



# Driveshaft Adapter Kit for the Universal Groomer

Model No. 133-9230

Form No. 3412-237 Rev A

## Installation Instructions

# 1

## Removing the Groomer Brush

No Parts Required

### Procedure

1. If the reel is attached to a traction unit, park the machine on a level surface, shut off the engine, engage the parking brake, remove the ignition key, and secure the machine before installing the kit.
2. Disengage the quick-up lever.
3. Remove and retain the 4 bolts, jam nuts, and shaft clamps securing the groomer brush to both sides of the machine (Figure 1).

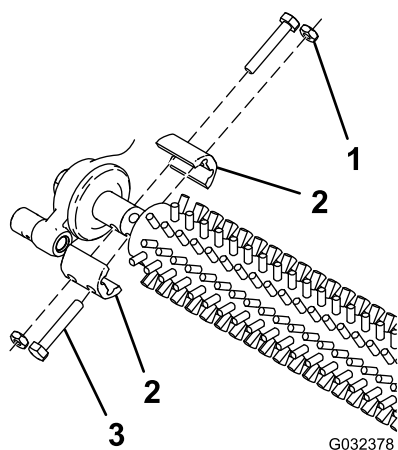


Figure 1

- |                |         |
|----------------|---------|
| 1. Jam nut     | 3. Bolt |
| 2. Shaft clamp |         |

# 2

## Removing the Groomer Drive Box

No Parts Required

### Procedure

1. Remove the cotter and adjuster pins from the adjuster-arm assembly rod (Figure 2).

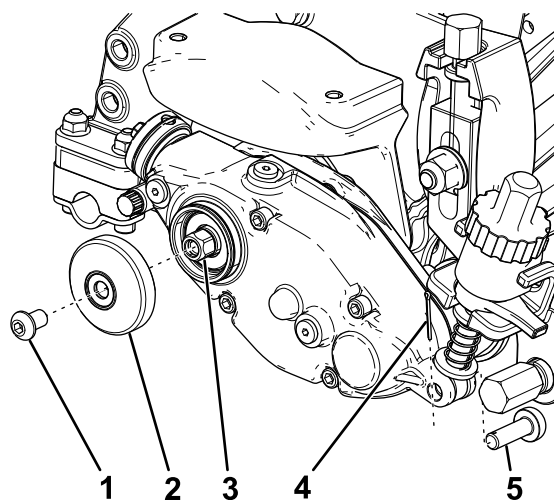


Figure 2

- |                     |                 |
|---------------------|-----------------|
| 1. Hex-socket screw | 4. Cotter pin   |
| 2. Outer cover      | 5. Adjuster pin |
| 3. Hex-head drive   |                 |
2. Remove the hex-socket screw and outer cover from the groomer drive box (Figure 2).
  3. Determine if your groomer drive has a left or right-hand threaded insert. Groomers installed on the left of the cutting unit have left-hand threads. Groomers installed on the right of the cutting unit have right-hand threads.
  4. Using a block of wood or having another person restrain the reel, loosen the hex-head drive (Figure 2).

**Important:** You must use a 6-point socket with heavy wall.



**Important:** Do not use an impact wrench for this step.

**Note:** Do not damage the seal under the outer cover.

5. Remove the groomer drive box from the side of the reel (Figure 3).

**Note:** If your groomer drive is installed on the left side of a Greensmaster cutting unit, remove the shim washer as well.

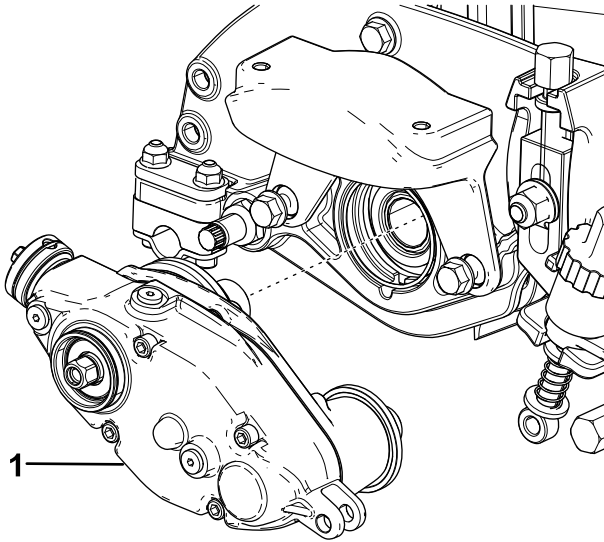


Figure 3

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1. Groomer drive box

6. Remove the 4 bolts securing the groomer drive cover (Figure 4).

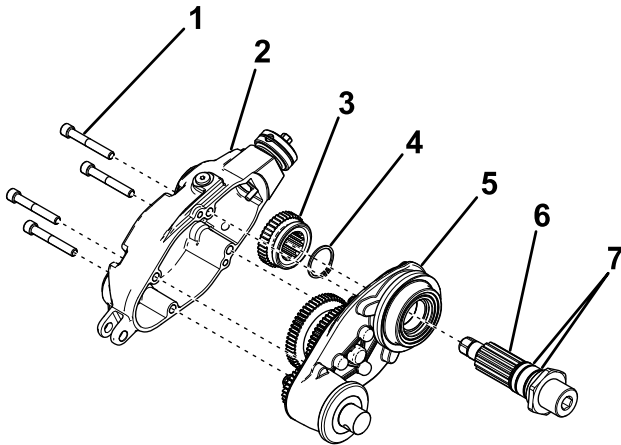


Figure 4

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- |                        |                          |
|------------------------|--------------------------|
| 1. Bolt                | 5. Groomer drive housing |
| 2. Groomer drive cover | 6. Drive shaft assembly  |
| 3. Driver gear         | 7. O-rings               |
| 4. Retaining ring      |                          |

7. Remove the cover, and slide the driver gear off the drive shaft (Figure 4).

8. Remove the retaining ring and push the drive shaft assembly out of the groomer housing (Figure 4).
9. Remove and discard the O-rings on the drive shaft assembly (Figure 4).

## 3

### Installing the Drive Shaft

No Parts Required

#### Procedure

1. Install 2 O-rings onto the drive shaft (Figure 5).

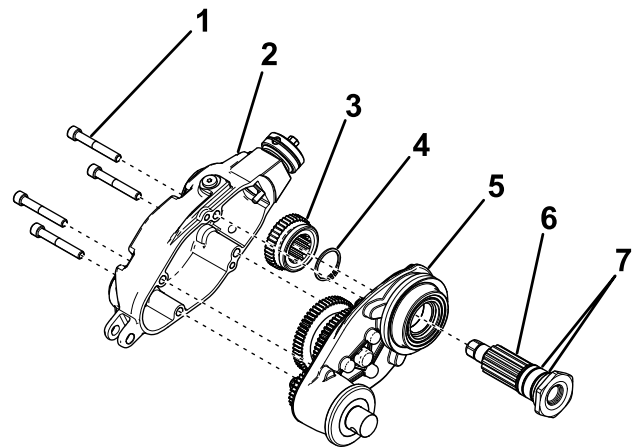


Figure 5

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- |                        |                          |
|------------------------|--------------------------|
| 1. Bolt                | 5. Groomer drive housing |
| 2. Groomer drive cover | 6. Drive shaft           |
| 3. Driver gear         | 7. O-rings               |
| 4. Retaining ring      |                          |

2. Insert the new drive shaft into the groomer housing (Figure 5).
3. Install the previously removed retaining ring and driver gear (Figure 5).
4. Secure the groomer cover to the groomer housing using the 4 previously removed bolts (Figure 5), and torque them to 8 to 10 N·m (75 to 85 in-lb).

# 4

## Installing the Drive Shaft Adapter

No Parts Required

### Procedure

1. Apply blue thread-locking compound to the inside of the drive shaft (Figure 6).

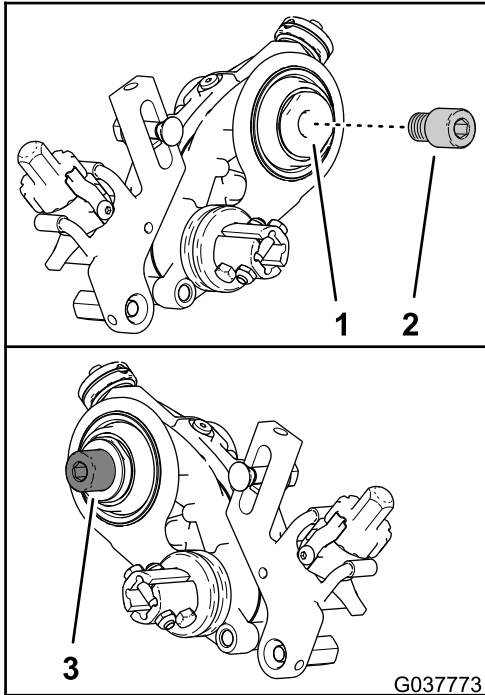


Figure 6

1. Drive shaft
2. Reel adapter—right side
3. Reel adapter—left side

2. Assemble the appropriate reel adapter into the drive shaft (Figure 6). Use the following table to determine which adapter to use.

Traction Unit	Groomer Location	Adapter Color
Greensmaster	Right side	Silver
	Left side	Black
Reelmaster	Right side	Yellow
	Left side	Green

3. Torque the reel adapter and drive shaft to 163 to 176 N·m (120 to 130 ft-lb).

**Note:** When torquing the reel adapter and drive shaft, restrain the drive shaft with a wrench on the wrench

flats at the inboard side of the groomer drive box (Figure 7).

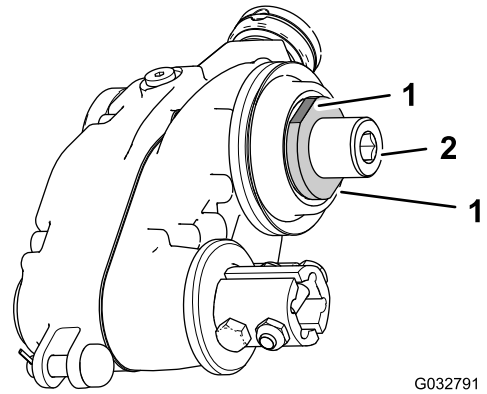


Figure 7

1. Wrench flats (drive shaft)
2. Hex socket (reel adapter)

# 5

## Installing the Groomer Drive Box

No Parts Required

### Procedure

1. For a groomer drive box installed at the left side of a Greensmaster cutting unit, assemble the shim washer over the threads of the reel adapter (Figure 8).

**Note:** No shim washer is needed on a groomer drive box installed on the right side of the cutting unit or on a Reelmaster cutting unit.

# 6

## Finishing the Installation

### No Parts Required

### Procedure

1. Secure the outer cover to the groomer drive box using the previously removed hex-socket screw (Figure 9).

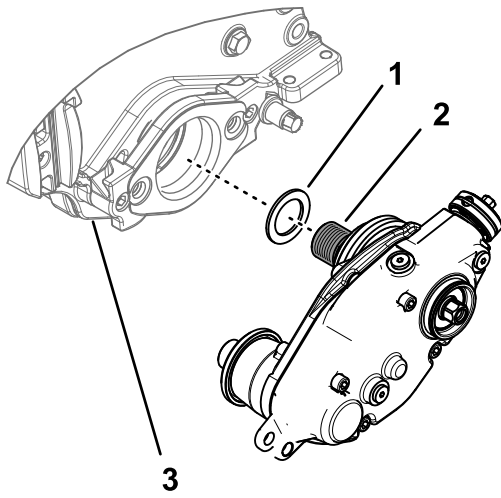


Figure 8

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1. Shim washer
2. Reel adapter
3. Cutting unit

2. Attach the groomer drive box to the reel shaft.

**Important:** The splined insert on the left side of the cutting unit has left-hand threads. The splined insert on the right side of the cutting unit has right-hand threads.

3. Using a block of wood or having another person restrain the reel, torque the hex-head drive of the drive shaft as follows:
  - For Greensmaster cutting units, torque the hex-head drive to 122 to 135 N·m (90 to 100 ft-lb).
  - For Reelmaster cutting units, torque the hex-head drive to 163 to 176 N·m (120 to 130 ft-lb).

**Important:** You must use a 6-point socket with heavy wall.

**Important:** Do not use an impact wrench for this step.

**Note:** Do not damage the seal under the outer cover.

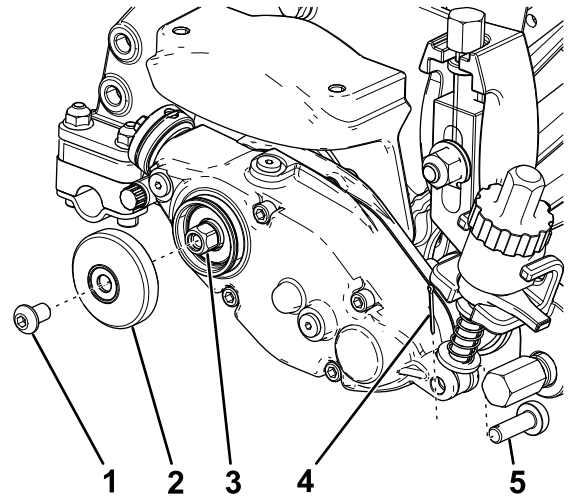
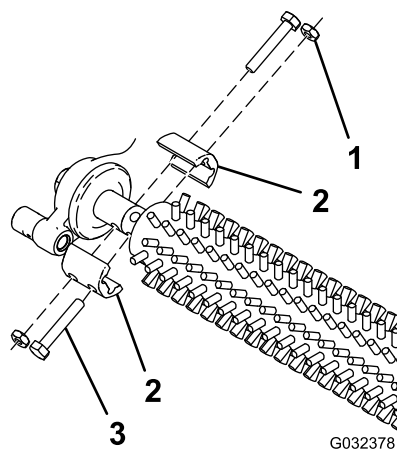


Figure 9

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1. Hex-socket screw
2. Outer cover
3. Hex-head drive
4. Cotter pin
5. Adjuster pin

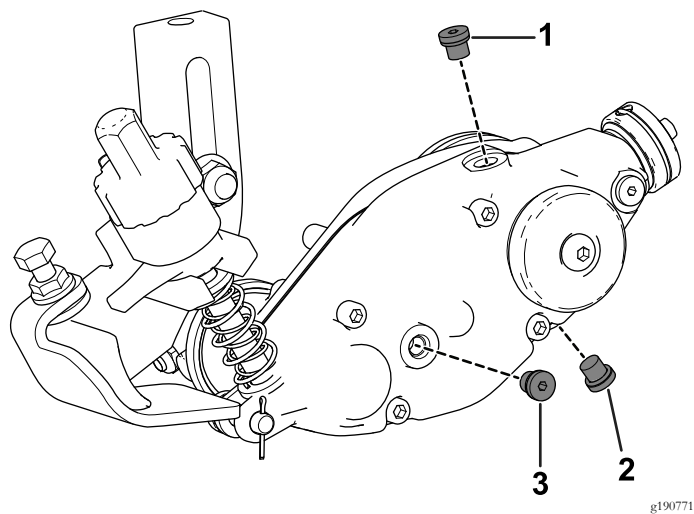
2. Slide the adjuster pin through the adjuster-arm assembly rod and groomer drive box, and secure it with a cotter pin (Figure 9).
3. Use the previously removed 4 bolts, jam nuts, and shaft clamps to secure the groomer brush to both sides of the machine (Figure 10).



**Figure 10**

- |                |         |
|----------------|---------|
| 1. Jam nut     | 3. Bolt |
| 2. Shaft clamp |         |

- 
4. Remove the fill plug on the top of the groomer housing (Figure 11).



**Figure 11**

- |               |               |
|---------------|---------------|
| 1. Fill plug  | 3. Level plug |
| 2. Drain plug |               |

- 
5. Fill the groomer drive box with 80W-90 gear oil until the oil reaches the bottom of the level plug (approximately 50 cc for a 5-inch reel and 90 cc for a 7-inch reel).
6. Replace the level plug and the fill plug.

**Notes:**

**Notes:**



**Count on it.**