Form No. 3445-909 Rev C

Hose Replacement Kit

Groundsmaster® 3200 or 3300 Series Traction Unit

Model No. 144-3960

Installation Instructions

Installation

Loose Parts

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

Description	Qty.	Use
No parts required	–	Prepare the machine.
Right cooler-shroud bracket	1	Install the hose guides to the cooler-shroud brackets.
Left cooler-shroud bracket	1	
Flange nut (5/16 inch)	4	
Hose guide	2	
Flat washer (5/16 inch)	4	
Straight fitting	1	Install the right side hoses.
90º elbow fitting	1	
Hose with straight fittings	1	
Hose with 90º elbow	1	
Right cooler-shroud bracket assembly	1	
Cap	2	
Nylon locknut (3/8 inch)	1	
Bolt (3/8 x 3 inches)	1	
Flat washer (3/8 inch)	1	
Straight fitting	1	Install the left side hoses.
90º elbow fitting	1	
Hose with straight fittings	1	
Hose with 90º elbow	1	
Left cooler-shroud bracket assembly	1	
Hose guide	1	
Cap	2	
Nylon locknut (3/8 inch)	1	
Bolt (3/8 x 3 inches)	1	
Flat washer (3/8 inch)	1	

Preparing the Machine

1. Park the machine on a level surface.
2. Engage the parking brake.
3. Lower the cutting unit.
4. Shut off the engine and remove the key.
5. Raise the rear of the machine and support it with jack stands. Refer to *Operator's Manual* for the correct procedure.
6. Unlatch the hood and rotate it to the service position.
7. Remove the rear wheels.

8111 Lyndale Avenue South
Bloomington, MN 55420

Register at www.Toro.com.

Original Instructions (EN)
Printed in the USA

3445-909

Installing the Hose Guides to the Cooler-Shroud Brackets

Install the hose guides to the left and right cooler-shroud brackets with 2 flat washers (5/16 inch) and 2 flange nuts (5/16 inch); refer to Figure 1.

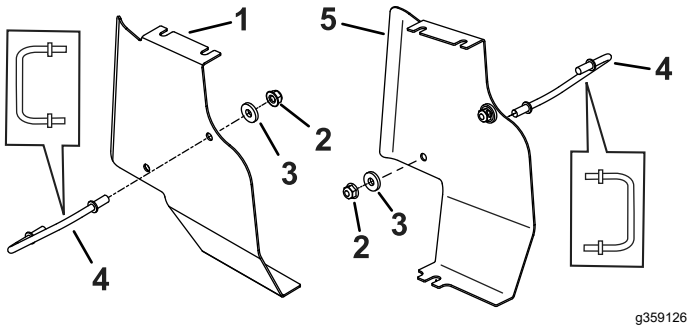

Figure 1

1. Left cooler-shroud bracket
2. Flange nut (5/16 inch)
3. Flat washer (5/16 inch)
4. Hose guide
5. Right cooler-shroud bracket

Installing the Right Side Hoses

Note: Install 1 side at a time.

1. Remove the existing hydraulic hoses from the hydraulic lines in front of the wheel and immediately install the caps to the hydraulic lines (Figure 2 and Figure 3).

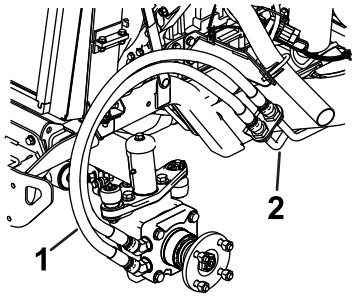

Figure 2

1. Existing hoses
2. Hydraulic lines

2. Remove the existing hose fittings from the wheel motor.

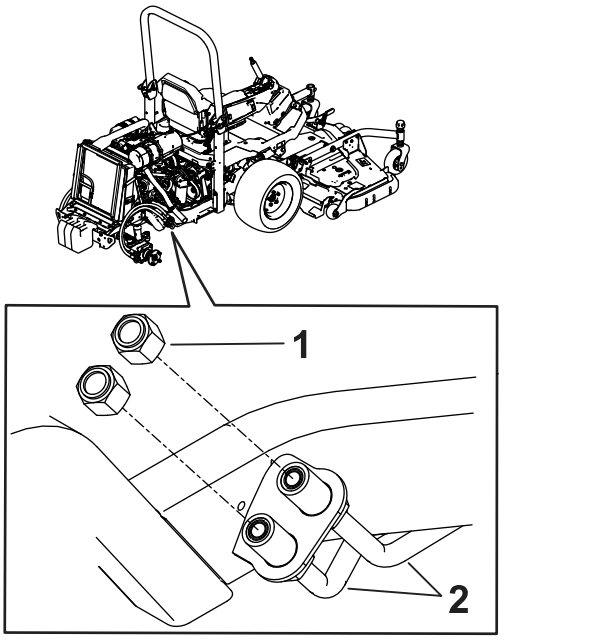

Figure 3

1. Caps
2. Hydraulic lines

3. Install the new straight fitting and the 90º elbow fitting to the wheel motor (Figure 4).

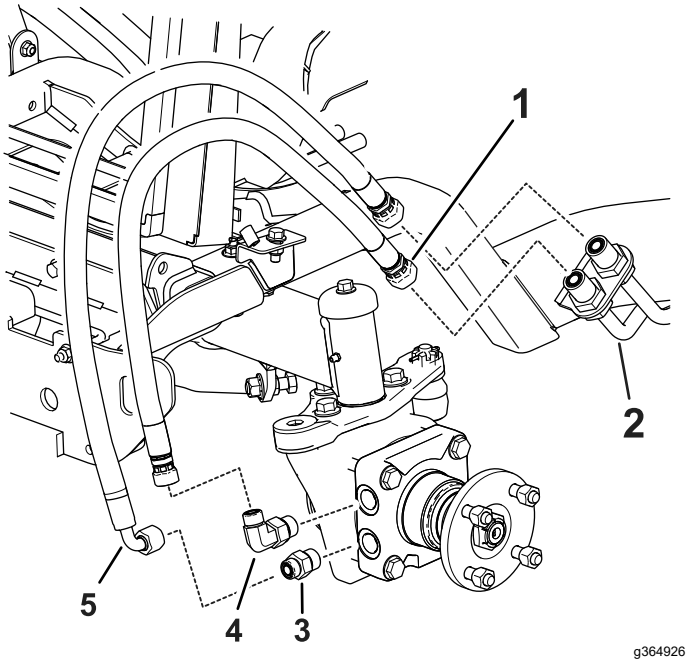

Figure 4

1. Hose with straight fittings
2. Hydraulic lines
3. Straight fitting
4. 90º elbow fitting
5. Hose with 90º elbow

4. Adjust the 90º elbow fitting to a 15º angle as shown in Figure 5.

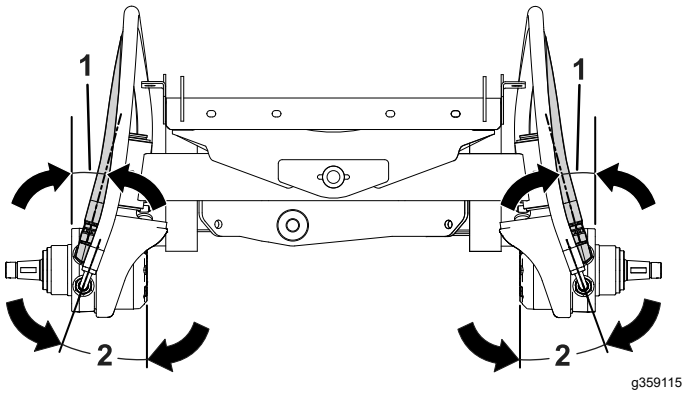

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Figure 5

1. 15º angle for hose with straight fittings
2. 20º angle for hose with 90º elbow

5. Torque the wheel motor fittings to 142 N·m (105 ft-lb).
6. Install the hose with straight fittings onto the 90º elbow fitting (Figure 4).
7. Install the hose with the 90º elbow to the straight fitting (Figure 4).
8. Adjust the 90º hose elbow to a 20º angle as shown in Figure 5.
9. Torque the hoses onto the fittings with 57 N·m (42 ft-lb).

   Note: Ensure the angles are maintained as shown in Figure 5.
10. Remove the existing nut and bolt under the radiator that secures the bumper bracket (Figure 6).
11. Replace the existing nut and bolt with a bolt (3/8 x 3 inches), flat washer (3/8 inch), and flange nut (3/8 inch) to the frame. Do not tighten the bolt until the cooler-shroud bracket is installed.

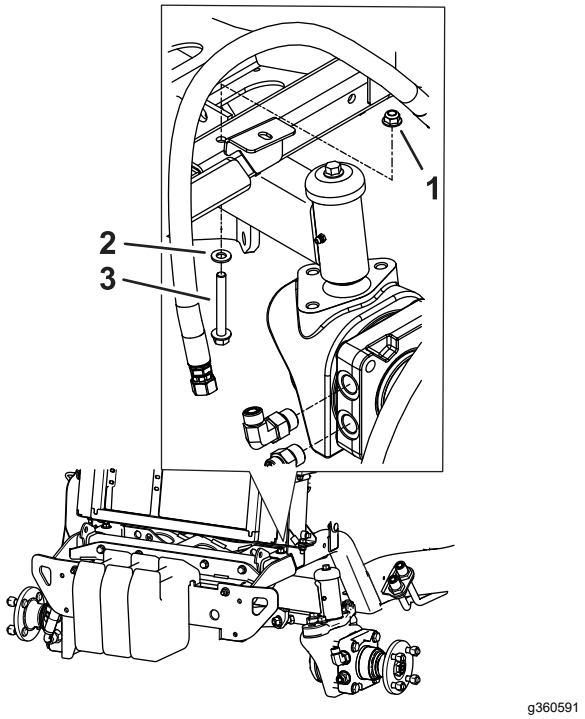

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Figure 6

1. Flange nut (3/8 inch)
2. Flat washer (3/8 inch)
3. Bolt (3/8 x 3 inches)

12. Loosen the bolts on the side of the radiator (Figure 7).
13. Slide the cooler-shroud bracket under the bolt heads on the radiator and bumper bracket (Figure 7).

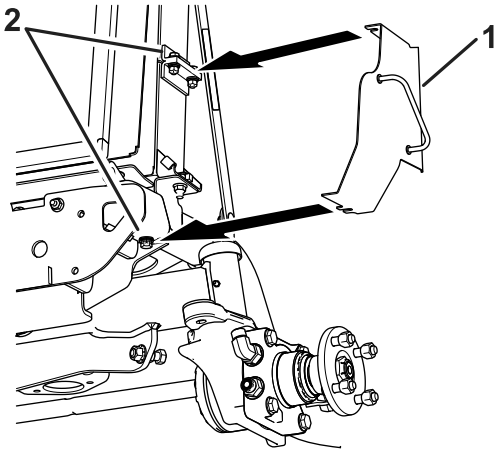

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Figure 7

1. Cooler-shroud bracket
2. Bolt heads

14. Push the cooler-shroud bracket all the way in and tighten the bolts.

15. Route the hoses through the hose guide (Figure 8).

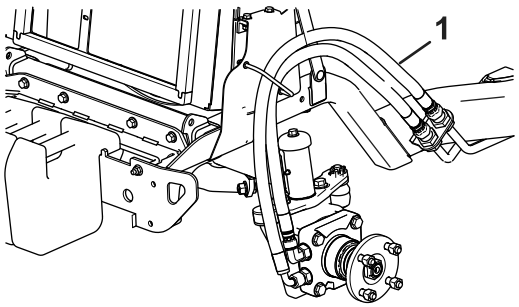

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Figure 8

1. Installed hoses and routed through the guide

16. Remove one cap at a time and install the correct hose to the hydraulic line as shown in Figure 4.

    Note: Use a backing wrench to prevent the hoses from twisting.

17. Remove the remaining cap and install the hose to the hydraulic line (Figure 4).

18. Torque the hoses to the hydraulic lines with 85 N·m (63 ft-lb).

    Note: Ensure the hoses are aligned above and below each other and not to the side.

19. Install the rear wheel and ensure there is a 1.6 to 4.8 mm (1/16 to 3/16 inch) clearance between the hoses and the tire sidewall.

20. Adjust the hose with the 90º elbow or 90° fitting if the clearance is not correct.

21. Torque the wheel-lug nuts; refer to the *Operator's Manual* for the correct procedure.

Installing the Left Side Hoses

1. Remove the existing hydraulic hoses from the hydraulic lines in front of the wheel and immediately install the caps to the hydraulic lines (Figure 9 and Figure 10).

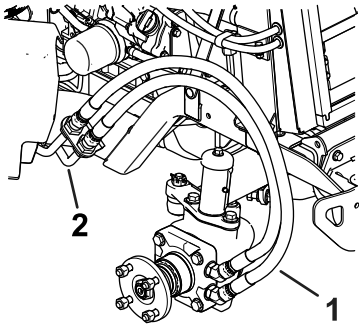

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Figure 9

1. Existing hoses
2. Hydraulic lines

2. Remove the existing hose fittings from the wheel motor.

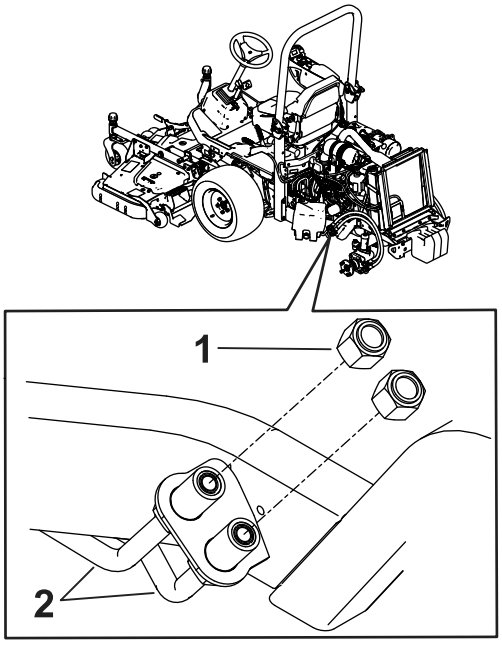

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Figure 10

1. Caps
2. Hydraulic lines

3. Install the new straight fitting and the 90º elbow fitting to the wheel motor (Figure 11).

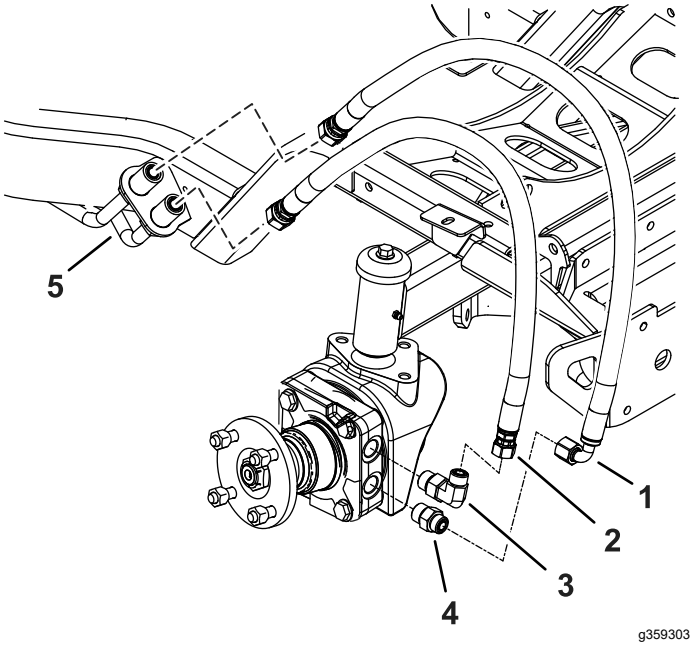

Figure 11

1. Hose with 90º elbow
2. Hose with straight fittings
3. 90º elbow fitting
4. Straight fitting
5. Hydraulic lines

4. Adjust the 90º elbow fitting to a 15º angle as shown in Figure 12.

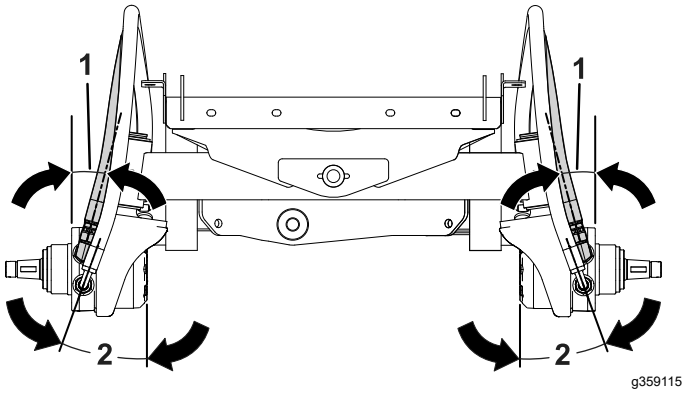

Figure 12

1. 15º angle for hose with straight fittings
2. 20º angle for hose with 90º elbow

5. Torque the wheel motor fittings to 142 N·m (105 ft-lb).
6. Install the hose with straight fittings onto the 90º elbow fitting (Figure 11).
7. Install the hose with the 90º elbow to the straight fitting (Figure 11).
8. Adjust the 90º hose elbow to a 20º angle as shown in Figure 12.
9. Torque the hoses onto the fittings with 57 N·m (42 ft-lb).

   Note: Ensure the angles are maintained as shown in Figure 12.
10. Remove the existing nut and bolt under the radiator that secures the bumper bracket (Figure 13).
11. Replace the existing nut and bolt with a bolt (3/8 x 3 inches), flat washer (3/8 inch), and flange nut (3/8 inch) to the frame. Do not tighten the bolt until the cooler-shroud bracket is installed.

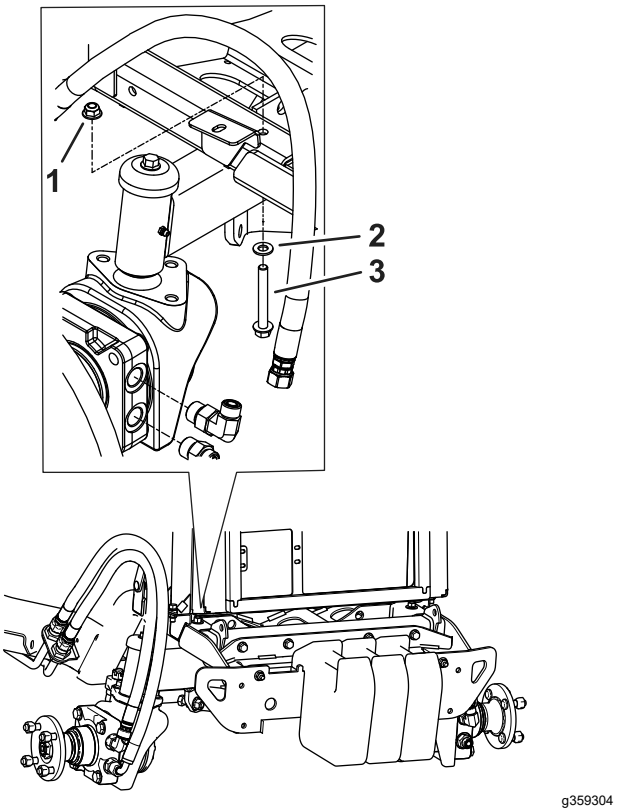

Figure 13

1. Flange nut (3/8 inch)
2. Flat washer (3/8 inch)
3. Bolt (3/8 x 3 inches)

12. Loosen the bolts on the side of the radiator (Figure 14).
13. Slide the left cooler-shroud bracket assembly under the bolt heads on the radiator and bumper bracket (Figure 14).

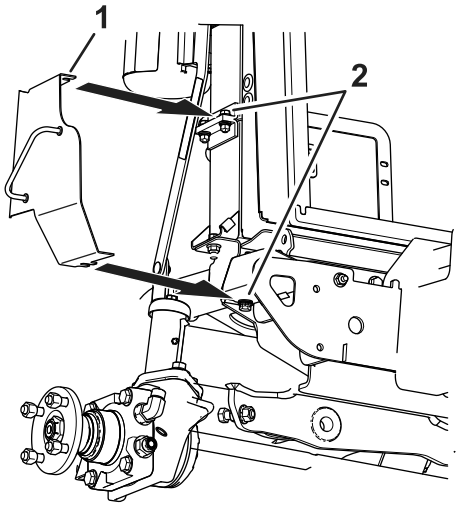

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Figure 14

1. Cooler-shroud bracket
2. Bolt heads

14. Push the cooler-shroud bracket all the way in and tighten the bolts.
15. Route the hoses through the hose guide (Figure 15).

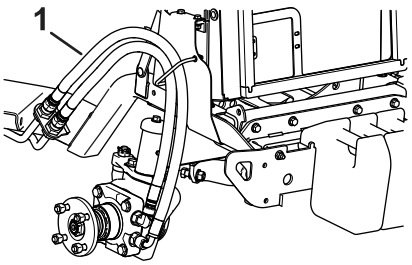

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Figure 15

1. Installed hoses and routed through the guide

16. Remove one cap at a time and install the correct hose to the hydraulic line as shown in Figure 11.

    Note: Use a backing wrench to prevent the hoses from twisting.
17. Remove the remaining cap and install the hose to the hydraulic line (Figure 11).
18. Torque the hoses to the hydraulic lines with 85 N·m (63 ft-lb).

    Note: Ensure the hose are aligned above and below each other and not to the side.
19. Install the rear wheel and ensure there is a 1.6 to 4.8 mm (1/16 to 3/16 inch) clearance between the hoses and the tire sidewall.
20. Adjust the hose with the 90º elbow or 90° fitting if the clearance is not correct.
21. Torque the wheel-lug nuts; refer to the *Operator's Manual* for the correct procedure.
22. Lower the hood and latch it.
23. Lower the rear of the machine.
24. Slowly drive the machine forward and reverse to purge the air out of the traction system.
25. Check the fitting connections and hoses for any leaks.
26. Check the hydraulic fluid level; refer to the *Operator's Manual* for the correct procedure.

Notes:

Count on it.