Form No. 3374-855 Rev A

Relief Valve Kit

2012 Riding Greensmaster® Traction Unit

Model No. 125-5150

Installation Instructions

1. Park the machine on a level surface, engage the parking brake, lower the cutting units and stop the engine. Remove the key from the ignition switch.
2. Disconnect the traction control cable ball joint and jam nuts from the neutral arm (Figure 1). Position the traction cable away from the pump assembly.

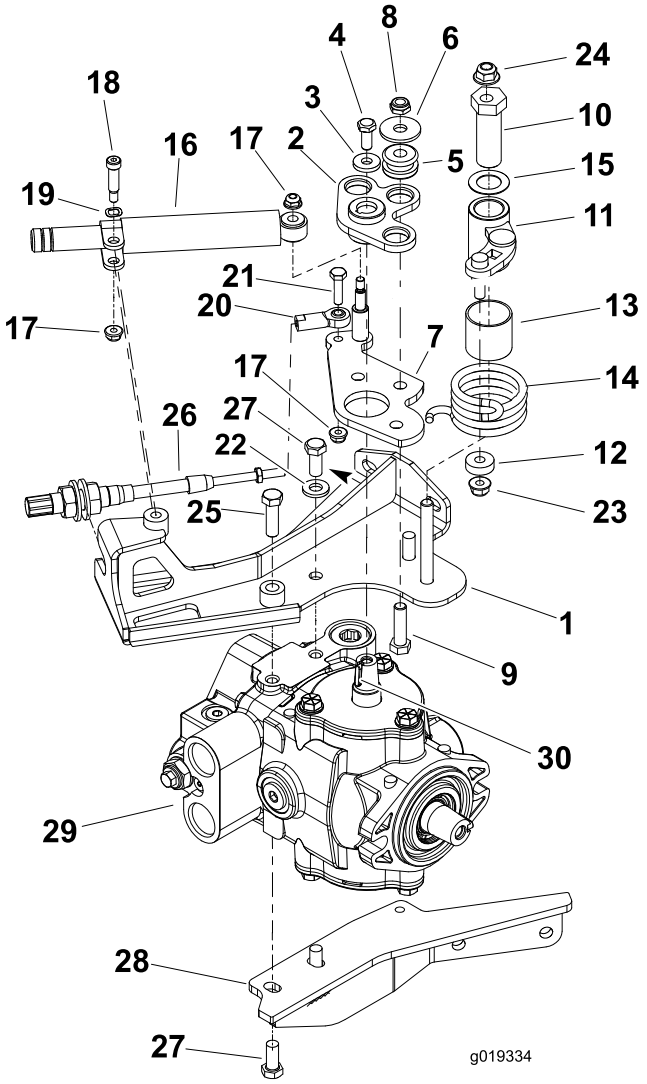

Figure 1

1. Cable support (diesel shown)
2. Plate
3. Flat washer
4. Capscrew
5. Mount (3 used)
6. Washer (3 used)
7. Pump lever
8. Lock nut (3)
9. Capscrew (3 used)
10. Eccentric stud
11. Neutral arm
12. Ball bearing
13. Spring spacer
14. Torsion spring
15. Nylon washer
16. Damper lever
17. Flange nut (3)
18. Shoulder bolt
19. Wave washer
20. Cable end ball joint
21. Capscrew
22. Washer
23. Flange nut
24. Flange nut
25. Capscrew
26. Traction control cable
27. Capscrew (2 used) (diesel)
28. Muffler bracket (diesel)
29. Piston (traction) pump
30. Key

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Register at www.Toro.com.

Note: The piston pump neutral assembly used on all Greensmaster TriFlex Hybrid machines are very similar. The pump assembly from the Greensmaster 3420 machine is shown in Figure 1.

⚠ WARNING

Before disconnecting or performing any work on hydraulic system, relieve all pressure in system. Stop engine; lower or support all cutting units.

Keep body and hands away from pin hole leaks or nozzles that eject hydraulic fluid under high pressure. Use paper or cardboard, not hands, to search for leaks. Hydraulic fluid escaping under pressure can have sufficient force to penetrate the skin and cause serious injury. If fluid is injected into the skin, it must be surgically removed within a few hours by a doctor familiar with this type of injury. Gangrene may result from such an injury.

3. Thoroughly clean the hydraulic hose ends and the fittings on the gear and piston (traction) pumps to prevent hydraulic system contamination.

Important: If fittings are to be removed, note the position of the fittings for assembly purposes. Remove the hydraulic fittings and O-rings. Discard the removed O-rings.

4. Label all the hydraulic hose connections on the gear and piston pump back plate for reassembly purposes.
5. Clamp the pump suction hose to prevent draining the hydraulic reservoir.
6. Loosen the hose clamp and remove the suction hose from the gear pump.
7. Disconnect the remaining hydraulic hoses from the fittings on the gear pump and piston pump back plate. Allow the hoses to drain into a suitable container. Plug the hoses and fittings to prevent contamination.
8. Remove the components from the traction neutral assembly, as needed, using Figure 1 as a guide.

⚠ CAUTION

Support the gear and piston pump back plate assembly when removing its supporting fasteners to prevent it from falling and causing damage or personal injury.

9. Remove the (4) capscrews that secure the piston pump back plate to the piston pump assembly (Figure 2). Carefully slide the pump plate back plate off the alignment pins and away from the piston pump.

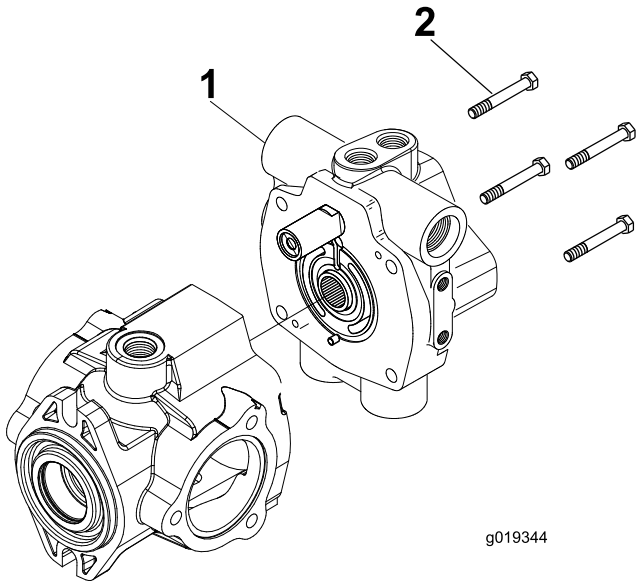

Figure 2

1. Piston pump back plate 2. Capscrew (4)

10. Remove and discard the charge relief valve from the piston pump back plate (Figure 3). Also, remove the gasket.

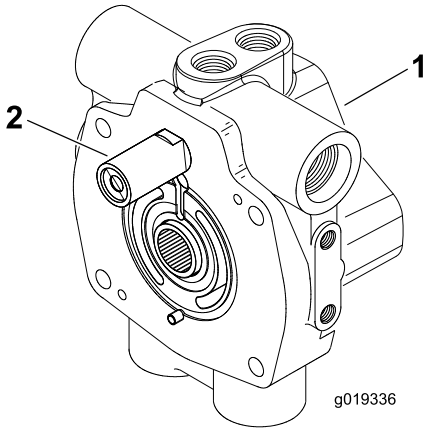

Figure 3

1. Piston pump back plate 2. Charge relief valve

11. Apply Loctite #242 (or equivalent) to the threads of the new charge relief valve and install it into the piston pump back plate. Torque the charge relief valve to 10 to 20 ft-lb (13.5 to 27 N-m)
12. Make sure the mounting surfaces of piston pump back plate and piston pump are thoroughly clean.
13. Install the new gasket onto the alignment pins of the piston pump back plate.
14. Carefully slide the pump plate back plate onto the piston pump alignment pins.
15. Install the (4) capscrews that secure the piston pump back plate to the piston pump assembly. Torque the capscrews to 18 to 20 ft-lb (24 to 27 N-m).

16. Install removed components to traction neutral assembly, using Figure 1, as a guide along with the following:

⚠ CAUTION

The torsion spring is under tension and may cause personal injury during installation. Use caution when installing the spring to the pump neutral assembly.

- If the cable support was removed from the pump, apply Loctite #242 (or equivalent) to the threads of the screws that secure the support to the pump.
- If the plate was removed from pump the trunnion shaft, make sure that both the trunnion shaft and the plate bore are thoroughly cleaned before installing the plate to the shaft. Secure the plate to the trunnion shaft with the flat washer and capscrew. Torque the capscrew from 200 to 250 in-lb (23 to 28 N-m).
- If the damper lever was removed, apply antiseize lubricant to the post on the pump lever and the shoulder of the bolt during assembly.
- Make sure that the ball bearing on the neutral arm is properly positioned in the pump lever after assembly.

17. After the traction neutral assembly has been installed, make sure that the transmission is adjusted for the neutral position so that the machine does not move or creep when the traction pedal is in neutral.
18. Remove the plugs that were placed during disassembly from hydraulic fittings and hoses.
19. Using labels placed during pump removal, lubricate new O-rings and connect hydraulic hoses to gear pump and piston pump back plate fittings. Tighten hose connections.
20. Connect the traction control cable to the neutral arm as follows:
    - Secure the cable ball joint to the neutral arm with the capscrew and flange nut.
    - Secure the control cable to the neutral arm with cable jam nuts. Make sure that a lock washer is positioned on each side of the neutral arm.
21. Remove the clamp from the gear pump suction hose.
22. Check oil level in hydraulic reservoir and add correct oil if necessary.
23. Start the machine and run it at idle for 3 to 5 minutes to circulate the fluid and remove any air trapped in the system.
24. Stop the machine, recheck the fluid level and replenish as required.
25. Check the neutral position of the traction pedal. If an adjustment is required, refer to the Operator's Manual or Service Manual for the procedure.

Count on it.