



# DPA Reel Mower Rear Roller Brush (RH)

## Greensmaster® 3250-D/3300/3400 Series Traction Unit

Model No. 04724

### Installation Instructions

#### ▲ WARNING

##### CALIFORNIA Proposition 65 Warning

This product contains a chemical or chemicals known to the State of California to cause cancer, birth defects, or reproductive harm.

This product complies with all relevant European directives. For details, please see the Declaration of Incorporation (DOI) at the back of this publication.

**Note:** The Rear Roller Brush Kit can only be installed on Model 04613, 04614, 04615, 04618, or 04619 cutting units.

**Note:** Right-hand brush drives are shown in all figures.

**Note:** Determine the left and right and front and back sides of the machine from the normal operating position.

## Installation

### Loose Parts

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

Description	Qty.	Use
Stop mount	1	Install the stop mount (Greensmaster TriFlex 3300 and 3400 series only).
Bumper	1	
Shoulder bolt	1	
Locknut	1	
Flange bolt (5/16)	1	
Flange nut (5/16)	1	
Right brush support	1	Install the rear roller brush.
Right brush support cover	1	
Left brush support assembly	1	
Roller brush assembly with 2 shipping washers	1	
Brush drive belt	1	
Drive pulley (with hex extension)	1	
Driven pulley (with key slot)	1	
Hex bolt (1/4 inch x 2-1/4 inches)	1	
Threadlock bolt (5/16 inch x 1 inch)	4	
Threadlock bolt (5/16 inch x 5/8 inch)	4	
Flange nut (5/16 inch)	4	
Washer	1	
Bearing collar assembly	1	
Spacer	1	
Square key	1	
Brush driver	1	



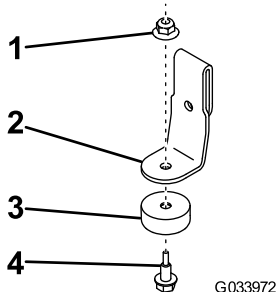
# Tools Required for Setup

- 1/8 hex wrench
- 1/2 hex wrench
- Torque wrench 110 ft-lb
- Torque wrench 130 to 140 in-lb
- Torque wrench 70 to 80 in-lb
- 7/16 socket wrench
- 1/2 socket wrench
- 7/16 box wrench
- 1/2 box wrench
- Band cutters
- Punch
- Light hammer
- Straight edge
- Caliper or ruler

## Installing the Stop Mount

### For the Greensmaster TriFlex 3300 and 3400 series only

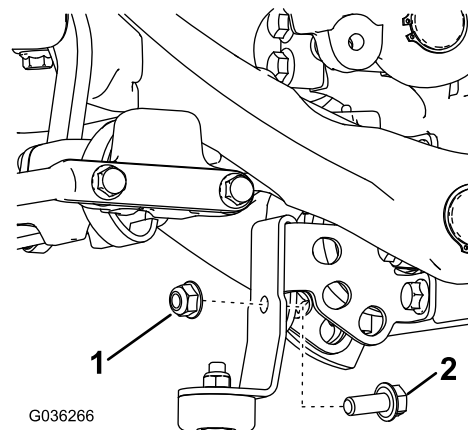
1. Attach the bumper to the stop mount using a shoulder bolt and locknut ([Figure 1](#)).



**Figure 1**

- |               |                  |
|---------------|------------------|
| 1. Locknut    | 3. Bumper        |
| 2. Stop mount | 4. Shoulder bolt |

2. Slide the stop mount onto the balance mount bracket of the suspension arm, and secure it with a bolt (5/16) and flange nut ([Figure 2](#)).



**Figure 2**

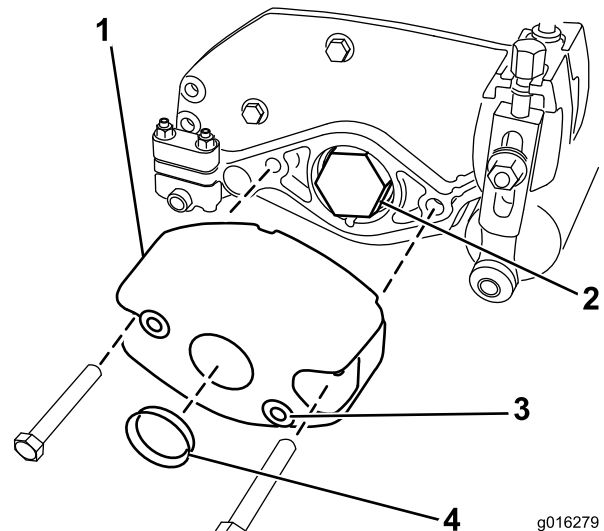
- |                      |                |
|----------------------|----------------|
| 1. Flange nut (5/16) | 2. Bolt (5/16) |
|----------------------|----------------|

## Installing the Rear Roller Brush

### Installing on Cutting Units without a Groomer

**Note:** For cutting units with a groomer installed, see [Installing on Cutting Units with a Groomer](#) (page 6).

1. Stop the machine on a level surface, engage the parking brake, raise the cutting blades to the highest position, shut off the engine, remove the key, and disconnect the spark-plug wire.
2. Remove the fasteners and the counterweight from the end of the cutting unit; see [Figure 3](#). Pushing from the inside, remove the plug from the large hole in the center of the counterweight.



**Figure 3**

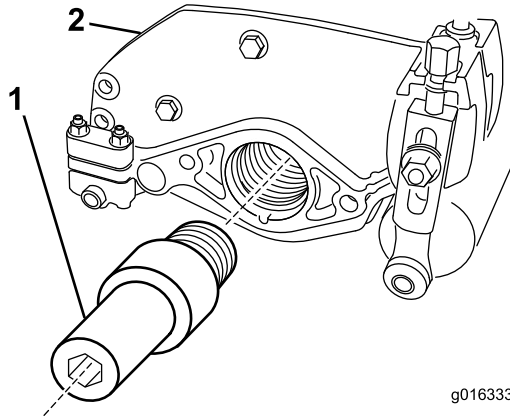
- |                  |         |
|------------------|---------|
| 1. Counterweight | 3. Boss |
| 2. Bearing nut   | 4. Plug |

3. Remove the bearing nut. Store it for future use.

**Note:** The internal threads on the bearing nut must be clean and free of grease and add thread-locking adhesive to the internal threads.

4. Install the brush driver in place of the bearing nut as shown in [Figure 4](#); torque it to 136 N·m (100 ft-lb).

**Note:** Using an impact gun to install the brush driver does not ensure that the brush driver is torqued correctly. If the brush driver is not torqued correctly, the assembly may unscrew itself during operation.



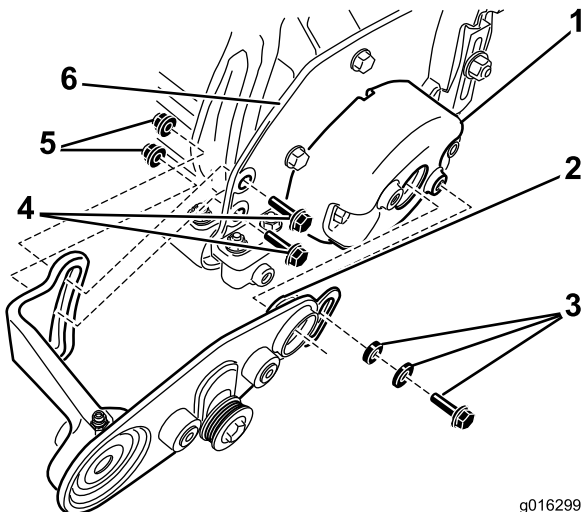
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**Figure 4**

- |                 |                 |
|-----------------|-----------------|
| 1. Brush driver | 2. Cutting unit |
|-----------------|-----------------|

5. Attach the counterweight back onto the cutting unit with the previously removed fasteners; see [Figure 3](#).

6. Install the O-ring onto the pilot of the right brush support; see [Figure 5](#).



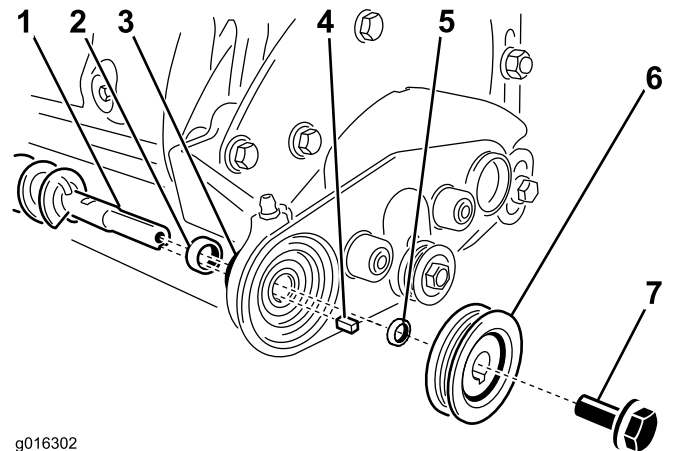
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**Figure 5**

- |  |                            |
|--|----------------------------|
| 1. Counterweight                               | 4. Hex bolt                |
| 2. Install O-ring onto pilot                   | 5. Flange nut              |
| 3. Bearing spacer, washer, and threadlock bolt | 6. Cutting unit side plate |

7. Attach the right brush support to the cutting unit:
  - A. Remove the band tie and set the locking collar aside.
  - B. Apply a light coating of grease to the O-ring on the right brush support pilot; see [Figure 5](#).
  - C. Insert the pilot into the weight and secure the front side of the right brush support to the boss in the counterweight with a bearing spacer, a washer, and a threadlock bolt ([Figure 5](#)).
  - D. Attach the rear side of the right brush support to the inside of the cutting unit side plate with 2 hex bolts and 2 flange nuts ([Figure 5](#)).

8. Attach the brush to the right brush support:
  - A. Remove and discard the 2 shipping washers on the brush.
  - B. Slide the locking collar up to the shoulder on the brush shaft. Insert the brush shaft through the bearing in the right brush support; refer to [Figure 6](#).



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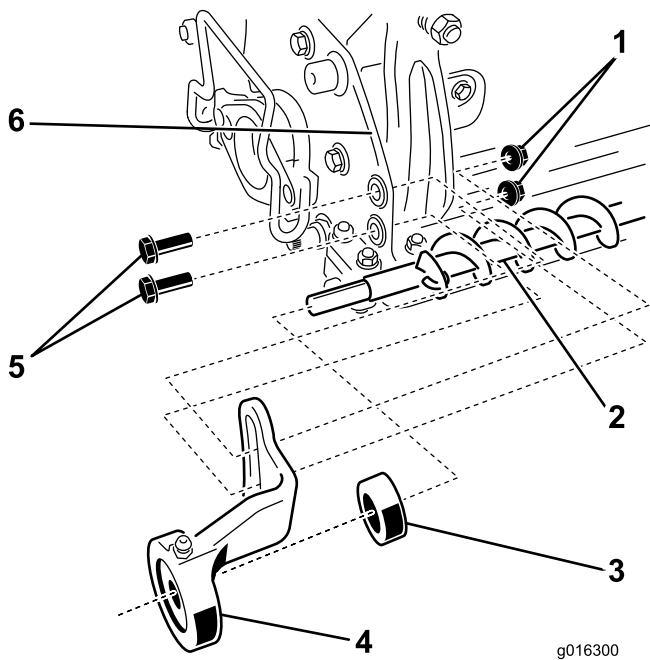
**Figure 6**

- |                   |                    |
|-------------------|--------------------|
| 1. Brush shaft    | 5. Spacer          |
| 2. Locking collar | 6. Driven pulley   |
| 3. Bearing        | 7. Threadlock bolt |
| 4. Square key     |                    |

- C. Install the square key into the shaft and spacer ([Figure 6](#)).

- D. Slide the driven pulley onto the shaft and fasten it in place with the threadlock bolt ([Figure 6](#)); torque to 15 to 16 N·m (130 to 140 in-lb).

9. Attach the left end of the brush to the cutting unit:
  - A. Cut the band tie holding the bearing and the locking collar to the support.
  - B. On the free end of the brush shaft, slide the other locking collar up to the shoulder, followed by the left brush support; see [Figure 7](#).



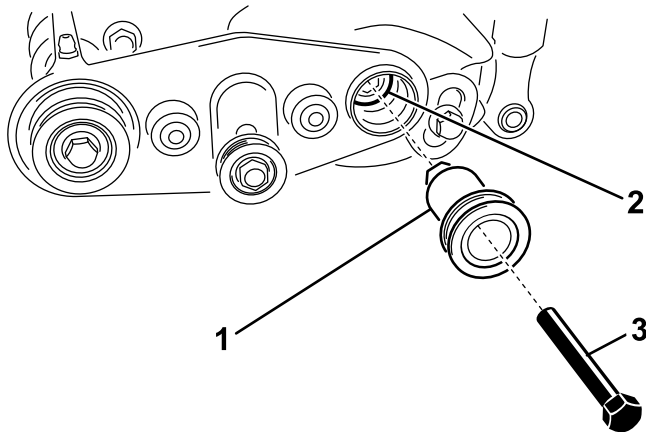
**Figure 7**

- |                   |                            |
|-------------------|----------------------------|
| 1. Flange nut     | 4. Left brush support      |
| 2. Brush shaft    | 5. Hex bolt                |
| 3. Locking collar | 6. Cutting unit side plate |

C. Secure the left brush support to the inside of the cutting unit side plate with 2 hex bolts and 2 flange nuts (Figure 7).

10. Attach the drive pulley:

A. Insert the drive pulley through the hole in the right brush support and rotate it as needed until it slides into the brush driver; see Figure 8.



**Figure 8**

- |                 |                                     |
|-----------------|-------------------------------------|
| 1. Drive pulley | 3. Hex bolt (1/4 inch x 2-1/4 inch) |
| 2. Brush driver |                                     |

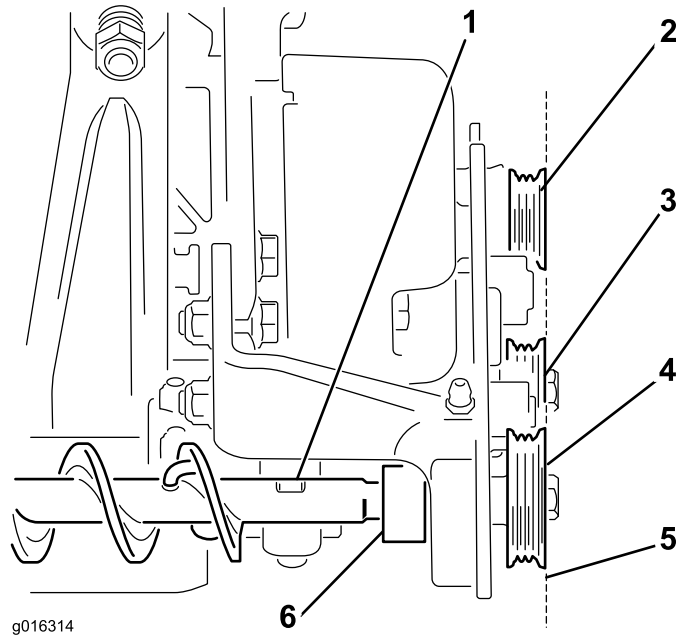
B. Apply anti-seize compound to the hex bolt threads and secure the drive pulley to the brush

driver with the hex bolt as shown in Figure 8; torque to 8 to 9 N·m (70 to 80 in-lb).

11. Align the pulleys:

A. Align the driven pulley to the idler and drive pulleys by moving the roller brush back and forth between the left and right supports; see Figure 9.

**Important:** The brush drive belt may fail prematurely if the pulleys are not properly aligned.



**Figure 9**

- |                 |                             |
|-----------------|-----------------------------|
| 1. Roller brush | 4. Driven pulley            |
| 2. Drive pulley | 5. Align the driven pulley. |
| 3. Idler pulley | 6. Locking collar           |

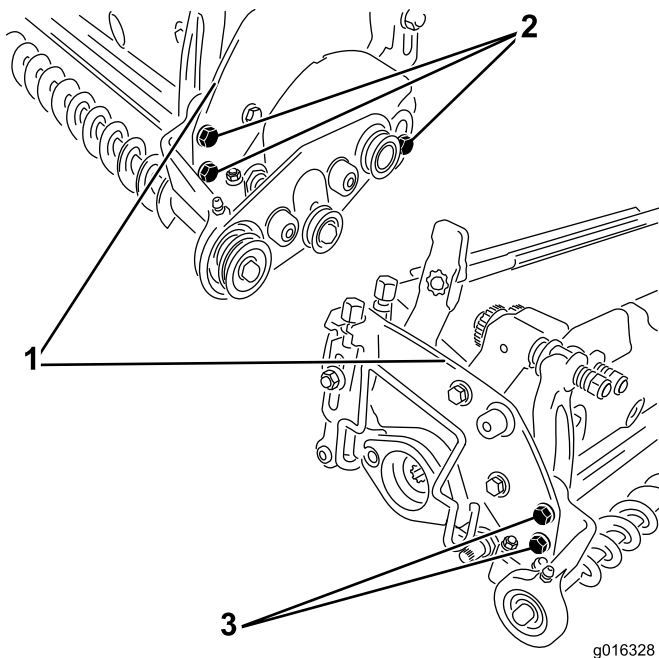
B. On each end of the brush shaft, slide the locking collar outward onto the bearing collar; rotate it by hand in the same direction the brush rotates until the collar is tight on the shaft.

C. Tighten the collar further by placing a punch in the blind hole of the collar and striking it sharply in the direction of the rotation of the brush.

D. Tighten the collar set screw with a 1/8 inch hex wrench.

12. Adjust the roller brush:

A. Loosen the bolts securing the brush supports to the cutting unit side plates; see Figure 10.



**Figure 10**

1. Cutting unit side plate
2. Hex bolts on right side
3. Hex bolts on left side

B. Pivot the assembled roller brush unit until there is contact to 0.254 mm (0.010 inch) clearance between the brush and the rear roller.

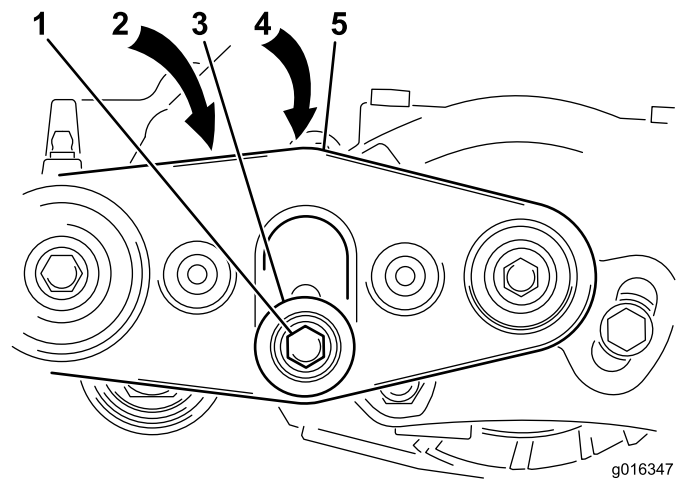
**Important:** Make sure that the roller brush is parallel to the rear roller.

C. Tighten the nuts securing both brush supports to the cutting unit side plates.

13. Install the brush drive belt:

**Important:** You must loosen the idler pulley before installing the brush drive belt. Never stretch the belt. Stretching the belt over the pulleys deforms it and makes it unusable.

A. Loosen the hex bolt and the nut securing the idler pulley to the right brush support; see [Figure 11](#).



**Figure 11**

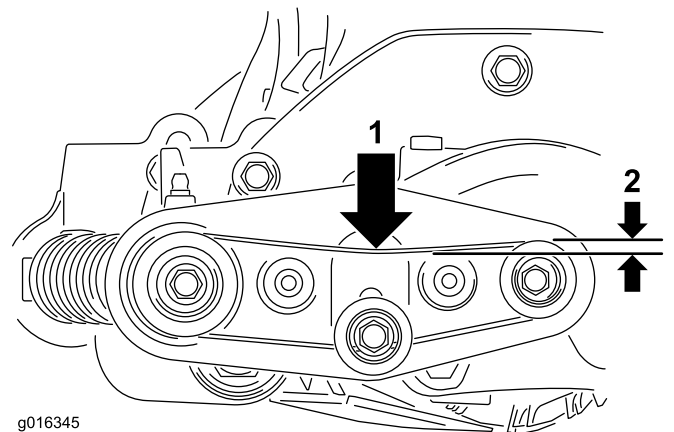
1. Hex bolt
2. Nut (not shown)
3. Idler pulley
4. Idler cover plate
5. Right brush support

B. Install the brush drive belt over the pulleys.

C. Using about 2 kg (5 lb) of force, push down on the idler pulley to initially set the belt tension. Tighten the hex bolt and the nut securing the idler pulley to the right brush support.

**Important:** Make sure that the idler cover plate is covering the slots to prevent debris from entering the brush drive.

14. Check the tension on the brush drive belt. The belt should have approximately 6 mm (1/4 inch) deflection at the center of the belt with 1 kg (2 lb) of force applied; see [Figure 12](#).

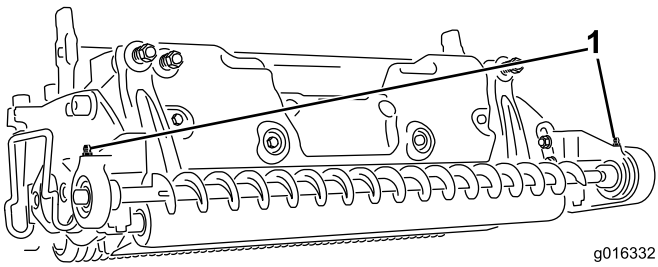


**Figure 12**

1. 1 kg (2 lb) of force
2. 6 mm (1/4 inch) deflection

15. Attach the belt cover to the right brush support using 2 threadlock bolts, previously removed. Tighten the bolts securely.

16. Lubricate the bearing housing grease fittings with No. 2 lithium grease; see [Figure 13](#).



**Figure 13**

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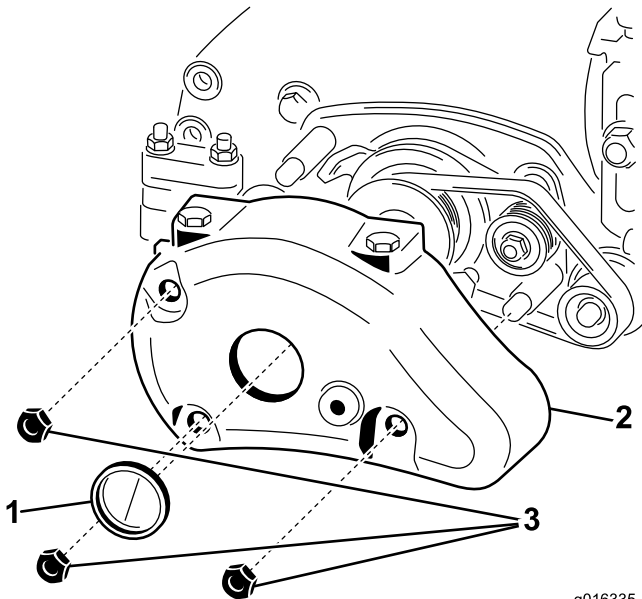
1. Grease fitting

17. Repeat this procedure on the remaining cutting units.

**Note:** You need to reverse some directions for the left brush drives.

## Installing on Cutting Units with a Groomer

1. Position the machine on a level surface, lower the cutting units to the ground, engage the parking brake, shut off the engine, and remove the key from the ignition.
2. Separate the cutting units from the traction unit. Refer to the *Operator's Manual* for the removal procedure.
3. Remove the 3 nuts and the groomer cover from the end of the cutting unit; see [Figure 14](#). Pushing from the inside, remove the plug from the large hole in the center of the groomer cover.



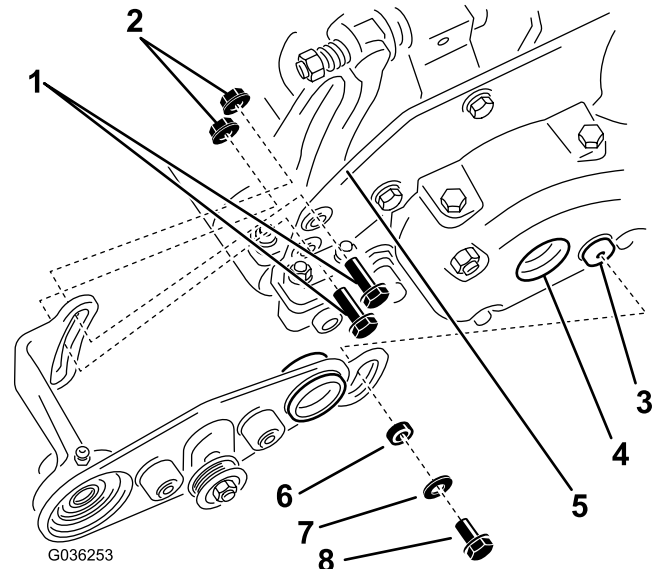
**Figure 14**

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1. Plug
2. Groomer cover
3. Locknut

4. Attach the groomer cover back onto the cutting unit with the previously removed fasteners; see [Figure 14](#).
5. Attach the right brush support to the cutting unit:

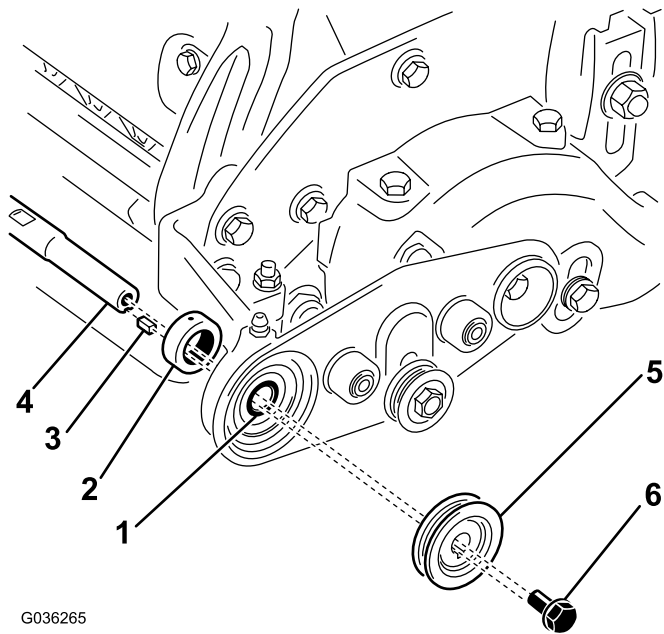
- A. Remove the band tie and set the locking collar aside.
- B. Apply a light coating of grease to the O-ring on the right brush support pilot; see [Figure 15](#).
- C. Remove and discard the bolt on the groomer cover.
- D. Insert the pilot into the large hole in the center of the groomer cover and secure the front side of the right brush support to the boss in the groomer cover with the bearing spacer, washer, and threadlock bolt (5/16 x 5/8 inch); refer to [Figure 15](#).
- E. Attach the rear side of the right brush support to the inside of the cutting unit side plate with 2 threadlock bolts (5/16 x 1 inch) and 2 flange nuts (5/16 inch); refer to [Figure 15](#).
- F. Tighten the threadlock bolts.



**Figure 15**

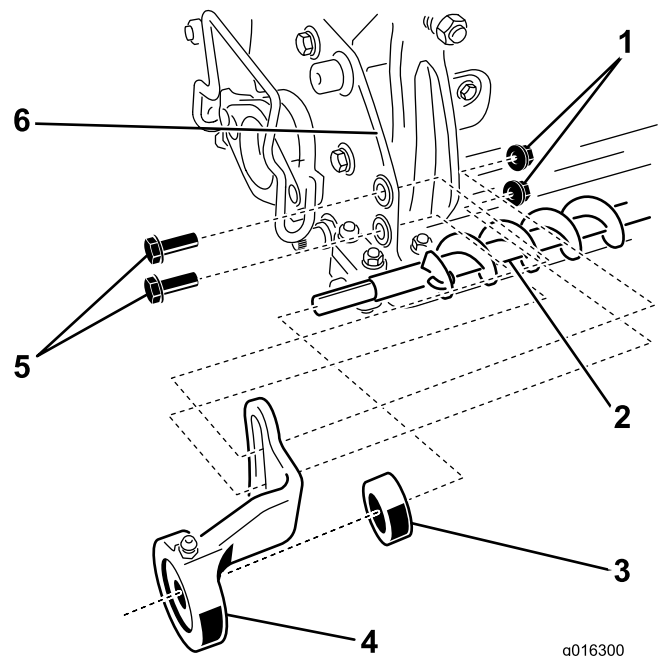
- |  |                                      |
|--|--------------------------------------|
| 1. Threadlock bolt (5/16 x 1 inch) (2) | 5. Cutting unit side plate           |
| 2. Flange nut (5/16 inch) (2)          | 6. Bearing spacer                    |
| 3. Boss in groomer cover               | 7. Washer                            |
| 4. Hole in groomer cover               | 8. Threadlock bolt (5/16 x 5/8 inch) |

6. Attach the threaded end of the brush to the right brush support:
  - A. Remove and discard the 2 shipping washers on the right reel shaft.
  - B. Make sure that the washer is installed on the collar.
  - C. Slide the locking collar up to the shoulder on the brush shaft. Insert the brush shaft through the bearing in the right brush support; refer to [Figure 16](#).



**Figure 16**

- |                   |                                      |
|-------------------|--------------------------------------|
| 1. Bearing        | 4. Brush shaft                       |
| 2. Locking collar | 5. Driven pulley                     |
| 3. Square key     | 6. Threadlock bolt (5/16 x 5/8 inch) |

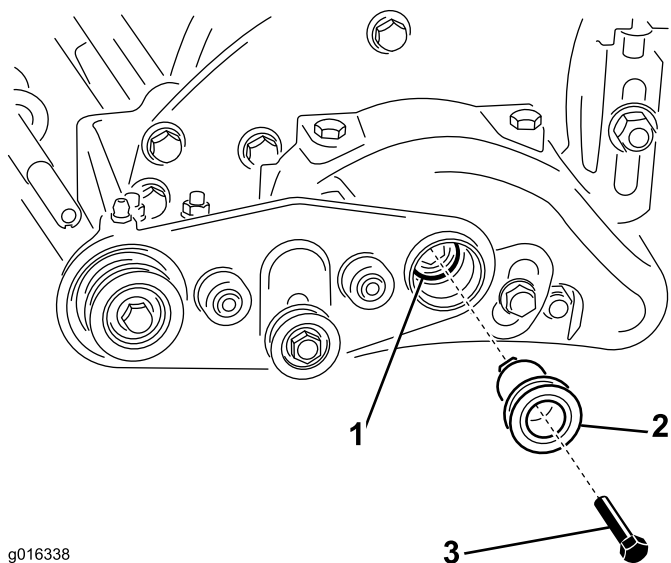


**Figure 17**

- |                   |                                    |
|-------------------|------------------------------------|
| 1. Flange nut     | 4. Left brush support              |
| 2. Brush shaft    | 5. Threadlock bolt (5/16 x 1 inch) |
| 3. Locking collar | 6. Cutting unit side plate         |

- 
- D. Apply anti-seize onto the key slot and install the square key into the shaft (Figure 16).
- E. Slide the driven pulley onto the shaft and fasten it in place with a threadlock bolt (5/16 x 5/8 inch) as shown in Figure 16.
- F. Torque the threadlock bolt to 15 to 16 N·m (130 to 140 in-lb).
7. Attach the left end of the brush to the cutting unit:
- Remove the band tie.
  - On the free end of the brush shaft, slide the other locking collar up to the shoulder, followed by the left brush support; see Figure 17.

- 
- C. Secure the left brush support to the inside of the cutting unit side plate with 2 threadlock bolts (5/16 x 1 inch) and 2 flange nuts (5/16 inch) as shown in Figure 17.
- D. Tighten the threadlock bolts.
8. Attach the drive pulley:
- Insert the drive pulley through the hole in the right brush support and rotate it as needed until it slides into the brush driver; see Figure 18.



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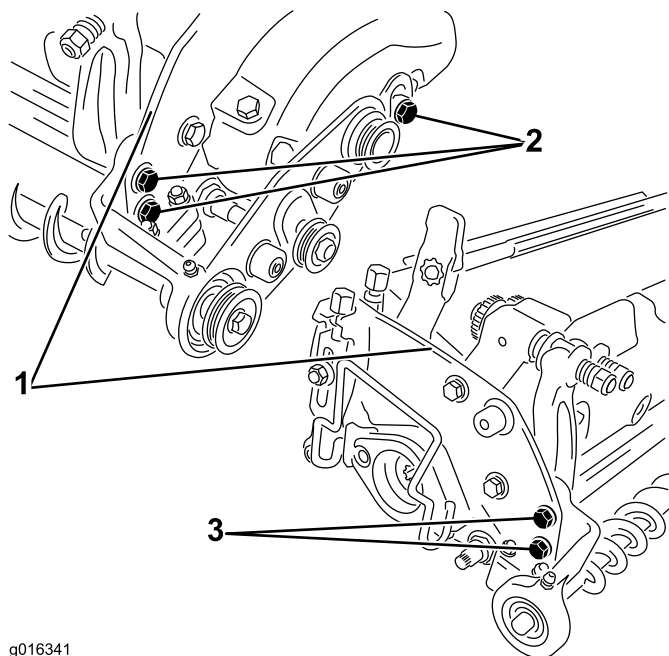
**Figure 18**

- |                 |                                     |
|-----------------|-------------------------------------|
| 1. Brush driver | 3. Hex bolt (1/4 inch x 2-1/4 inch) |
| 2. Drive pulley |                                     |

B. Apply anti-seize compound to the hex bolt threads and secure the drive pulley to the brush driver with the hex bolt as shown in [Figure 18](#); torque to 8 to 9 N·m (70 to 80 in-lb).

9. Adjust the roller brush:

A. Loosen the bolts securing the brush supports to the cutting unit side plates; see [Figure 19](#).



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**Figure 19**

- |                            |                          |
|----------------------------|--------------------------|
| 1. Cutting unit side plate | 3. Hex bolt on left side |
| 2. Hex bolt on right side  |                          |

B. Pivot the assembled roller brush unit until there is contact to 0.254 mm (0.010 inch) clearance between the roller brush and the rear roller.

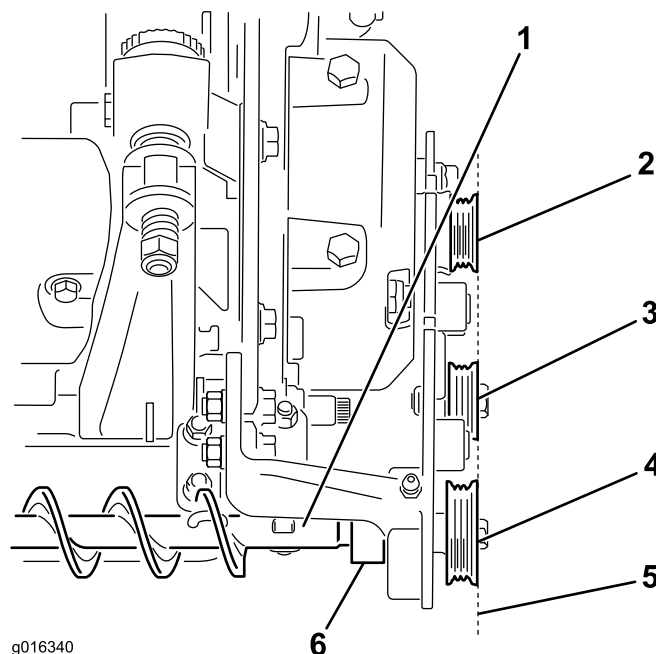
**Important:** Make sure that the roller brush is parallel to the rear roller.

C. Tighten the nuts securing both brush supports to the cutting unit side plates.

10. Align the pulleys:

A. Align the driven pulley to the idler and drive pulleys by moving the roller brush assembly back and forth between the left and right supports; see [Figure 20](#).

**Important:** The brush drive belt may fail prematurely if the pulleys are not properly aligned.



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**Figure 20**

- |                 |                             |
|-----------------|-----------------------------|
| 1. Roller brush | 4. Driven pulley            |
| 2. Drive pulley | 5. Align the driven pulley. |
| 3. Idler pulley | 6. Locking collar           |

B. On each end of the brush shaft, slide the locking collar outward onto the bearing collar; rotate it by hand in the same direction the brush rotates until the collar is tight on the shaft.

C. Tighten the collar further by placing a punch in the blind hole of the collar and striking it sharply in the direction of the rotation of the brush and perpendicular to the shaft.

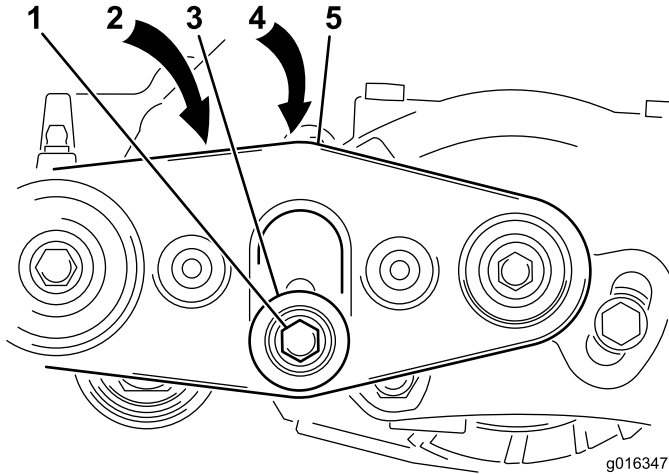
D. Tighten the collar set screw with a 1/8 inch hex wrench.

E. Double check the alignment to ensure that the pulley did not move.

11. Install the brush drive belt:

**Important:** You must loosen the idler pulley before installing the brush drive belt. Never stretch the belt. Stretching the belt over the pulleys deforms it and makes it unusable.

- A. Loosen the hex bolt and the nut securing the idler pulley to the right brush support; see [Figure 21](#).



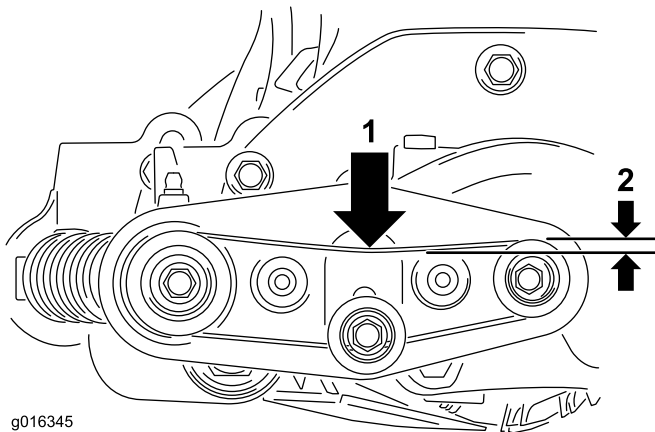
**Figure 21**

- |                    |                        |
|--------------------|------------------------|
| 1. Hex bolt        | 4. Idler cover plate   |
| 2. Nut (not shown) | 5. Right brush support |
| 3. Idler pulley    |                        |

- B. Install the brush drive belt over the pulleys.  
 C. Using about 2 kg (5 lb) of force, push down on the idler pulley to initially set the belt tension. Tighten the hex bolt and the nut securing the idler pulley to the right brush support.

**Important:** Make sure that the idler cover plate is covering the slots to prevent debris from entering the brush drive.

12. Check the tension on the brush drive belt. The belt should have approximately 6 mm (1/4 inch) deflection at the center of the belt with 1 kg (2 lb) of force applied; see [Figure 22](#).



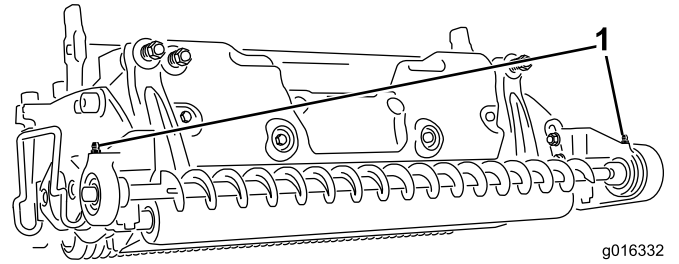
**Figure 22**

- |                         |                               |
|-------------------------|-------------------------------|
| 1. 1 kg (2 lb) of force | 2. 6 mm (1/4 inch) deflection |
|-------------------------|-------------------------------|

13. Attach the belt cover to the right brush support using the 2 threadlock bolts (5/16 x 5/8 inch).

**Note:** The belt cover fits over the main side plate.

14. Tighten the bolts but do not overtighten.  
 15. Lubricate the bearing housing grease fittings with No. 2 lithium grease; see [Figure 23](#).



**Figure 23**

1. Grease fitting

16. Repeat this procedure on the remaining cutting units.

**Note:** You have to reverse some directions for the left brush drives.

# Maintenance

## Recommended Maintenance Schedule(s)

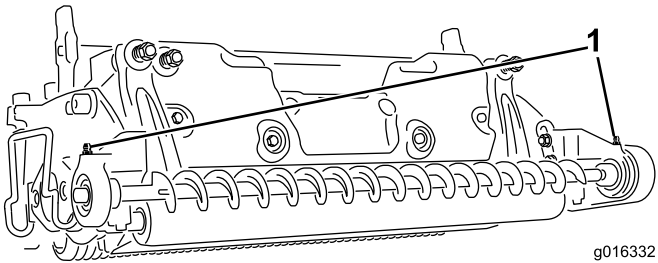
Maintenance Service Interval	Maintenance Procedure
Every 25 hours	• Grease the fittings after each 25 hours of operation. (Also after every washing.)

## Greasing the Fittings

**Service Interval:** Every 25 hours (Also after every washing.)

Lubricate the grease fitting regularly with No. 2 lithium grease.

1. Stop the machine on a level surface, engage the parking brake, raise the cutting blades to the highest position, shut off the engine, remove the key, and disconnect the spark-plug wire.
2. Wipe the grease fitting clean so foreign matter cannot be forced into the bearing or bushing; see [Figure 24](#).



**Figure 24**

1. Grease fitting

- 
3. Pump grease into the bearing or bushing until the grease is visible. Wipe up excess grease.

**Notes:**

# Declaration of Incorporation

Model No.	Serial No.	Product Description	Invoice Description	General Description	Directive
04724	—	DPA Reel Mower Rear Roller Brush (RH)	ROTATING REAR ROLLER BRUSH (RH)	Lawn Mower Accessory	2006/42/EC

Relevant technical documentation has been compiled as required per Part B of Annex VII of 2006/42/EC.

We will undertake to transmit, in response to requests by national authorities, relevant information on this partly completed machinery. The method of transmission shall be electronic transmittal.

This machinery shall not be put into service until incorporated into approved Toro models as indicated on the associated Declaration of Conformity and in accordance with all instructions, whereby it can be declared in conformity with all relevant Directives.

Certified:



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