



Tri-Roller Kit for Greensmaster 3000 Series Model No. 04495—Serial No. 200000501 and Up

Form No. 3329-231 Rev B

Installation Instructions

Installation

Important: Read this Operator's Manual thoroughly before operating the Tri-Roller Kit. Failure to do so may result in damage to the roller.

Mounting the Pull Arm Bumpers (Greensmaster 3050, 3100, 3150 and 3200)

1. Using the dimensions shown in Figure 1, locate, mark, and drill 2 holes (0.221 in. diameter) in the underside of each pull frame cross tube.

Note: The holes may already be present in the cross tubes.

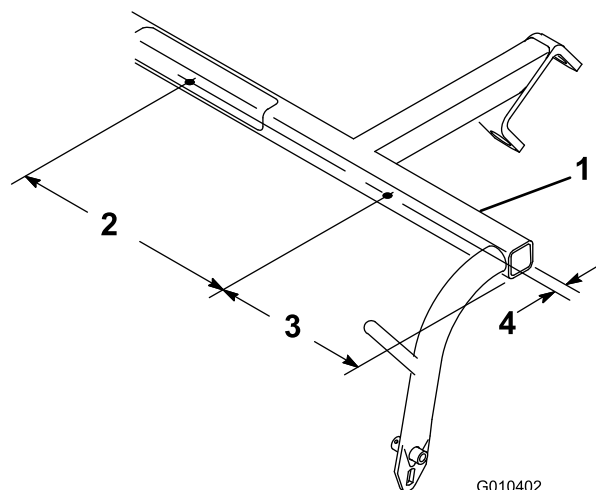


Figure 1

Greensmaster 3050, 3100, and 3150 Shown

- | | |
|--------------------------|----------------|
| 1. Pull frame cross tube | 3. 3.54 inches |
| 2. 19.43 inches | 4. .75 inch |

2. Mount 2 recessed bumpers to the underside of each pull frame cross tube with 2 washer head self tapping screws (1/4 x 3/4 in.) (Figure 2).

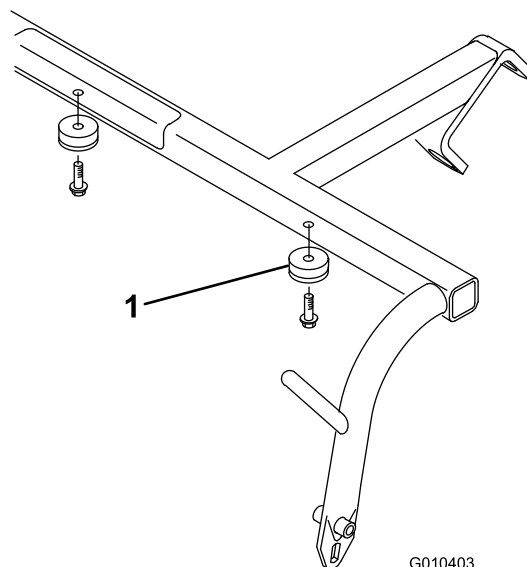


Figure 2

Greensmaster 3050, 3100 and 3150 Shown

1. Recessed bumper

Adjusting the Rear Roller Scrapers

Note: The rear roller scraper is adjusted at the factory, but can be adjusted to meet turf conditions.

1. Loosen the locknuts securing the scraper to the frame.
2. Adjust the scraper until there is 0.03-0.06 in. clearance between the edge of the scraper and roller.
3. Tighten the locknuts securing the scraper.

Mounting the Tri-Rollers

1. Park the machine on a level surface, lower the lift arms, stop the engine, and set the parking brake.

Note: If the carrier frames are equipped with single point pull frames, the pull frame and attaching ball joint must be removed (Figure 3).

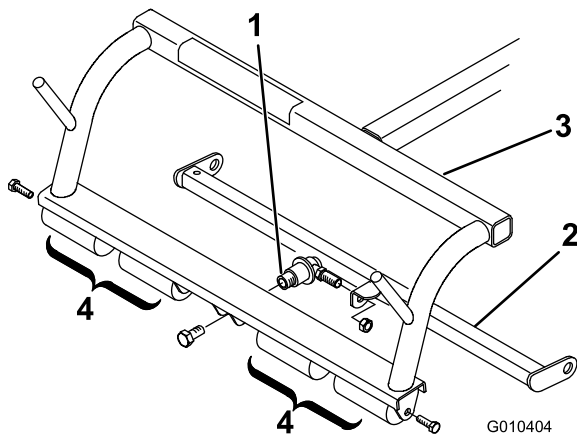


Figure 3

Greensmaster 3200 Only

- | | |
|----------------|------------------|
| 1. Ball socket | 3. Carrier frame |
| 2. Pull frame | 4. Roller sets |

2. Slide the tri-roller under the traction unit pull frame while hooking the lift roller onto the lift arm (Figure 4).

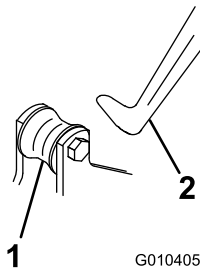


Figure 4

- | | |
|----------------|-------------|
| 1. Lift roller | 2. Lift arm |
|----------------|-------------|

3. Mount the new pull link assemblies to the **Greensmaster 3200 and 3250** pull arms as follows:
 - A. Remove the screws securing the outside ends of each anti-scalp roller shaft to each end of the carrier frame (outside end of shafts only) (Figure 3).
 - B. Assemble a jam nut and ball joint receiver onto each pull link assembly as shown in Figure 5 and Figure 6.
 - C. Mount a pull link assembly to each end of the carrier frame with a spacer, washer and screw (Figure 5 and Figure 6). Make sure that the nylon bushing is in the pull link.
 - D. Install the ball stud and lock washer to each end of the tri-roller (Figure 5 and Figure 6).
 - E. Adjust the pull links all the way forward and tighten the jam nut.
 - F. Slide the sleeve back on each ball joint receiver and hook them onto the ball studs (Figure 5 and Figure 6).

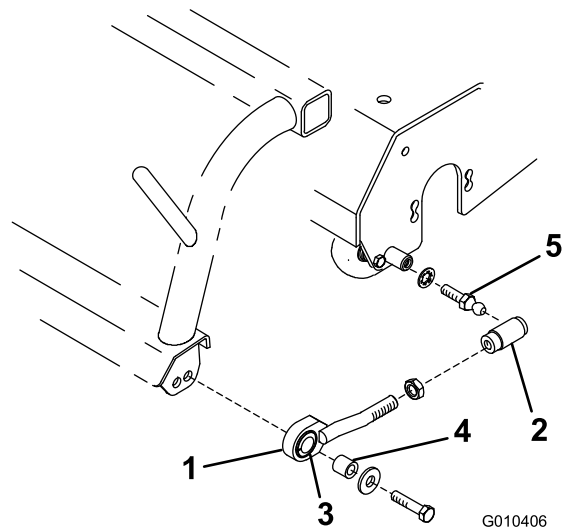


Figure 5

Greensmaster 3200 Shown

- | | |
|------------------------|-------------------------------|
| 1. Pull link assembly | 4. Spacer |
| 2. Ball joint receiver | 5. Ball stud (large diameter) |
| 3. Nylon bushing | |

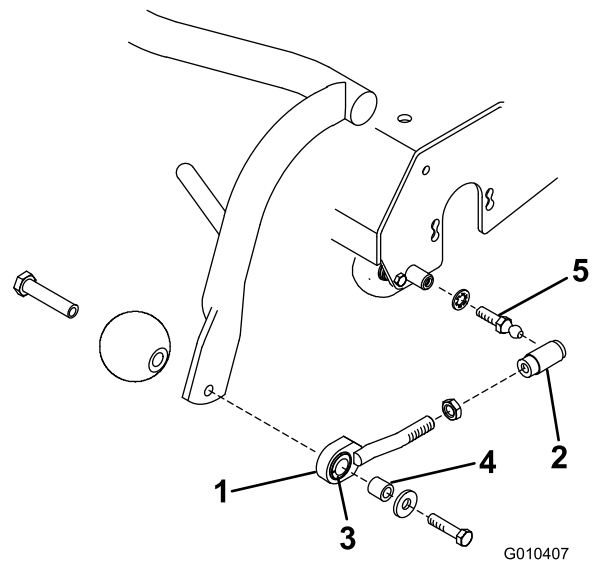


Figure 6

Greensmaster 3250 Shown

- | | |
|------------------------|-------------------------------|
| 1. Pull link assembly | 4. Spacer |
| 2. Ball joint receiver | 5. Ball stud (large diameter) |
| 3. Nylon bushing | |

4. When mounting the Tri-Roller Kit to the Greensmaster 3050, 3100 or 3150 traction unit, use the small diameter ball stud and washer on each end of the tri-roller (Figure 7). Adjust the links so that they are forward as far as they will go.

Note: To avoid tri-roller interference with the traction pedal linkage, it may be necessary to lower the tri-rollers when in the raised (transport) position; refer to Adjusting the Lift Cylinders in the

Maintenance section of the traction unit Operator's Manual.

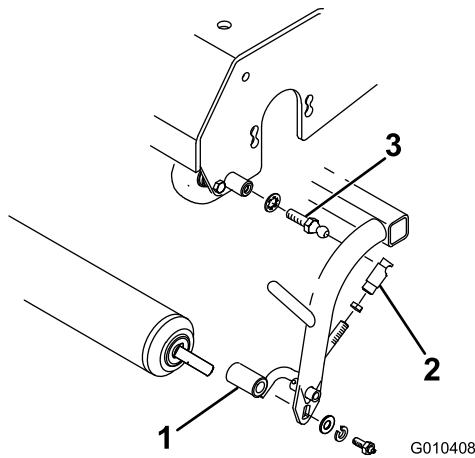


Figure 7

1. Pull link assembly
2. Ball joint receiver
3. Ball stud (small diameter)

Note: When mounting the Tri-roller Kit in the right front position on the Greensmaster 3200 or 3250 traction unit, remove the counterweight from the left end of the unit and mount it on the right end. Connect the motor to the left end.

5. Store the front reel motors as follows:
 - A. Loosen the mounting screws and washers for the reel motor to each tri-roller. Leave approximately 1/2 in. (13 mm) of threads exposed on each mounting screw (Figure 8).
 - B. Install the motor by rotating the motor clockwise so the motor flanges clear the screws. Rotate the motor counterclockwise until the flanges encircle the screws and tighten the screws. Ensure that the washers are against the screw heads.
6. Store the rear reel motor on the Greensmaster 3150, 3200 or 3250 the same as the front reel motor.

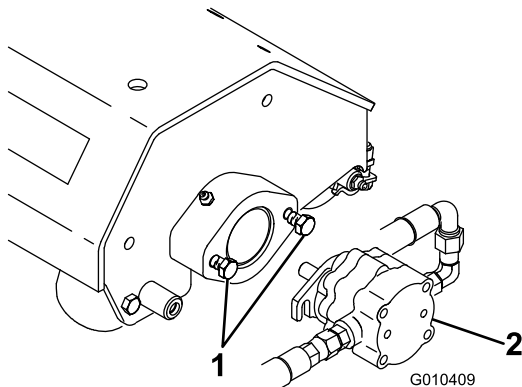


Figure 8

1. Screws and washers
2. Reel motor

7. Store the rear reel motor on the Greensmaster 3100 and Greensmaster 3050 as follows:

- A. Using the dimensions shown in Figure 9 for the Greensmaster 3100 and Figure 10 for the Greensmaster 3050, locate and scribe a line on the appropriate frame member.

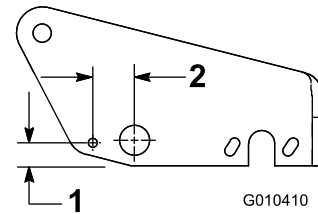


Figure 9

1. .90 inch
2. 1.62 inch

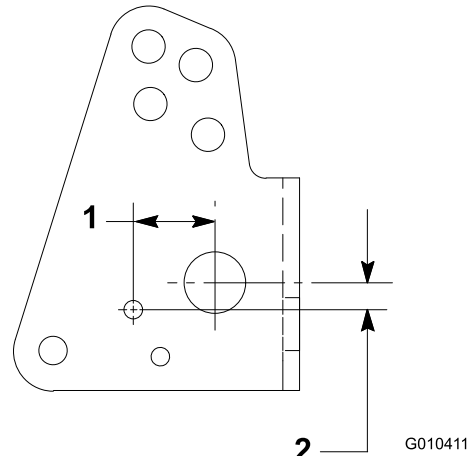


Figure 10

1. 1.54 inch
2. .51 inch

- B. Insert the spline shaft of the reel motor into the storage tube on the frame.
- C. Using the reel motor flange as a template and positioning it as shown in Figure 11, locate, mark, and drill a hole (0.344 in. diameter) on the scribed line.

Note: The hole may already be present.

- D. Position the spacer between the reel motor flange and frame while aligning the holes. Secure the reel motor and spacer to the frame with a self tapping screw.

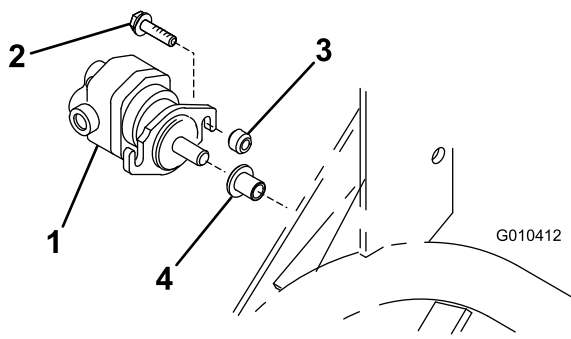


Figure 11

- | | |
|-----------------------|-----------------|
| 1. Reel motor | 3. Spacer |
| 2. Self tapping screw | 4. Storage tube |

8. Mount the counterweight to the right side of the rear tri-roller with 2 screws and washers.

Installing the Rear Weight

The Greensmaster Traction Units comply with ANSI B71.4-1999 and EN836:1997 Standards when 43 lbs. of calcium chloride ballast is added to the rear wheel and also equipped with rear weight. Order the appropriate weight kit (see chart below) from your local Authorized Toro Distributor.

| Traction Unit | Weight Kit Part No. |
|---|---------------------|
| Greensmaster 3050, 3100, or 3200 2-Wheel Drive | 99-1640 |
| Greensmaster 3100, 3150, 3200, or 3250 3-Wheel Drive or with 3-Wheel Drive Kit | 99-1645 |
| Greensmaster 3100 (Model No. 04356), 3150 (Model No. 04357), and 3250-D (Model No. 04383) (2-Wheel Drive) | 100-6442 |
| Greensmaster 3150, 3200 or 3250 with ROPS only and 2-Wheel Drive | 100-6442 |

Operation

Training Period

Before rolling greens, we suggest that you find a clear area and practice starting, stopping, raising, lowering, and rolling with the tri-roller. This training period will be beneficial to the operator in gaining confidence in the performance of the tri-roller.

Operating Tips

Maintain a straight line when rolling. Do not turn when the tri-rollers are on the ground.

When the edge of the green has been reached, raise the tri-rollers before turning or stopping. The tri-rollers must be raised completely before making turns. Survey the green to determine if there are any obstacles that will be damaged or will result in damage to the rollers, such as sprinkler heads and protruding objects.

Maintenance

Lubrication

There are 4 grease fittings on each tri-roller, which must be lubricated after every 15 hours of operation. Lubricate using a #2 multi-purpose lithium base grease. A hand operated grease gun is recommended for best results.

1. Wipe each grease fitting with a clean rag.
2. Apply grease to the tri-roller shaft bearings and rear roller bearings (Figure 12) until pressure is felt.

Important: Do not apply too much pressure or the grease seals will be permanently damaged.

3. Wipe excess grease away.

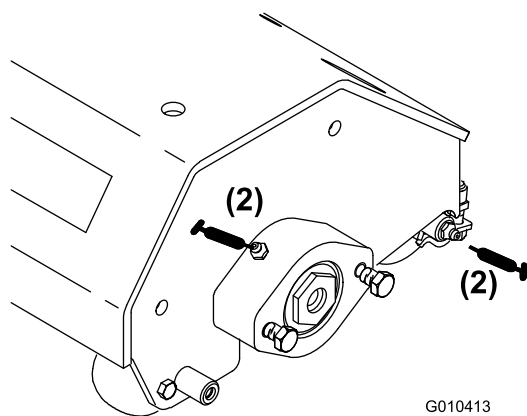


Figure 12

Notes:

Notes:



Count on it.