



# Hydraulic Oil Leak Detector Kit

## Greensmaster 3300/3400 Series TriFlex Traction Unit

Model No. 04715

### Installation Instructions

## Loose Parts

Use the chart below to verify that all parts have been shipped.

Procedure	Description	Qty.	Use
<b>1</b>	Leak detector tank	1	Install the leak detector.
	Straight fitting	1	
	Indicator light	1	
	Audio alarm	1	
	Oil level sensor	1	
	Valve hose	1	
	Hex-head bolt (1/4 x 2 inches)	2	
	Shield	1	
	Hose clamp	4	
	Solenoid valve assembly	1	
	90-degree hydraulic fitting	2	
	90-degree hydraulic fitting (beaded)	1	
	Oil level cover	1	
	Wire harness	1	
	Delay timer (diesel model only)	1	
	Oil level cover (diesel model only)	1	
	Oil level cover (gas model only)	1	
	Overflow hose	1	
<b>2</b>	No parts required	—	Check the leak detector operation.

# 1

## Installing the Leak Detector

### Parts needed for this procedure:

1	Leak detector tank
1	Straight fitting
1	Indicator light
1	Audio alarm
1	Oil level sensor
1	Valve hose
2	Hex-head bolt (1/4 x 2 inches)
1	Shield
4	Hose clamp
1	Solenoid valve assembly
2	90-degree hydraulic fitting
1	90-degree hydraulic fitting (beaded)
1	Oil level cover
1	Wire harness
1	Delay timer (diesel model only)
1	Oil level cover (diesel model only)
1	Oil level cover (gas model only)
1	Overflow hose

### Procedure

1. Park the machine on a level surface, turn off the engine, remove the ignition key, and set the parking brake.
2. Remove the hex-head screws that secure the console arm cover and remove the cover.

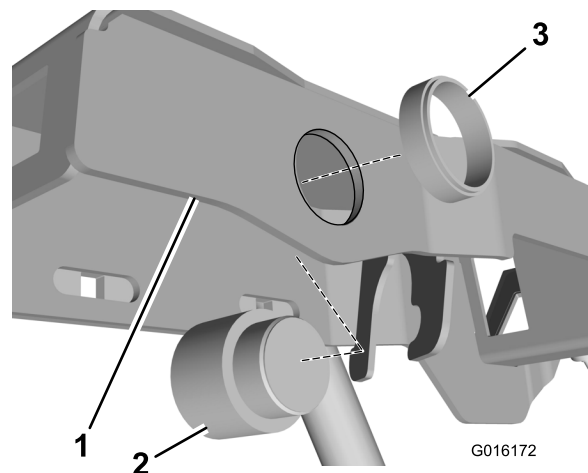
**Note:** Save the screws for securing the console arm cover later.

3. Route the wire harness by positioning the light indicator and alarm leads in the console arm, following the main wire harness under the seat to the other side of the machine, and then behind the seat along the left-hand rail, so that the oil level sensor and solenoid valve leads are near the main hydraulic tank (diesel model only).

**Note:** Use cable ties to secure the wire harness to the main wire harness and frame members away from any hot or moving parts (for diesel model only).

4. Remove the plug on the console arm panel and insert the indicator light.

5. Connect the indicator light connector to the main wire harness (gas model only) or to the wire harness from the kit (diesel model only).
6. Install the audio alarm into the console arm frame (Figure 1).

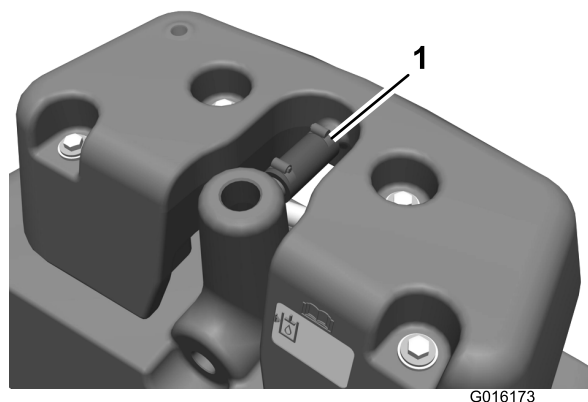


**Figure 1**

1. Console arm frame
2. Audio alarm
3. Threaded ring

7. Connect the audio alarm to the main wire harness (gas model only) or to the wire harness from the kit (diesel model only).
8. Loosen the worm-drive clamps and remove the overflow hose (Figure 2).

**Note:** Discard the overflow hose.



**Figure 2**

1. Overflow hose

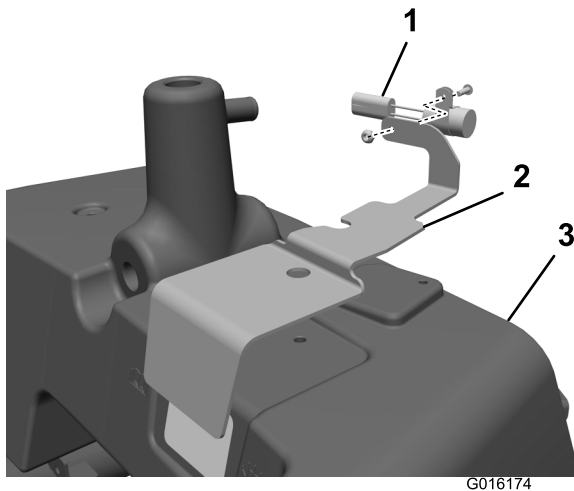
9. Remove the 4 bolts and 4 spacers that secure the outer housing to the main hydraulic tank.

**Note:** Save the bolts and spacers for securing the leak detector tank to the main hydraulic tank later.

10. Remove the outer housing from the main hydraulic tank.
11. Find the oil level cover for your machine from loose parts.

**Important:** There are two different oil level covers in the kit, one for gas machines and the other for diesel machines. The cover for the diesel model is longer than the cover for the gas model and may have a “D” etched in it.

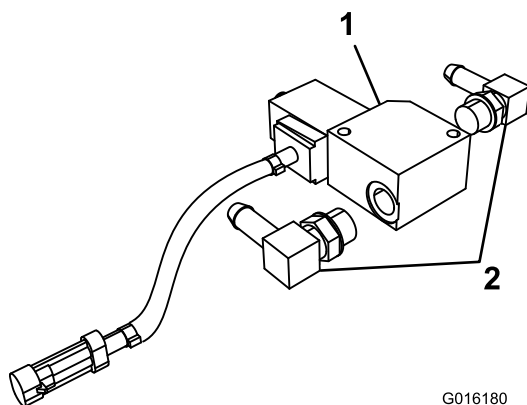
12. Install the delay timer on the oil level cover (diesel model only) (Figure 3).



**Figure 3**

- |                                    |                        |
|------------------------------------|------------------------|
| 1. Delay timer (diesel model only) | 3. Main hydraulic tank |
| 2. Oil level cover                 |                        |

13. Set the oil level cover in place, but do not secure it to the main hydraulic tank yet (Figure 3).
14. Install 2 hydraulic fittings (90-degree) onto the front and back of the solenoid valve (Figure 4).

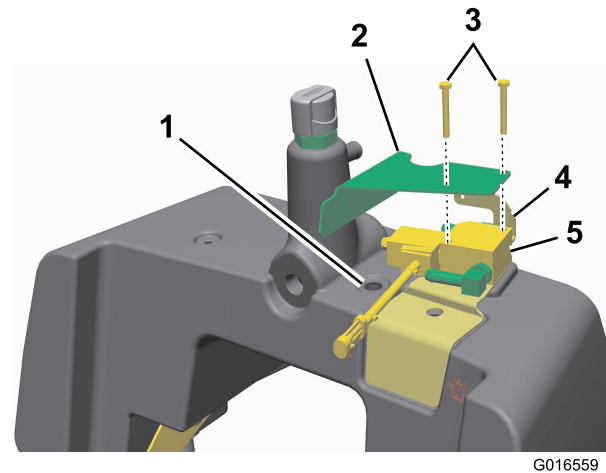


**Figure 4**

- |                   |                                     |
|-------------------|-------------------------------------|
| 1. Solenoid valve | 2. 90-degree hydraulic fittings (2) |
|-------------------|-------------------------------------|

**Note:** Position the 90-degree hydraulic fittings so that the hoses to be attached to them will be parallel to the ground when installed.

15. Install the 90-degree beaded hydraulic fitting to the main hydraulic tank (Figure 5).



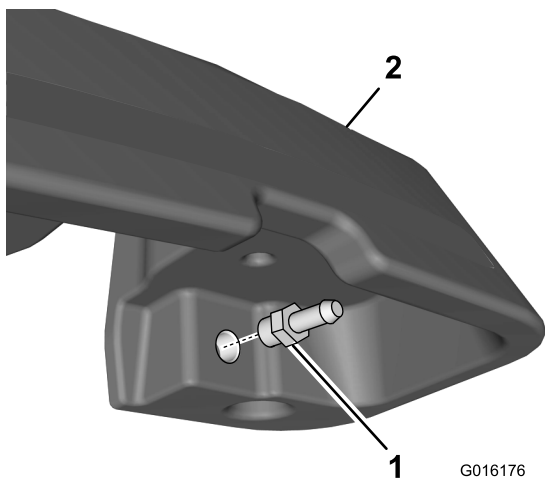
**Figure 5**

- |  |                            |
|--|----------------------------|
| 1. 90-degree beaded hydraulic fitting here | 4. Oil level cover         |
| 2. Shield bracket (2)                      | 5. Solenoid valve assembly |
| 3. Hex-head bolts (2)                      |                            |

16. Install one end of the tank valve hose to the 90-degree hydraulic fitting connected to the front of the solenoid valve with a worm-drive clamp.
17. Slip a worm-drive clamp over the other end of the tank valve hose.
18. Connect the free end of the tank valve hose onto the 90-degree beaded hydraulic fitting on the main hydraulic tank as you lower the solenoid valve assembly onto the oil level cover.
19. Install the oil level cover and solenoid valve assembly to the main hydraulic tank with 2 hex-head bolts and the shield bracket (Figure 3).

**Note:** Before installing the bolts, coat the bottom 2 or 3 threads with Never-Seize.

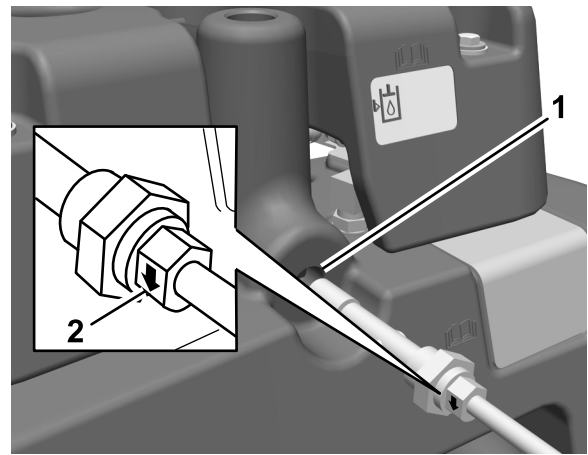
20. Secure the tank valve hose end onto the 90-degree beaded hydraulic fitting with the worm-drive clamp.
21. Install the straight hydraulic fitting into the opening on the underside of the leak detector tank (Figure 6).



**Figure 6**

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1. Straight hydraulic fitting      2. Leak detector tank



**Figure 7**

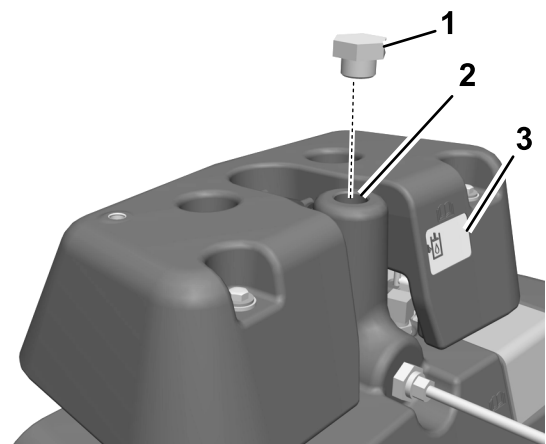
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1. Remove plug from main hydraulic tank here      2. Indicator arrow on nut (2) hydraulic tank here

22. Secure one end of the valve hose to the 90-degree hydraulic fitting connected to the back of the solenoid valve with a worm-drive clamp.
23. Slip a worm-drive clamp over the free end of the valve hose, and secure the end of the valve hose to the straight hydraulic fitting on the leak detector tank.
24. Secure the free end of the overflow hose to the tube on the leak detector tank with a worm-drive clamp (Figure 2).
25. Connect the delay time connector to the connector on the wire harness (diesel model only).
26. Connect the solenoid valve connector to the connector marked "Leak Detector Solenoid" on the wire harness.
27. Remove the plug on the main hydraulic tank and install the hydraulic oil level sensor (Figure 7).

**Note:** Ensure that the indicator arrow on each side of the nut that secures the hydraulic oil level sensor points downward (Figure 7).

28. Connect the oil level sensor connector to the connector marked "Leak Detector Switch" on the wire harness.
29. Secure the leak detector tank onto the main hydraulic tank with the 4 bolts and 4 spacers that you removed in step 9.
30. Ensure that all the fittings are tight.
31. Remove and discard the breather, and top off the main hydraulic tank with hydraulic oil (Figure 8).



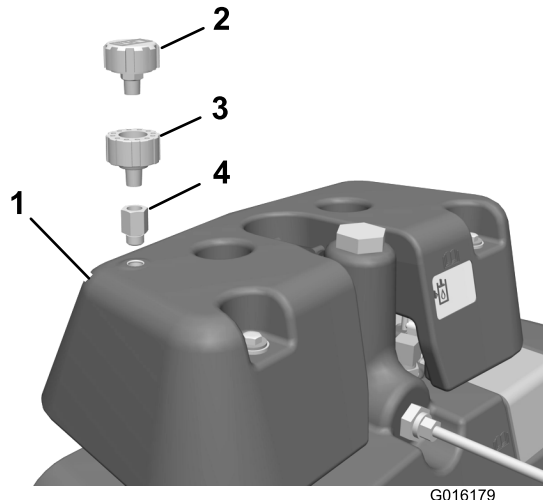
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**Figure 8**

1. Plug (replaces the breather)      3. Sight window
2. Fill with hydraulic oil to top off the main hydraulic tank here

32. Install a plug in place of the breather (Figure 8).
33. Fill the leak detector tank with hydraulic oil until the oil level is at the middle of the sight window on the tank (Figure 8).

34. Install the hydraulic fitting, breather adapter, and breather on the leak detector tank as shown in (Figure 9).



**Figure 9**

- |                       |                      |
|-----------------------|----------------------|
| 1. Leak detector tank | 3. Breather adapter  |
| 2. Breather           | 4. Hydraulic fitting |

35. Install the console arm cover using the hex-head screws that you removed in step 2.

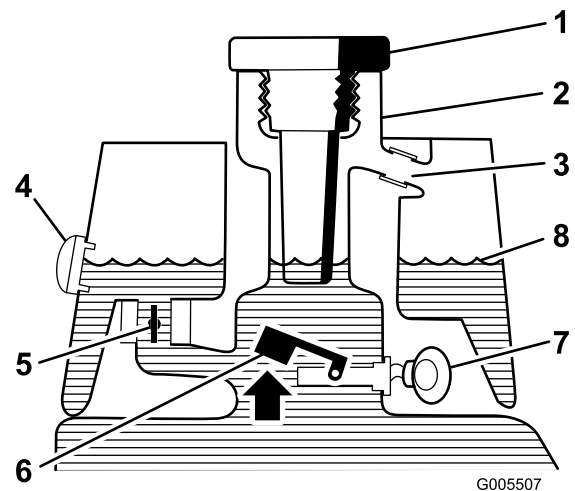
## 2

## Checking the Leak Detector Operation

### No Parts Required

### Checking the System Operation

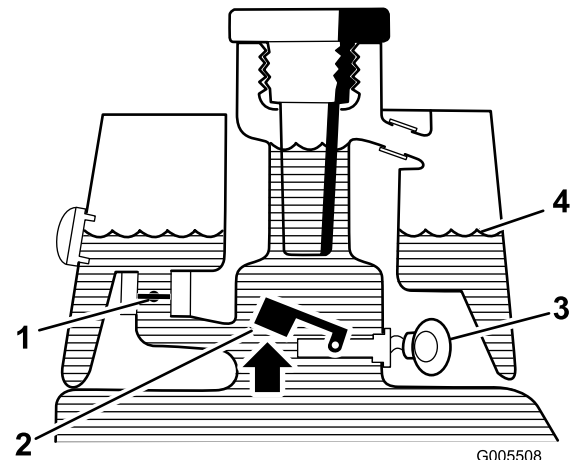
The leak detector system is designed to assist in the early detection of hydraulic oil system leaks. If the oil level in the main hydraulic reservoir is lowered by 4 to 6 ounces (118 to 177 ml), the oil level sensor float switch in the tank will close. After a one-second delay, the alarm will sound, alerting the operator (Figure 10). The expansion of oil, due to normal heating during machine operation, will cause the oil to transfer into the auxiliary oil reservoir. The oil is allowed to return to the main tank when you turn off the ignition switch.



**Figure 10**

Before starting (oil is cold)

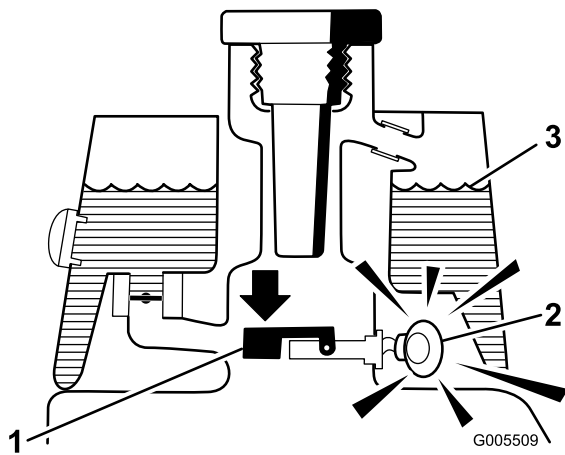
- |                  |                               |
|------------------|-------------------------------|
| 1. Filler plug   | 5. Solenoid return valve open |
| 2. Filler neck   | 6. Float raised switch open   |
| 3. Overflow tube | 7. Warning buzzer: No sound   |
| 4. Sight window  | 8. Fluid level (cold)         |



**Figure 11**

Normal operation (oil is warm)

- |                                 |                             |
|---------------------------------|-----------------------------|
| 1. Solenoid return valve closed | 3. Warning buzzer: No sound |
| 2. Float raised switch open     | 4. Fluid level (warm)       |

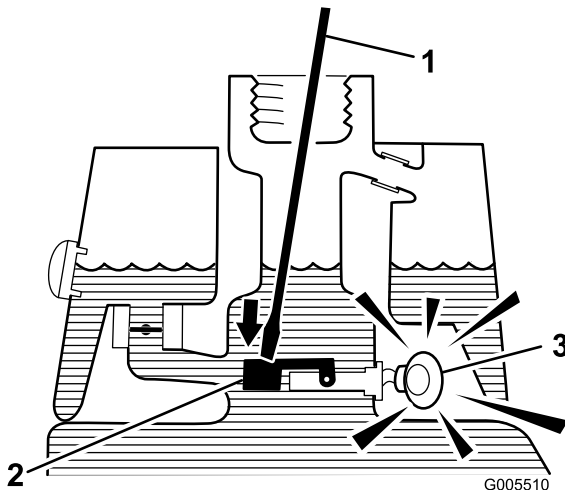


**Figure 12**  
Leak alert!

1. Float down switch closed; fluid level down 4 to 6 ounces (118 to 177 ml)
2. Warning buzzer sounds
3. Fluid level (warm)

## Checking the Leak Detector System Operation

1. Move the ignition switch to the On position and start the engine.
2. Remove the hydraulic tank plug from the neck of the tank.
3. Insert a clean rod or screwdriver into the tank neck and gently push down on the oil level sensor float (Figure 13): The alarm should sound after a one-second delay.



**Figure 13**

1. Clean rod or screwdriver
2. Press down on switch
3. Warning buzzer

4. Release the float: The alarm should stop sounding.

**Notes:**



**Count on it.**