Form No. 3447-731 Rev A

Turn Signal Kit

Groundsmaster® 360, 3200, 3300, 4000, 5900, 7200 Series Rotary Mower or Reelmaster® 3000, 5000 Series Traction Unit with ROPS

Model No. 31672

Installation Instructions

Installation

1

Preparing the Machine

No Parts Required

Procedure

1. Park the machine on a level surface.
2. Engage the parking brake.
3. Disengage the PTO and lower the attachment(s).
4. Shut off the engine and remove the key.

2

Installing the Lights with a Sun Shade

Parts needed for this procedure:

2	Light bracket
8	Large speed-nut
8	Small speed-nut
8	Screw (#10 x 1-1/4 inches)
2	Front light
2	Rear light
4	Carriage bolt (5/16 x 1 inch)
4	Flange nuts (5/16 inch)
4	Carriage bolt (3/8 x 5 inches)
4	Carriage bolt (3/8 x 4 inches)
4	Carriage bolt (3/8 x 3 inches)
4	Flange locknuts (3/8 inch)
2	Mounting bracket

Procedure

Note: The location of the sun shade support determines the location of the light on the roll bar.

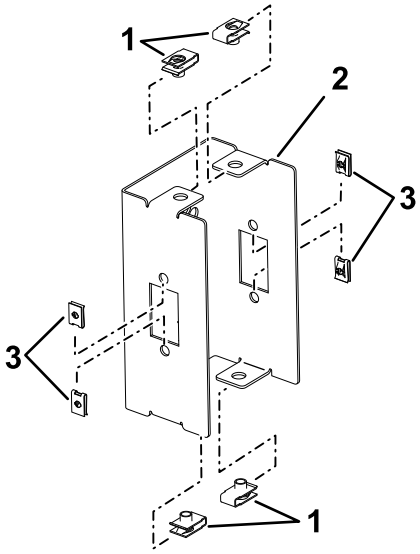
1. Install the large speed nuts to the top and bottom of the light bracket (Figure 1).
2. Install the small speed nuts to the sides of the light bracket (Figure 1).

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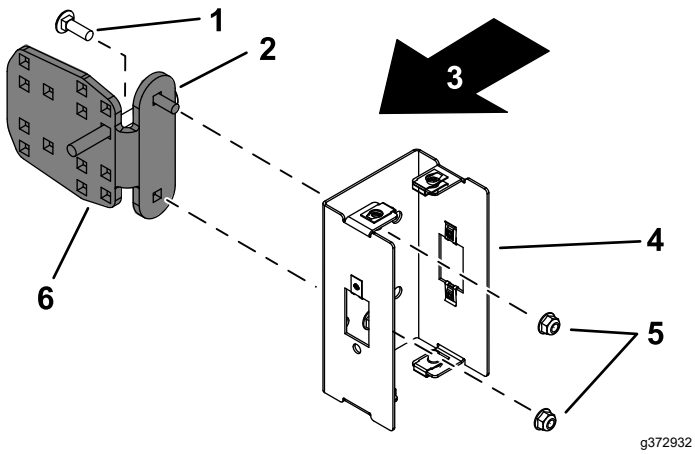
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Figure 1

1. Large speed nuts
2. Light bracket
3. Small speed nuts

3. Determine which holes to use for installing the mounting bracket to the light bracket. Refer to the table below and Figure 3.
4. Install the mounting bracket to the light bracket as shown in Figure 2.

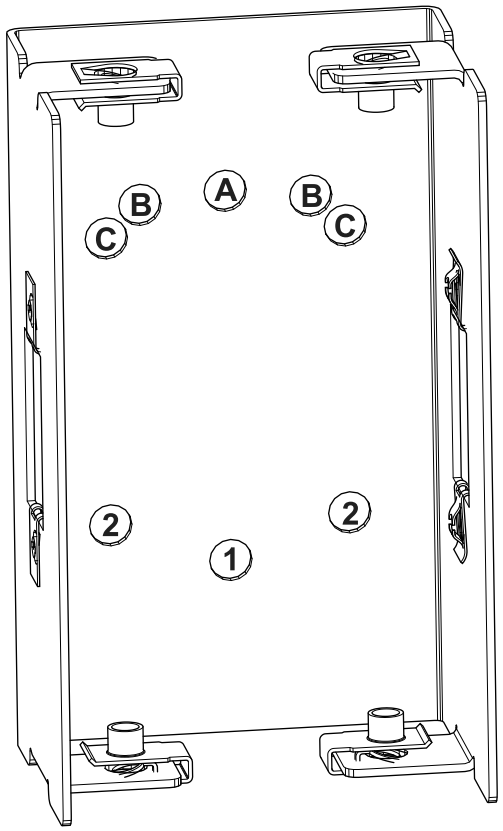
   Note: Ensure the mounting-bracket tab is pointing backwards (Figure 2).



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Figure 2

1. Carriage bolt (5/16 x 1 inch)
2. Mounting-bracket tab pointing backwards for machines with a sunshade
3. Front of machine
4. Light bracket
5. Locknut (5/16 inch)
6. Mounting bracket



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Figure 3

Mounting Bracket Position in the Light Bracket

Note: There are 2 positions for B and 2 in Figure 3. The correct holes are determined if you are installing the lights on the left or right side of the ROPS. Ensure the lights point straight back.

Hole Positions to Use (Figure 3)	Machine
B and 1	Groundsmaster 4000 and 4100 Series, ReelMaster 5000 Series, and ReelMaster 3000 Series
C and 2	Groundsmaster 4500, 4700 Series, and GroundsMaster 7000
A and 1	All other machines

5. Locate the bracket for the sunshade support and note the orientation of the bracket tab.

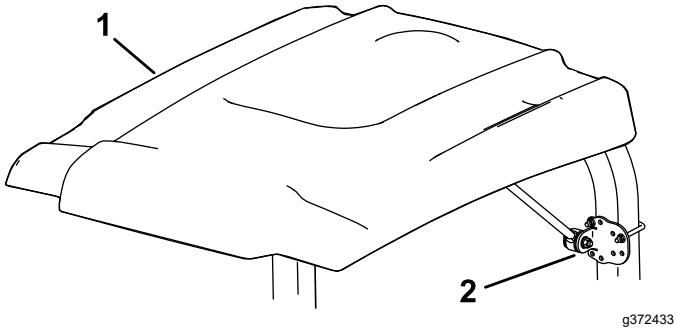


Figure 4

1. Sun shade
2. Bracket

6. Make note of which holes the existing U-bolts use when removing it.
7. Remove the U-bolt from the bracket attached to the sun-shade support. Discard the U-bolt.
8. Before installing the light assembly to the roll bar, you need to determine the length of bolts to use. Use the 3/8 inch carriage bolts that are 3, 4, or 5 inches long.
9. Using the holes used by the U-bolt, assemble the light assembly to the roll bar with existing sun-shade bracket, 4 carriage bolts (3/8 x 3, 4 or 5 inches), and 4 flange locknuts (3/8 inch); refer to Figure 5.

   Note: The length of the carriage bolts is determined by the size of the rollbar on your machine. Use the appropriate length to fit around your rollbar.

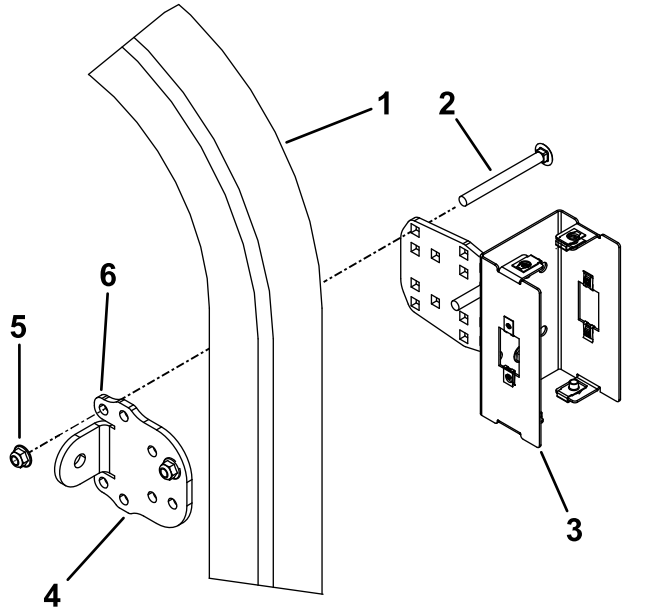
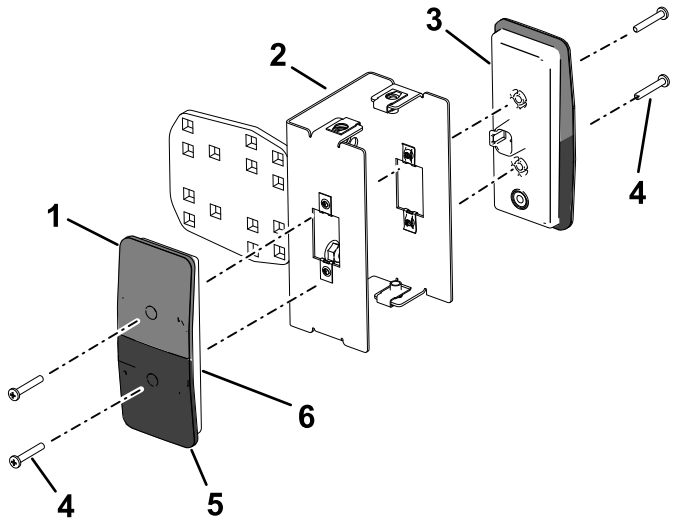


Figure 5

1. Rollbar
2. Bolt (3/8 x 3, 4 or 5 inches)
3. Light bracket
4. Existing sunshade bracket
5. Flange locknut (3/8 inch)
6. Bracket tab is pointing forward.

10. Align the front and rear lights to the light bracket with the yellow lens positioned as shown in Figure 6.
11. Install the front light to the front of the light bracket with 2 screws (#10 x 1-1/4 inches); refer to Figure 6.
12. Install the rear light to the light bracket with 2 screws (#10 x 1-1/4 inches); refer to Figure 6.



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Figure 6

1. Yellow lens
2. Light bracket
3. Rear light
4. Screw (#10 x 1-1/4 inches)
5. Red lens
6. Front light

3

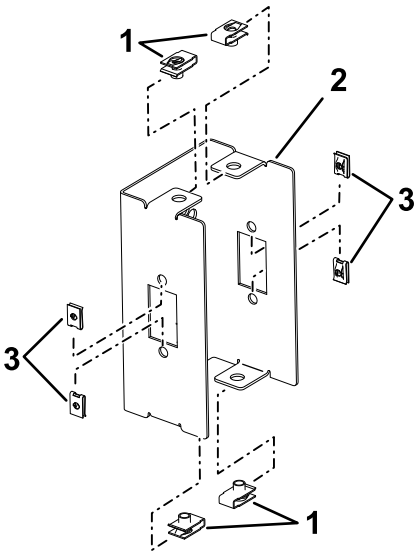
Installing the Lights without a Sunshade

Parts needed for this procedure:

2	Light bracket
8	Large speed-nut
8	Small speed-nut
8	Screw (#10 x 1-1/4 inches)
2	Front light
2	Rear light
4	Carriage bolt (5/16 x 1 inch)
4	Flange nuts (5/16 inch)
4	Carriage bolt (3/8 x 5 inches)
4	Carriage bolt (3/8 x 4 inches)
4	Carriage bolt (3/8 x 3inches)
2	Mounting bracket
2	Rollbar bracket

Procedure

1. Install the large speed nuts to the top and bottom of the light bracket (Figure 7).
2. Install the small speed nuts to the sides of the light bracket (Figure 7).



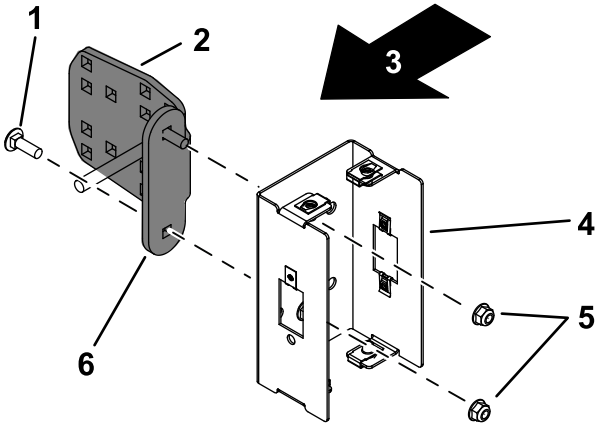
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Figure 7

1. Large speed nuts
2. Light bracket
3. Small speed nuts

3. Determine which holes to use for installing the mounting bracket to the light bracket and the position on the rollbar. Refer to the table below and Figure 8 through Figure 18.
4. Install the mounting bracket to the light bracket as shown in Figure 8.

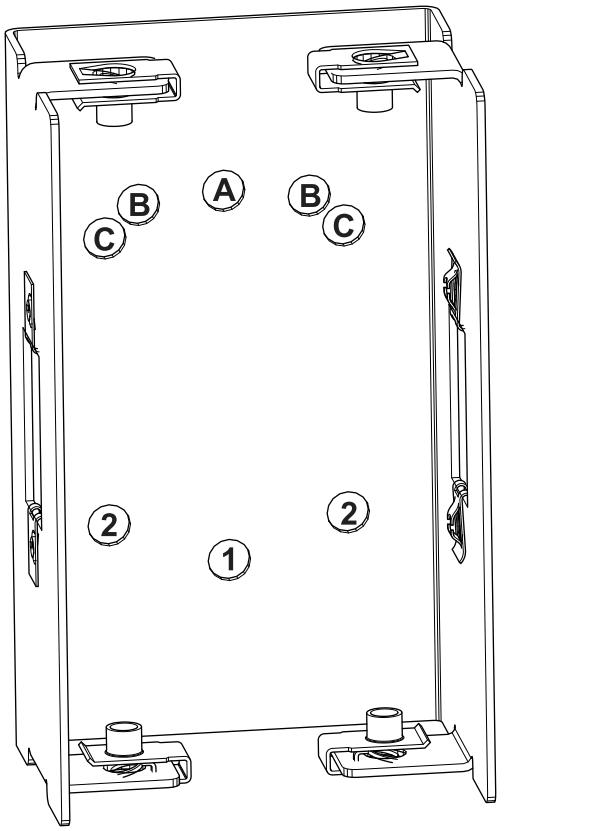
   Note: Ensure the mounting-bracket tab points in the correct position (Figure 8).



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Figure 8

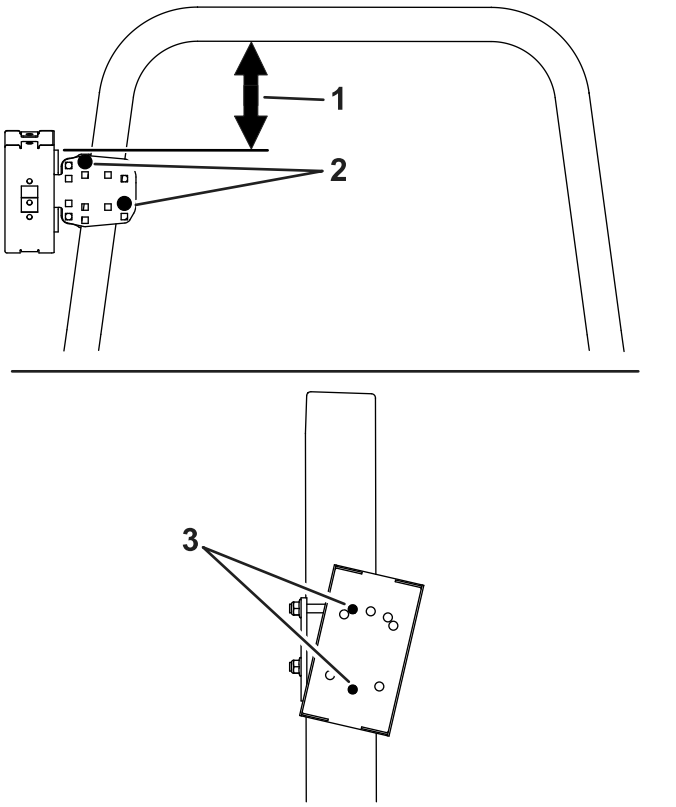
1. Carriage bolt (5/16 x 1 inch)
2. Mounting bracket
3. Front of machine
4. Light bracket
5. Locknut (5/16 inch)
6. Mounting-bracket tab pointing forward for machines with no sunshade



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Figure 9

Positions for Mounting Bracket



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Figure 10

ReelMaster 3000 Series

1. 15.2 to 17.8 cm (6 to 7 inches)
2. Use these holes in the brackets.
3. Use these holes in the housing.

Note: There are 2 positions for B and 2 in Figure 9. The correct holes are determined if you are installing the lights on the left or right side of the ROPS. Ensure the lights point straight back.

Hole Positions to Use (Figure 9)	Machine
B and 1	Groundsmaster 4000 and 4100 Series, ReelMaster 5000 Series, and ReelMaster 3000 Series
C and 2	Groundsmaster 4500, 4700 Series, and GroundsMaster 7000
A and 1	All other machines

Note: Each machine series has a specific location on the rollbar. Refer to Figure 10 through Figure 18.

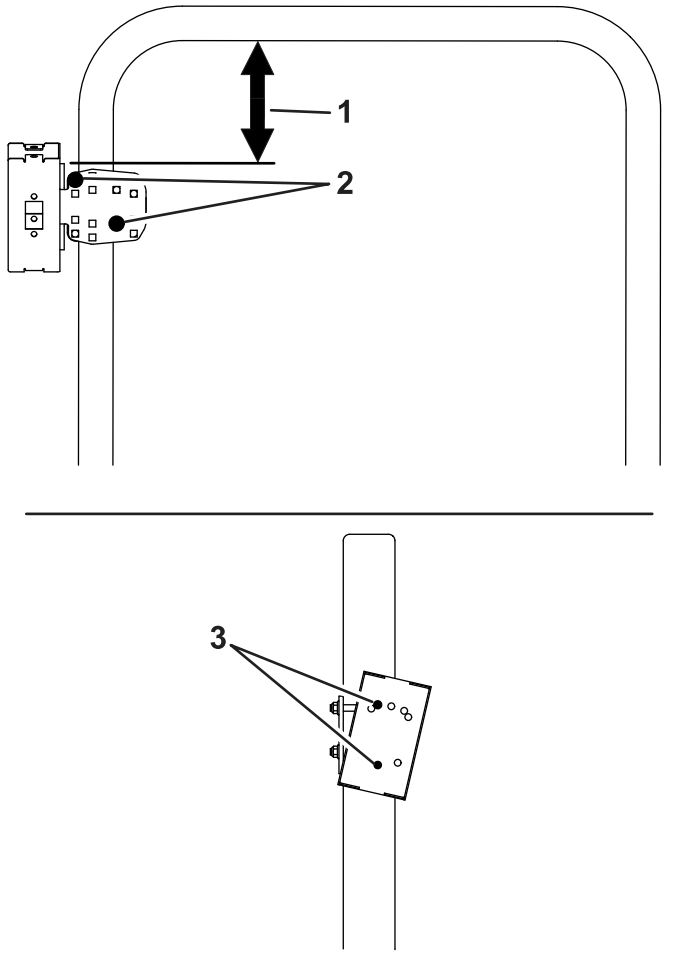


Figure 11

ReelMaster 5000 Series

1. 16.8 to 19.4 cm (6-5/8 to 7-5/8 inches)
2. Use these holes in the brackets.
3. Use these holes in the housing.

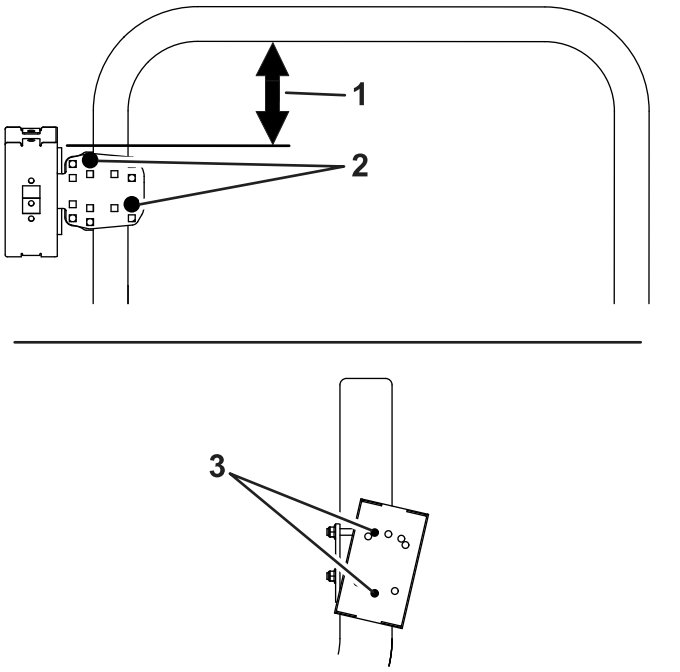


Figure 12

GroundsMaster 4000 and 4100 Series

1. 14.3 to 16.8 cm (5-5/8 to 6-5/8 inches)
2. Use these holes in the brackets.
3. Use these holes in the housing.

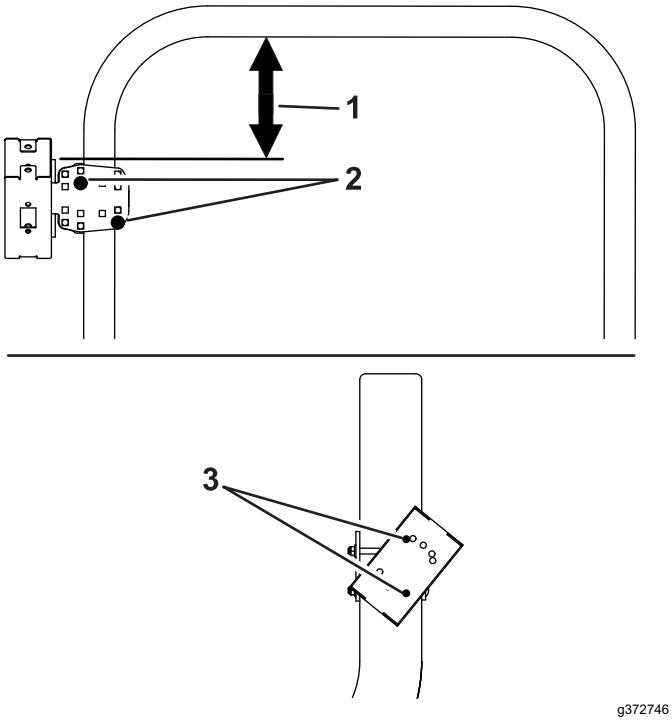


Figure 13

GroundsMaster 4500 Series

1. 19.0 to 21.6 cm (7-1/2 to 8-1/2 inches)
2. Use these holes in the brackets.
3. Use these holes in the housing.

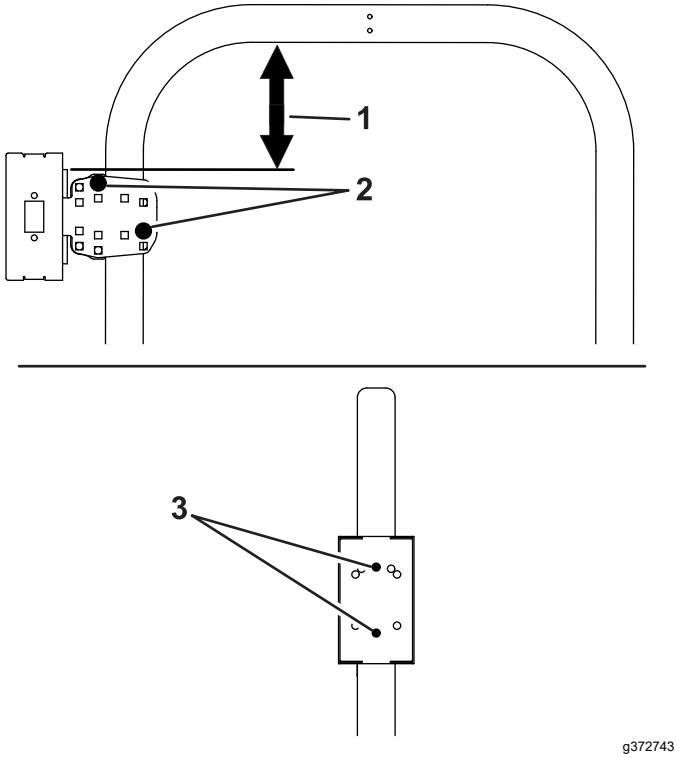
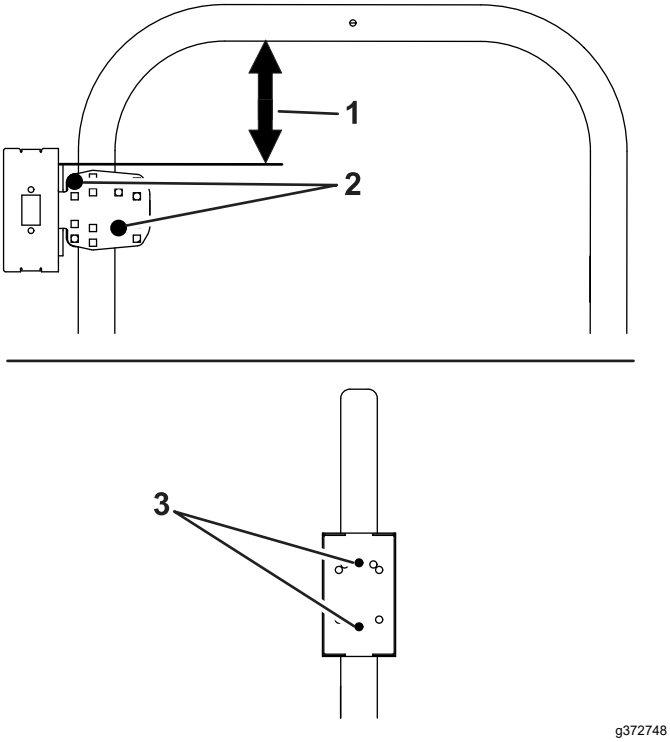


Figure 14

GroundsMaster 3280 Series

1. 15.9 to 18.4 cm (6-1/4 to 7-1/4 inches)
2. Use these holes in the brackets.
3. Use these holes in the housing.

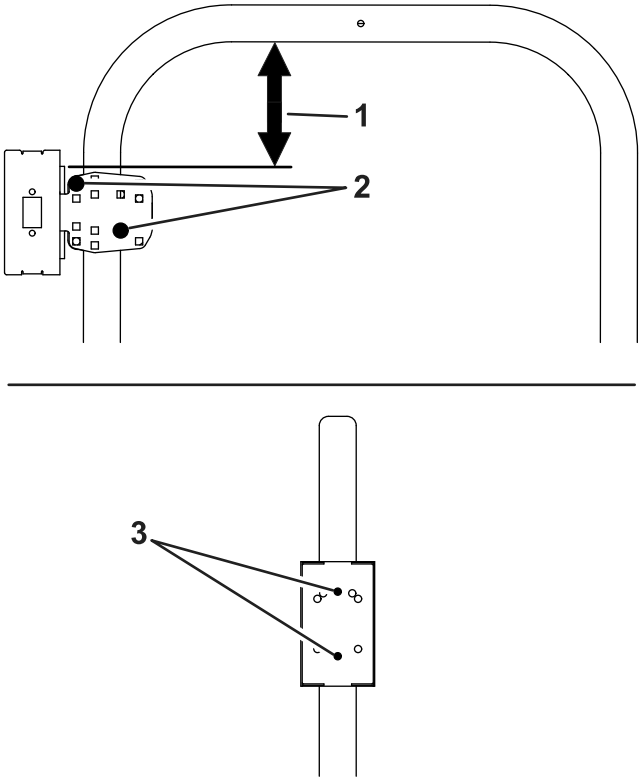


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Figure 15

GroundsMaster 7200 Series

1. 15.9 to 18.4 cm (6-1/4 to 7-1/4 inches)
2. Use these holes in the brackets.
3. Use these holes in the housing.

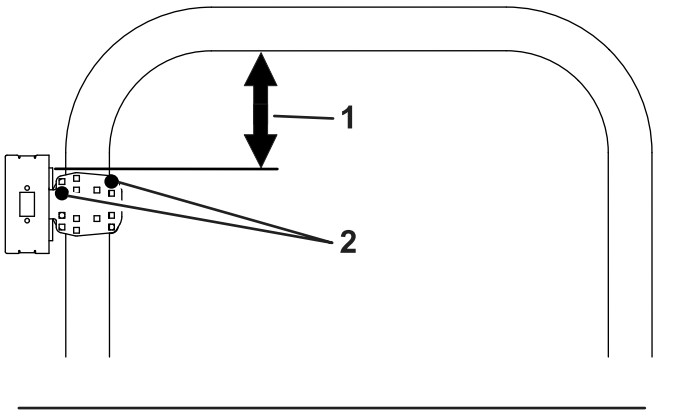


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Figure 16

GroundsMaster 360 Series

1. 15.9 to 18.4 cm (6-1/4 to 7-1/4 inches)
2. Use these holes in the brackets.
3. Use these holes in the housing.

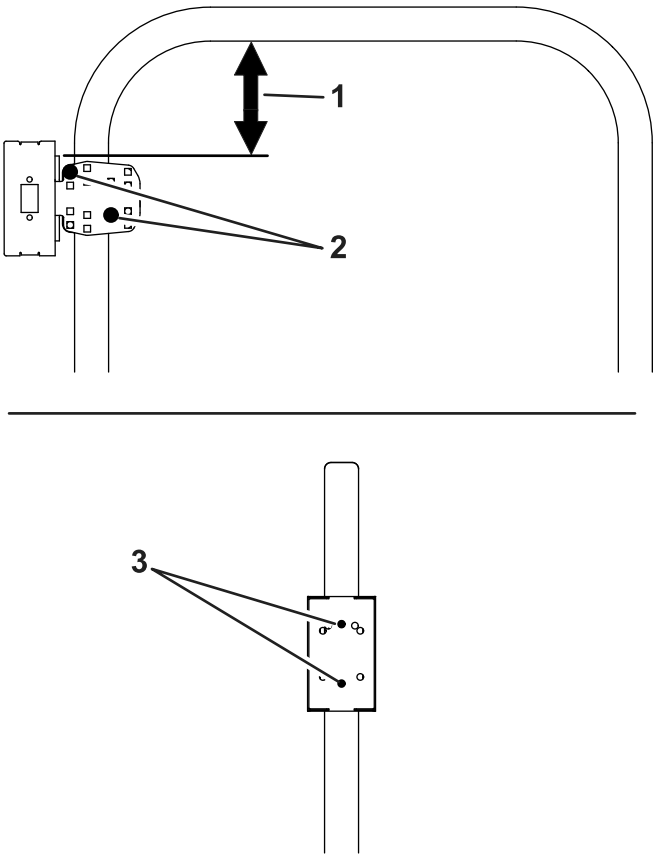


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Figure 17

GroundsMaster 5900 Series

1. 19.0 to 21.6 cm (7-1/2 to 8-1/2 inches)
2. Use these holes in the brackets.
3. Use these holes in the housing.



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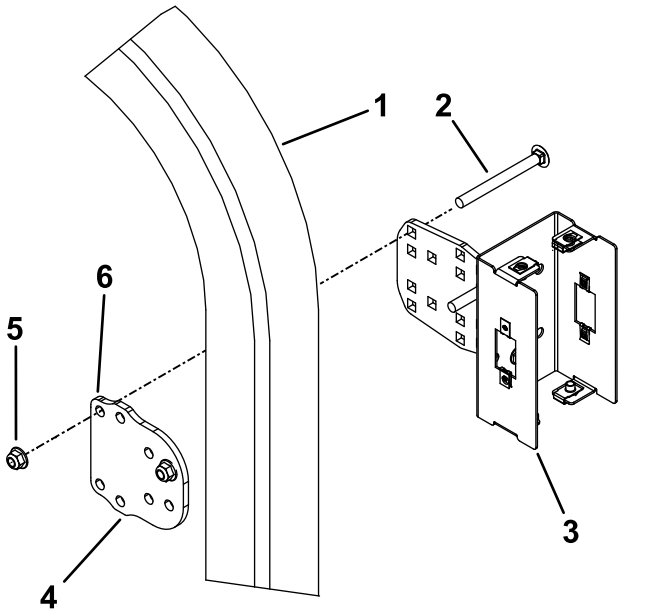
Figure 18

GroundsMaster 3200 and 3300 Series

1. 15.9 to 18.4 cm (6-1/4 to 7-1/4 inches)
2. Use these holes in the brackets.
3. Use these holes in the housing.

5. Before installing the light assembly to the roll bar, you need to determine the length of bolts to use. Use the 3/8 inch carriage bolts that are 3, 4, or 5 inches long.
6. Assemble the light assembly to the roll bar with rollbar bracket, 4 carriage bolts (3/8 x 3, 4 or 5 inches), and 4 flange locknuts (3/8 inch); refer to Figure 10 through Figure 18 and Figure 19.

   Note: The length of the carriage bolts is determined by the size of the rollbar on your machine. Use the appropriate length to fit around your rollbar.

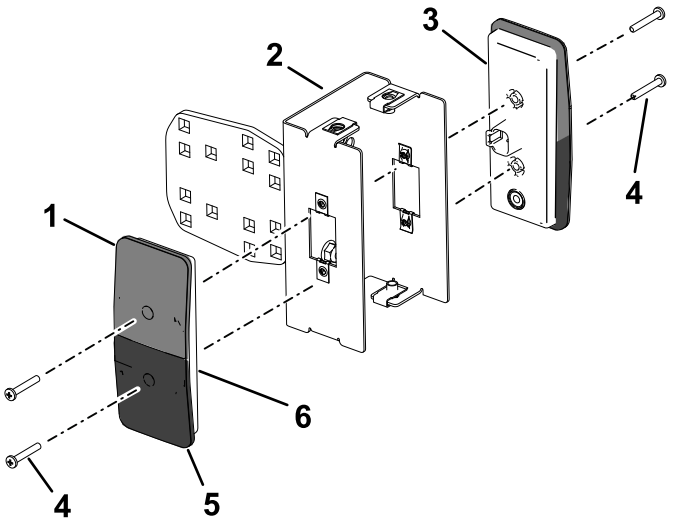


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Figure 19

1. Rollbar
2. Bolt (3/8 x 3, 4 or 5 inches)
3. Light bracket
4. Rollbar bracket
5. Flange locknut (3/8 inch)
6. No tab on bracket

7. Align the front and rear lights to the light bracket with the yellow lens positioned as shown in Figure 20.
8. Install the front light to the front of the light bracket with 2 screws (#10 x 1-1/4 inches); refer to Figure 20.
9. Install the rear light to the light bracket with 2 screws (#10 x 1-1/4 inches); refer to Figure 20.



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Figure 20

1. Yellow lens
2. Light bracket
3. Rear light
4. Screw (#10 x 1-1/4 inches)
5. Red lens
6. Front light

4

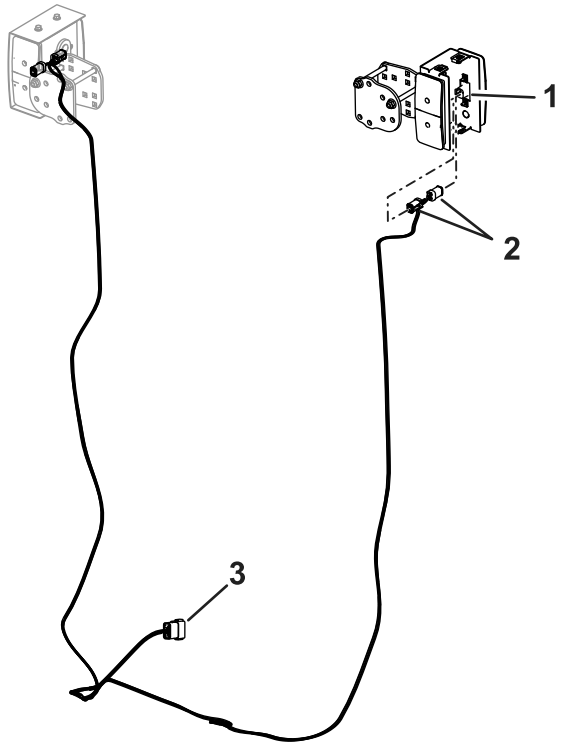
Routing the Wire Harness

No Parts Required

Procedure

1. Locate the 12 pin connector on your machine's main harness under the seat platform.
2. Plug the wire harness 12-pin connector into the main harness (Figure 21).
3. Route the harness up each side of the roll bar.

   Note: Ensure the harness is not pinched and when certain rollbars are folded.
4. Plug the harness into the front and rear lights (Figure 21).

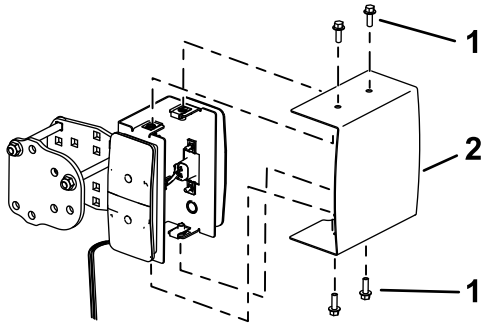


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Figure 21

1. Light connectors
2. Harness connectors
3. 12-pin connector

5. Install the cover onto the light brackets with 8 bolts (1/4 x 3/4 inch); refer to .



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Figure 22

1. Bolt (1/4 x 3/4 inch)
2. Cover

5

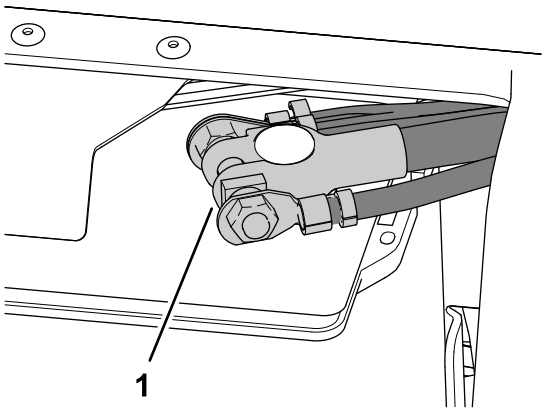
Connecting the Battery

No Parts Required

Connecting the Battery

Groundsmaster 4100 Series Machines

1. Assemble the terminal of the negative battery cable to the negative post of the battery, and tighten the nut of the terminal by hand (Figure 23).



g205861

Figure 23

1. Terminal (negative battery cable)

2. Test the lights of the kit.
3. Close the battery compartment door securely.

Connecting the Battery

Groundsmaster 5900 Series Machines

1. Rotate the battery disconnect switch to the ON position (Figure 24).

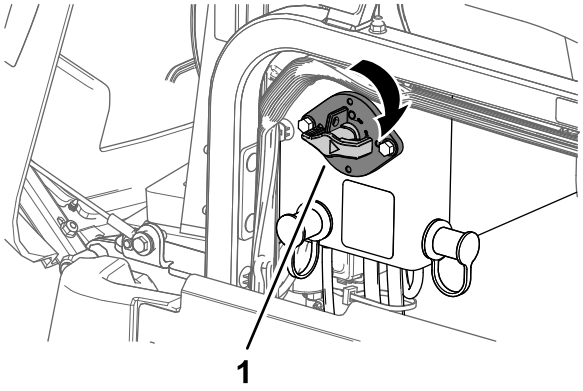


Figure 24

1. Battery disconnect switch

2. Test the lights of the kit.
3. Close the hood and latch it.