



Oil Cooler Kit

Greensmaster 3300 Series Traction Unit

Model No. 119-1691

Installation Instructions

Loose Parts

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

Procedure	Description	Qty.	Use
2	Large hose strap holder	1	Install the fittings and route the hoses.
	Small hose strap holder	1	
	Hex-washer-head, self-tapping bolt (3/8 x 3/4 inch)	3	
	Spacer	1	
	Straight adapter fitting	1	
	90-degree hydraulic fitting	2	
	90-degree fitting	1	
	Hose clamp	3	
	Lower hose	1	
	Push lock hose assembly	1	
	Hydraulic hose assembly	1	
Rubber grommet	4		
3	Oil cooler fan wire harness	1	Install the oil cooler fan wire harness.
	Relay	1	
	Hex-head bolt (1/4 x 5/8 inch)	1	
	Hex-flange nut (1/4 inch)	1	
	15-amp blade fuse	1	
Bushing	1		
4	Rubber grommet	2	Mount the oil cooler support and wireform bracing.
	Oil cooler support	1	
	Tap bolt (1/2 x 4 inch)	2	
	Wireform brace	1	
	Hose wire form	1	
	Hex-head-flange bolt (5/16 x 1 inch)	2	
	Flange nut (5/16 inch)	1	
	Nut (Tinnerman)	1	
	Hex-head bolt (1/4 x 5/8 inch)	2	
Hex-flange nut (1/4 inch)	2		
5	Oil cooler	1	Assemble and install the fan and oil cooler assembly.
	Electric fan	1	
	Screw	4	
	Flat washer	4	
	Lock washer	4	
	Square nut	4	
	Nut (Tinnerman)	4	
	Hose clamp	2	
	Hex-head-flange bolt (5/16 x 1 inch)	4	

Procedure	Description	Qty.	Use
6	Oil cooler screen	1	Finish the installation.
	Wing screw	2	
	Retainer nut	2	
	Clip	2	
	Cable tie	2	

1

Draining the Hydraulic Oil Tank

No Parts Required

Procedure

⚠ WARNING

Hydraulic fluid escaping under pressure can penetrate skin and cause injury.

- Ensure that all hydraulic fluid hoses and lines are in good condition and that all hydraulic connections and fittings are tight before applying pressure to the hydraulic system.
- Keep your body and hands away from pin hole leaks or nozzles that eject high pressure hydraulic fluid.
- Use cardboard or paper to find hydraulic leaks.
- Safely relieve all pressure in the hydraulic system before performing any work on the hydraulic system.
- Get immediate medical help if fluid is injected into skin.

Drain the hydraulic oil from the tank through the suction side on the right-hand side of the tank (Figure 1).

Note: Clamp the hose above the point where you will disconnect it to prevent the hydraulic oil from spilling out before you are ready to drain the tank.

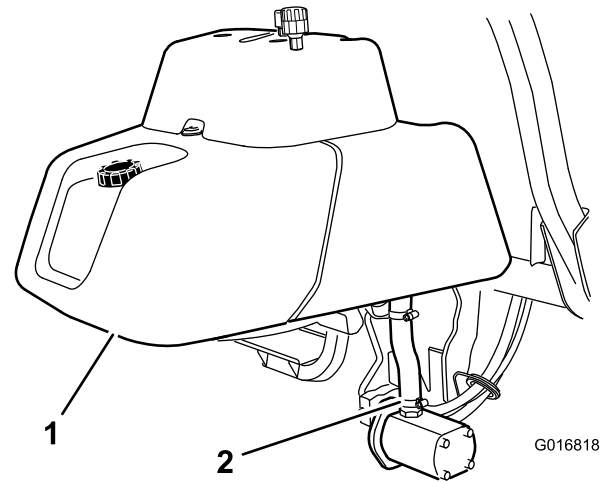


Figure 1

1. Hydraulic oil tank
2. Disconnect the hose and drain the hydraulic oil here.

2

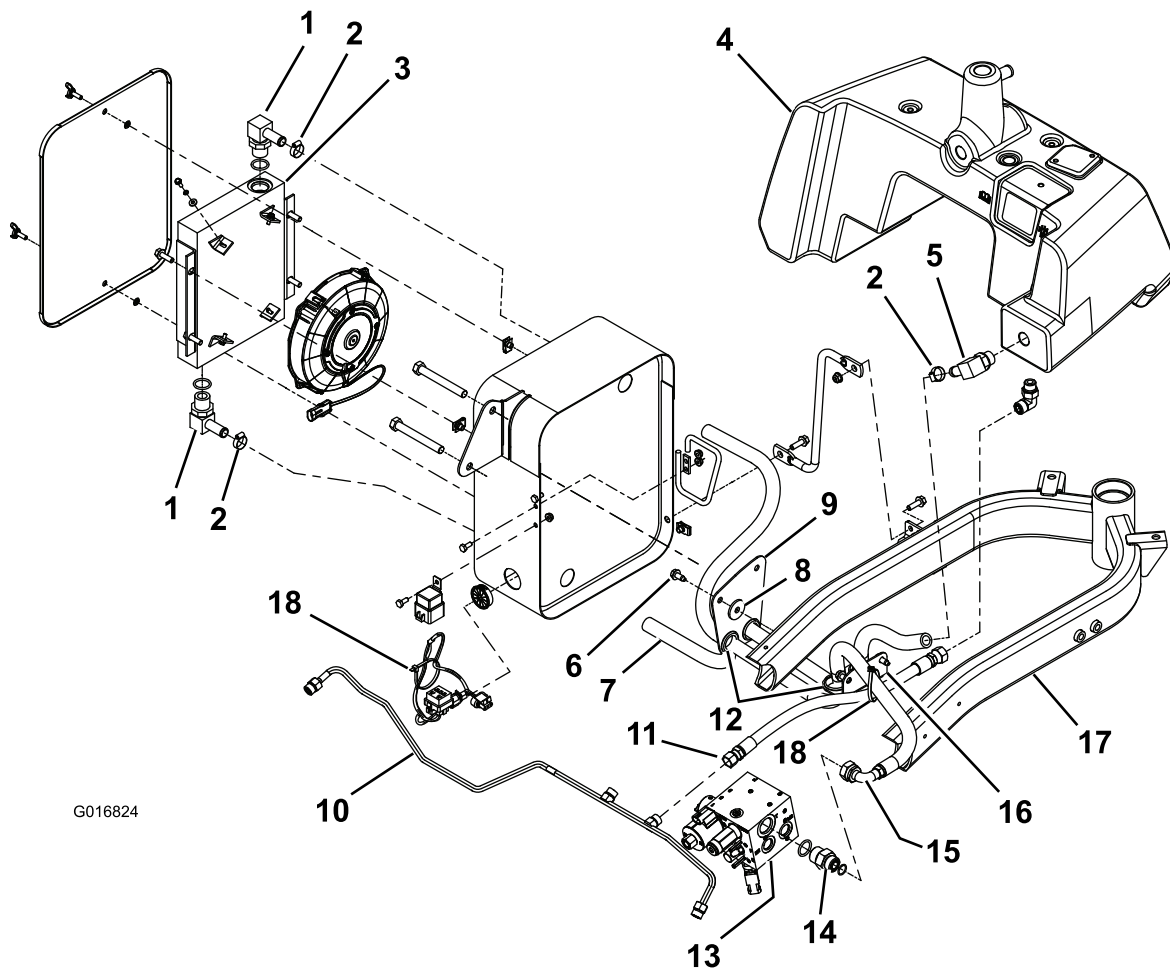
Installing the Fittings and Routing the Hoses

Parts needed for this procedure:

1	Large hose strap holder
1	Small hose strap holder
3	Hex-washer-head, self-tapping bolt (3/8 x 3/4 inch)
1	Spacer
1	Straight adapter fitting
2	90-degree hydraulic fitting
1	90-degree fitting
3	Hose clamp
1	Lower hose
1	Push lock hose assembly
1	Hydraulic hose assembly
4	Rubber grommet

Procedure

1. Loosen the 4 fasteners that secure the tank sub-frame to the machine frame (Figure 2), and slide the tank rearward.



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Figure 2

- | | | |
|---|-----------------------------|----------------------------------|
| 1. 90-degree hydraulic fitting | 7. Lower hose | 13. Hydraulic oil manifold block |
| 2. Hose clamp | 8. Spacer | 14. Straight adapter fitting |
| 3. Oil cooler | 9. Large hose strap holder | 15. Push lock hose assembly |
| 4. Hydraulic oil tank | 10. Hydraulic line | 16. Small hose strap holder |
| 5. 90-degree fitting | 11. Hydraulic hose assembly | 17. Machine frame |
| 6. Hex-washer-head, self-tapping bolt (5/16 x 3/4 inch) | 12. Rubber grommets (2) | 18. Cable tie |

2. Remove the fitting from the hydraulic oil tank on the left side of the machine.
3. Secure the large and small strap hose holders to the right side of the machine frame with self-tapping bolts for each strap hose holder (Figure 2).

Note: The large strap should be bolted to the outside of the right frame rail, and the small strap should be bolted to the inside of the left frame rail.

Note: Insert a spacer between the large strap hose holder and the machine frame (Figure 2).
4. Remove the straight fitting from the hydraulic manifold block, and replace it with a straight adapter fitting from loose parts (Figure 2).
5. Install a 90-degree fitting from loose parts in its place, and secure it to the hydraulic line with a hose clamp (Figure 2).
6. Route the hydraulic hose assemblies loosely (Figure 2), but **do not secure the hoses with cable ties.**
7. Install 2 barbed fittings (90-degree) on the oil cooler with the open ends facing the rear (fan) side of the oil cooler (Figure 2).

Note: Install rubber grommets as shown in Figure 2.
8. Remove the hose (item 10 in Figure 2) from the hydraulic line.

Note: Discard the hose.

9. Install the hydraulic hose (from loose parts) onto a 90-degree fitting on the bottom of the hydraulic tank.

3

Installing the Oil Cooler Fan Wire Harness

Parts needed for this procedure:

1	Oil cooler fan wire harness
1	Relay
1	Hex-head bolt (1/4 x 5/8 inch)
1	Hex-flange nut (1/4 inch)
1	15-amp blade fuse
1	Bushing

Procedure

1. Connect kit wire harness to the main wire harness on the right-hand side of the machine.

Note: Remove the existing plug from the connector on the main wire harness, and connect the kit connector to the connector on the main wire harness.

2. Unplug the jumper from the end of the wire harness, and mount the relay to the side of the oil cooler support with a hex-head bolt (1/4 x 5/8 inch) and a hex-flange nut (1/4 inch) (Figure 3).

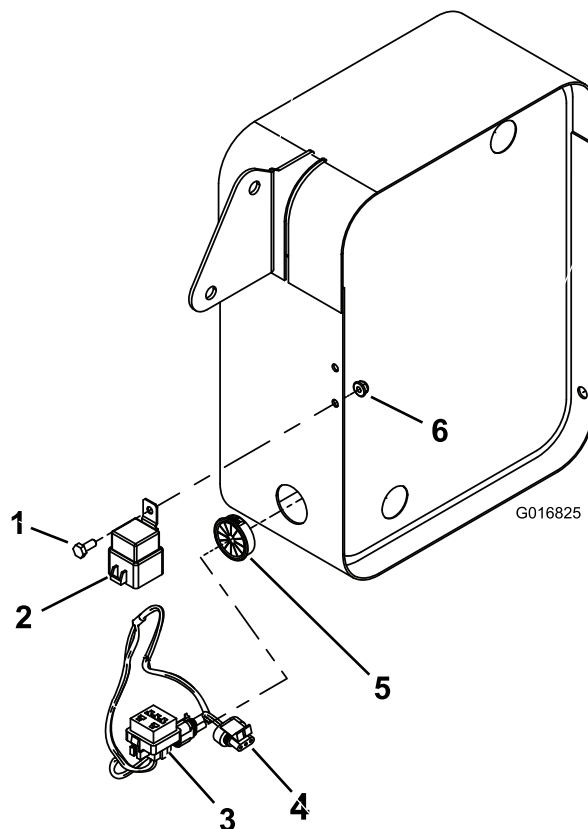


Figure 3

1. Hex-head bolt (1/4 x 5/8 inch)
 2. Relay
 3. Oil cooler fan wire harness
 4. 15-amp blade fuse
 5. Bushing
 6. Flange nut (1/4 inch)
3. Insert the bushing into the lower side opening in the oil cooler (Figure 3).
 4. If the 15-amp blade fuse is not in the fuse holder in the wire harness, insert the fuse in the holder.

4

Mounting the Oil Cooler Support and Wireform Bracing

Parts needed for this procedure:

2	Rubber grommet
1	Oil cooler support
2	Tap bolt (1/2 x 4 inch)
1	Wireform brace
1	Hose wire form
2	Hex-head-flange bolt (5/16 x 1 inch)
1	Flange nut (5/16 inch)
1	Nut (Tinnerman)
2	Hex-head bolt (1/4 x 5/8 inch)
2	Hex-flange nut (1/4 inch)

Procedure

1. Install the 2 rubber grommets onto the back side of the oil cooler support (Figure 4).

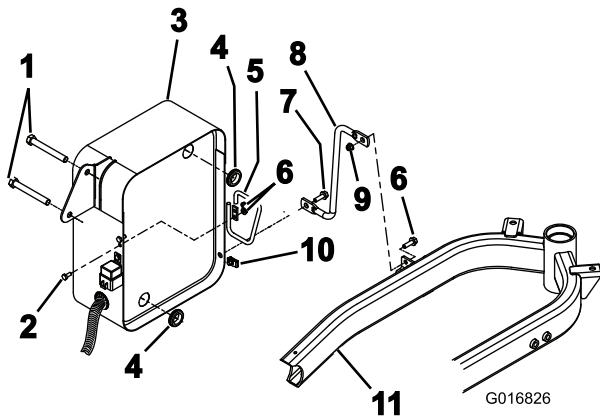


Figure 4

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|-----------------------------------|---|
| 1. Tap bolts (1/2 x 4 inch) | 7. Hex-head flange bolt (5/16 x 1 inch) |
| 2. Hex-head bolt (1/4 x 5/8 inch) | 8. Wireform brace |
| 3. Oil cooler support | 9. Flange nut (5/16 inch) |
| 4. Rubber grommet (2) | 10. Tinnerman nut (5/16 inch) |
| 5. Hose wireform | 11. Machine frame |
| 6. Hex-flange nuts (1/4 inch) | |

- B. Mount the oil cooler support by its flange to the machine frame with 2 tap bolts (1/2 x 4 inches).

Note: Torque the bolts to 100 to 110 ft-lb.

3. Install the wireform brace by securing the upper end to the frame and the lower end to the cylinder mount using 2 hex-head flange bolts (5/16 x 1 inch), a flange nut (5/16 inch), and a Tinnerman nut (Figure 4).

Note: If you have a three-wheel drive kit, the wireform brace should be inserted between the 2 hydraulic hoses. Also, install a hose wire form onto the side of the oil cooler support with 2 hex-head bolts (1/4 x 5/8 inch) and 2 hex-flange nuts (1/4 inch) for the 2 hoses to go through it (Figure 4).

5

Assembling and Installing the Fan and Oil Cooler Assembly

Parts needed for this procedure:

1	Oil cooler
1	Electric fan
4	Screw
4	Flat washer
4	Lock washer
4	Square nut
4	Nut (Tinnerman)
2	Hose clamp
4	Hex-head-flange bolt (5/16 x 1 inch)

Procedure

1. If the fan and oil cooler are not assembled, install the fan onto the oil cooler with 4 screws, 4 lock washers, 4 flat washers, and 4 square nuts as shown in (Figure 5).

2. Mount the oil cooler support to the machine.
 - A. Remove and discard the bolts that secure the ROPS to the right-hand side of the machine.

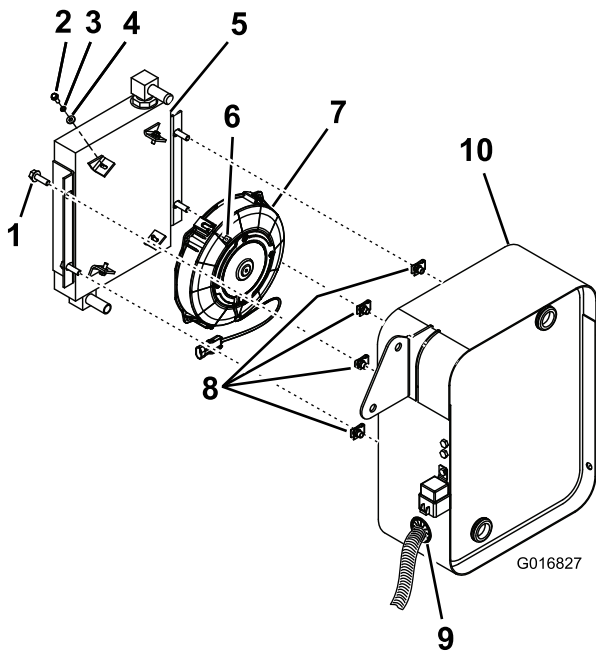


Figure 5

- | | |
|---|------------------------------|
| 1. Hex-head flange bolt (5/16 x 1 inch) | 6. Square nut |
| 2. Screw (#10) | 7. Electric fan |
| 3. Lock washer | 8. Tinnerman nut (5/16 inch) |
| 4. Flat washer | 9. Bushing |
| 5. Oil cooler | 10. Oil cooler support |

2. Slip 4 Tinnerman nuts onto the oil cooler support as shown in Figure 5.
3. Insert the hoses through the rubber grommets on the back of the oil cooler support.
4. Slip a hose clamp over the end of each of the 2 hoses that protrude through the back of the oil cooler support, and insert the 2 barbed fittings (90-degree) into the 2 hoses (Figure 5).
5. Finish routing the wire harness through the bushing in the oil cooler support, and connect the wire harness connector to the connector on the fan.
6. Secure the fan and oil cooler assembly to the oil cooler support with 4 bolts (5/16 x 1 inch) through the side flanges of the oil cooler and 4 Tinnerman nuts on the oil cooler support (Figure 5).

6

Finishing the Installation

Parts needed for this procedure:

1	Oil cooler screen
2	Wing screw
2	Retainer nut
2	Clip
2	Cable tie

Procedure

1. Connect the other ends of the hydraulic hoses to the hydraulic line and the manifold block, respectively (Figure 6).

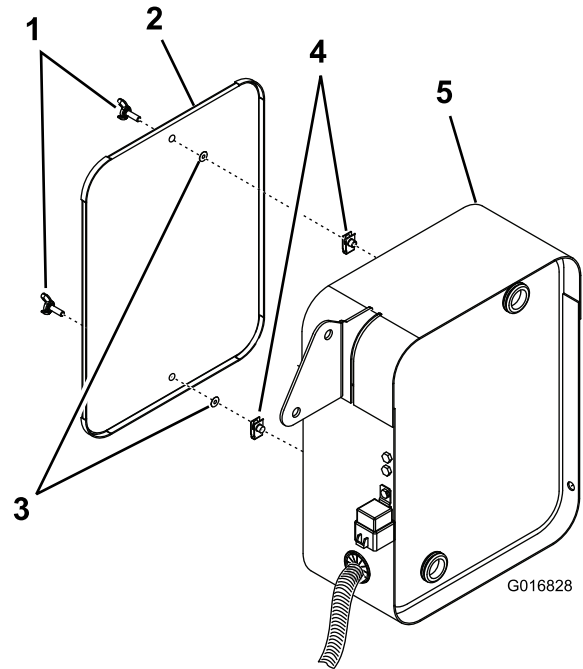


Figure 6

- | | |
|----------------------|-----------------------|
| 1. Wing screws | 4. Clips (1/4 inch) |
| 2. Oil cooler screen | 5. Oil cooler support |
| 3. Retainer nuts | |

2. Secure the hoses with cable ties as shown in Figure 2.

Note: Ensure that the hoses do not rub or contact hot or moving parts.

3. Fill the machine with hydraulic oil. Refer to the *Operator's Manual* for the machine.
4. Check for hydraulic oil leaks, and tighten any connections, if necessary.

Maintenance

5. Attach the oil cooler screen to the oil cooler support with 2 wing screws, 2 retainer nuts, and 2 clips (Figure 6).
6. Verify that the system works: When you engage the reels, the fan should turn on.

Clean the system every year (clean the screens), or more often, if necessary.