fig. 6).
 - B. Lift the mounting plate up from the rear of the machine. Support the mounting plate when raised.
2. Loosen the hose clamp and disconnect the fuel hose from the fuel fitting (Fig. 6).
3. Remove (3) capscrews and flat washers securing the fuel tank to the mounting plate (Fig. 6). Remove the tank from the mounting plate being careful not to damage any fuel hoses.
4. Loosen the hose clamp and disconnect the fuel hose from the fuel tank (Fig. 6). Discard the hose.
5. Install a new hose to the fuel tank with the hose clamp removed.
6. Loosen the hose clamps and disconnect the fuel hose from the fuel tank and the fuel shut off valve (Fig. 6). Note fuel shut off valve orientation. Discard the hose.

7. Install a new hose to the fuel tank and to the fuel shut off valve. Secure with the hose clamps previously removed.

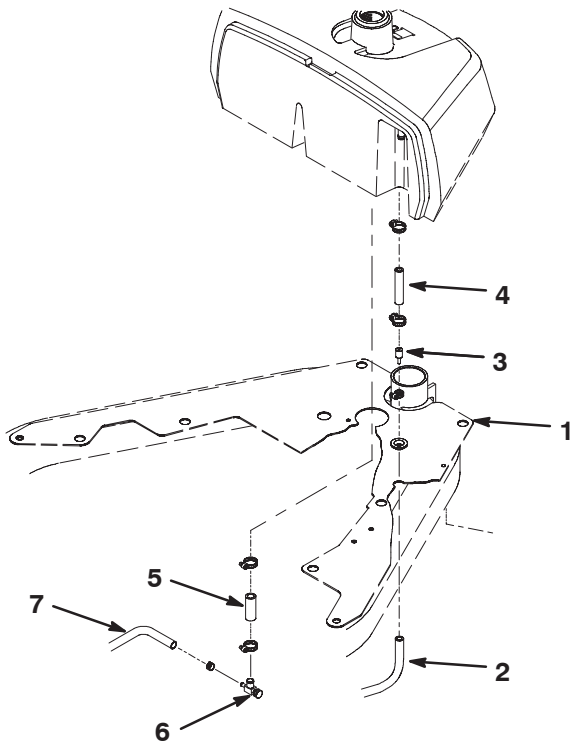


Figure 6

- | | |
|-----------------------------|------------------------|
| 1. Fuel tank mounting plate | 5. Fuel hose |
| 2. Fuel hose | 6. Fuel shut off valve |
| 3. Fuel fitting | 7. Fuel hose |
| 4. Fuel hose | |

8. Position the fuel tank onto the mounting plate. Be careful not to damage any fuel hoses.
9. Apply antiseize lubricant to the threads of the three capscrews.
10. Secure the fuel tank to the plate with the (3) flat washers and capscrews previously. Torque the capscrews from 30 to 60 in-lb (3.4 to 7.8 N.m).
11. Replace the hose from the fuel shut off valve to the fuel filter with a new similar length hose. Secure with the hose clamps previously removed.
12. Replace the hose from the fuel filter to the engine with a new similar length hose. Secure with the hose clamps previously removed.
13. Replace the hose from the engine to the hose fuel fitting with a new similar length hose. Secure with the hose clamps previously removed.

14. Install the fuel tank mounting plate to the frame as follows:

- A. Position the mounting plate on the frame. Make sure to align the plate holes with the frame holes and the support bracket.
- B. Secure the mounting plate to the frame and support bracket with two flat washers and three capscrews.

Install the Decal

Affix the decal to the back of the seat, centering it above the service decal (Fig. 7).

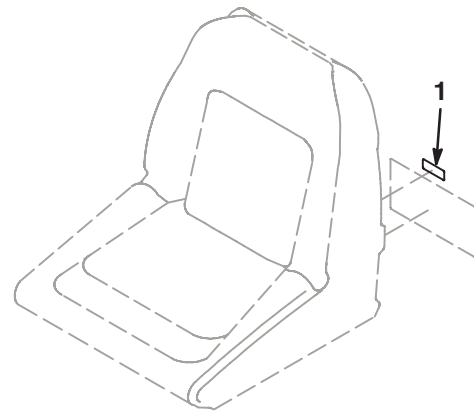


Figure 7

1. Decal

Inspection and Checks

1. Open fuel shut off valve below the fuel tank.
2. Fill fuel tank with fuel. Check fuel lines and tank for leaks.

Note: Fuel lines must not be routed or clamped with any electrical wires or cables.

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Draining Water from the Fuel Filter/Water Separator

Any water accumulation should be drained from the fuel filter/water separator before each use.

1. Position the machine on a level surface and stop the engine.
2. Place a drain pan under the fuel filter.
3. Open the drain plug on the fuel filter/water separator approximately one turn and drain any accumulated water (Fig. 8). Tighten the plug after draining.

Note: Because the accumulated water will be mixed with diesel fuel, drain the fuel filter into a suitable container and dispose of it properly.

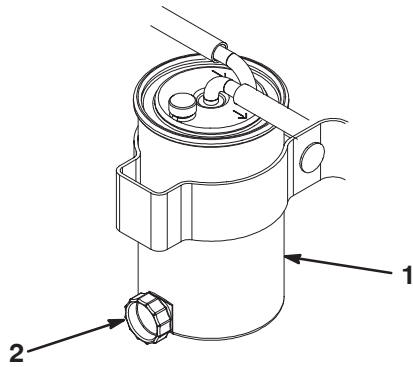


Figure 8

1. Fuel filter 2. Drain plug

Bleeding the Fuel System

1. Position the machine on a level surface. Make sure the fuel tank is at least half full.
2. Open the breather valve, on top of the canister, until fuel leaks out (Fig. 9).
3. Close the breather valve.

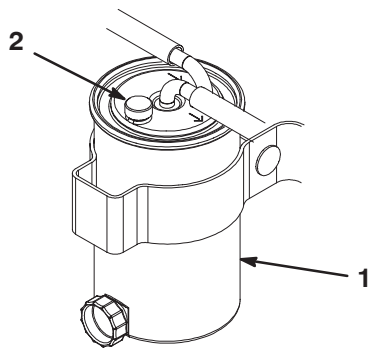


Figure 9

1. Fuel filter 2. Breather valve

4. Crank the engine for 5 seconds then pause. Repeat the procedure until the engine starts and runs smoothly.

Fuel Filter/Water Separator

Service Interval/Specification

Replace the filter element after every 800 operating hours.

Servicing the Filter

1. Clean the area where the filter canister mounts (Fig. 11).
2. Place a drain pan under the fuel filter.
3. Close the fuel shut off valve (Fig. 10) below the fuel tank.

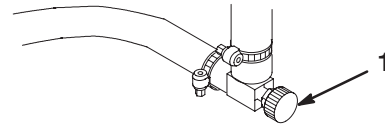


Figure 10

1. Fuel shut-off valve

4. Open the filter drain plug and breather valve (Fig. 11).
5. Loosen the hose clamps and disconnect the fuel lines from the top of the filter.
6. Loosen the carriage bolt on the filter mounting band and remove the filter canister. Dispose of properly.

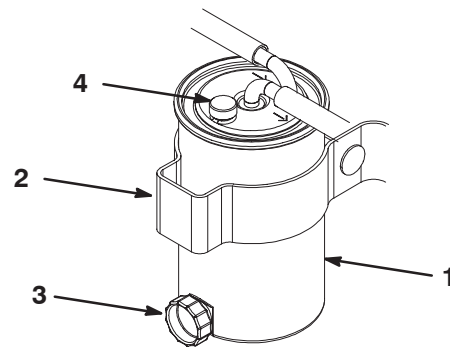


Figure 11

1. Fuel filter /water separator 3. Filter drain plug
2. Filter mounting band 4. Breather valve

7. Install the new filter canister and tighten the mounting band carriage bolt.
8. Install the fuel lines and clamps per the inlet and outlet markings on the top of the filter.
9. Make sure the filter drain plug is closed. Open the fuel shut off valve and then the filter breather valve.
10. Start the engine and check for leaks.