Form No. 3326-166

Rear Roller Brush Kit

Greensmaster® 3200 Series

Model No. 04489

Installation Instructions

Note: The Rear Roller Brush Kit can be installed on cutting unit models 04470, 04471, 04472, 04473, 04480, 04481, 04482 and 04483,

Note: Some components may have already been assembled loosely at the factory. Some components may have to be loosened or removed before installation. The right-hand brush drives are shown in all figures.

Note: If the cutting unit is equipped with a Groomer, use the instructions on page 3 for installation of this kit.

Installation for Cutting Units without a Groomer

1. Remove the fasteners securing the counterweight to the end of the cutting unit. Remove the counterweight and plastic spacer (if so equipped). Retain the fasteners and spacer (Fig. 1, inset).
2. Apply grease to the internal diameter of the drive coupler. Install the drive coupler to the end of the cutting unit with the snap ring (Fig. 1).

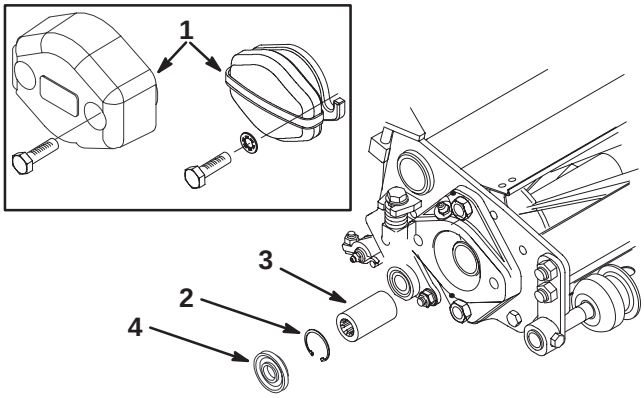


Figure 1

1. Counterweight
2. Snap ring
3. Drive coupler
4. Plastic spacer

3. On the same end of the cutting unit, remove the locknut and flat washer from the carriage bolt securing the height-of-cut bracket to the cutting unit side plate (Fig. 2).

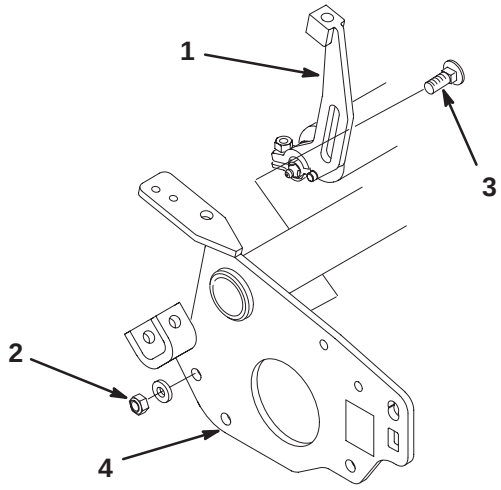


Figure 2

1. Height-of-cut bracket
2. Locknut and flat washer
3. Carriage bolt
4. Cutting unit side plate

4. Thread the **short** (1.2” lg.) hex extension onto the carriage bolt (Fig. 3). Tighten the hex extension securely against the cutting unit side plate.

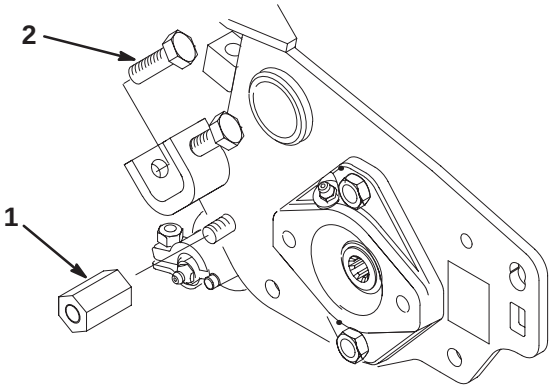


Figure 3

1. Short hex extension (1.2” lg.)
2. Lower bedbar adjuster bolt

5. Repeat steps 3 and 4 on the opposite end of the cutting unit using the **long** (1.8” lg.) hex extension. Check and adjust the height-of-cut as required.

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Note: On cutting unit models 04470, 04471, 04480 and 04481 only, remove the lower bedbar adjuster bolts and install new special bolts reversed as shown in Figure 3. The bedbar may have to be removed to install the new special bolt.

6. Remove the plastic belt cover from the brush kit drive assembly (Fig. 4).

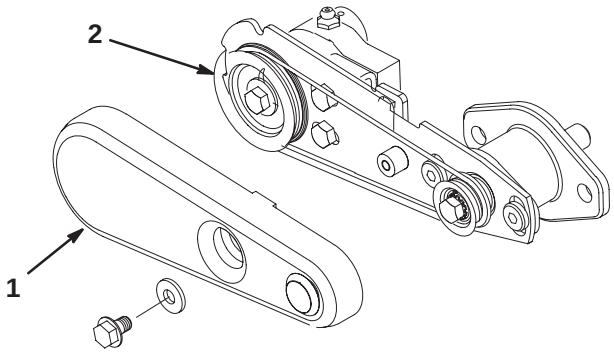


Figure 4

1. Belt cover
2. Drive assembly

7. Insert plastic spacer into reel bearing housing (Fig. 5).

8. Insert the bearing housing/driveshaft assembly into the drive coupler (Fig. 5).

9. Secure the bearing housing to the cutting unit with the counterweight mounting fasteners previously removed (Fig. 5).

10. Loosely secure the pivot plate slotted bracket to the **short** (1.2" lg.) hex extension with a M10 hex head screw and flat washer (Fig. 5).

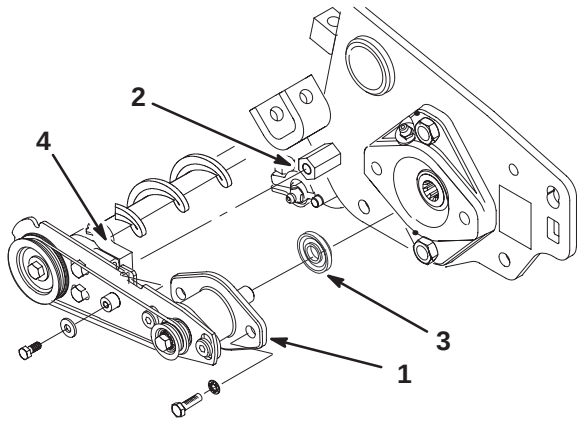


Figure 5

1. Bearing housing/driveshaft
2. Short hex extension (1.2" lg.)
3. Plastic spacer
4. Pivot plate slotted bracket

11. On the other end of the cutting unit, loosely secure the bearing adjustment plate to the long hex extension with a M10 hex head screw and flat washer (Fig. 6). Do not overtighten; the brush must pivot freely.

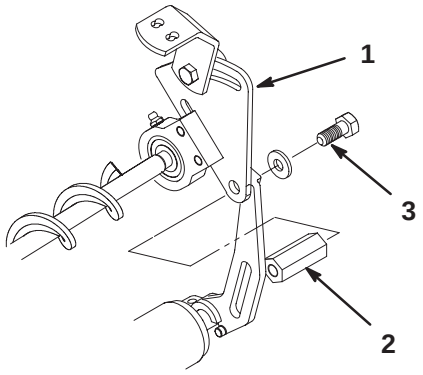


Figure 6

1. Bearing adjustment plate
2. Long hex extension (1.8" lg.)
3. Hex head screw, M10

12. Secure the support bracket to the underside of the cutting unit tab with 2 hex head screws (M6) and locknuts. Tighten the screws (Fig. 7).

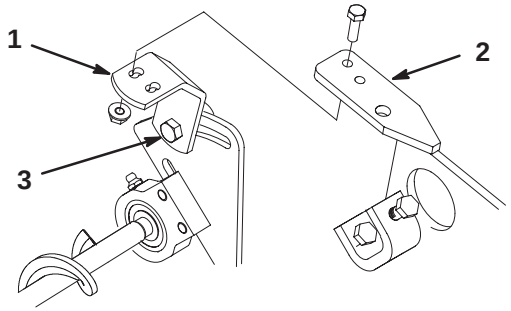


Figure 7

1. Support bracket
2. Cutting unit tab
3. Capscrew and flange nut

13. Adjust the belt tension (Fig. 8) as follows:

A. Loosen the 2 capscrews securing the brush shaft bearing housing to the pivot plate.

B. Insert a screwdriver between the brush shaft bearing housing and slotted bracket.

C. Pry the bearing housing rearward and tighten the belt until there is 3/32 in. deflection midway between the pulleys with a force of 2 lb. applied at a right angle to the belt.

D. Tighten the 2 bearing housing mounting screws to lock the adjustment (Fig. 8).

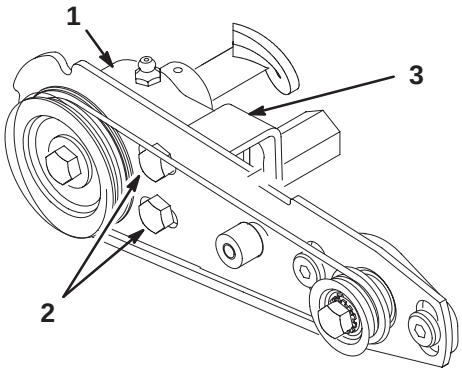


Figure 8

1. Brush shaft bearing housing
2. Bearing housing mounting screws
3. Pivot plate slotted bracket

14. Adjust the axial movement of the brush shaft as follows:

A. Loosen the set screw securing each locking collar to the ends of the brush shaft.

B. Rotate each locking collar to unlock them from the bearing.

C. On the pulley end of the shaft, pull the shaft inward and rotate the collar forward (in the direction of brush rotation) into the locking position. Use a hammer and punch to ensure that the collar is tight.

D. Tighten the collar set screw to secure the adjustment.

E. Repeat the procedure on the opposite end of the shaft.

15. Pivot the brush assembly onto the roller. The brush should lightly contact the entire length of the roller and should be parallel to the roller.

16. While holding each hex extension with a wrench, tighten each hex head screw to 60 ft.-lb. Tighten the capscrew and flange nut securing the bearing adjustment plate to the support bracket (Fig. 7). Make sure that the brush to roller contact is not disturbed.

17. Install the belt cover to the drive assembly with a screw and flat washer. Tighten the screw securely but do not overtighten as damage to the cover may occur.

18. Lubricate the bearing housing grease fittings with general purpose lithium grease.

19. Repeat procedure on the 2 remaining left-hand brush drives.

Important Use caution if tipping the cutting unit onto the roller brush. Roller brush misadjustment and/or damage to the brush may occur, resulting in poor performance or a ruined brush. After completion of the cutting unit maintenance, check the brush-to-roller contact and reset it if required.

Note: Retain remaining hex extensions for use with roller brush kit if groomer attachment is added to cutting unit.

Installation for Cutting Units with a Groomer

1. Remove the 2 screws and lock washers from the groomer drive cover (Fig. 9). Also, remove the screw with the grease fitting or relief valve, the washer, and the spacer.

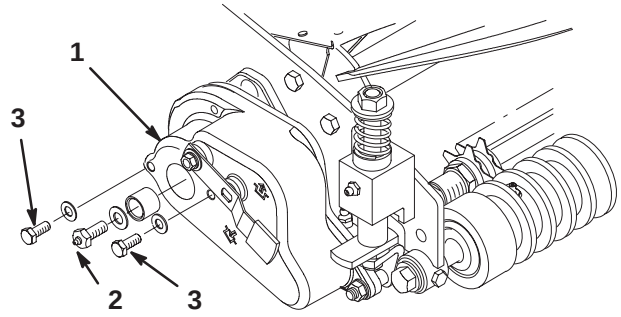


Figure 9

1. Drive cover
2. Screw with grease fitting or relief valve
3. Screw (2)

2. On the same end of the cutting unit (drive end), remove the locknut and flat washer from the carriage bolt securing the height-of-cut bracket to the cutting unit side plate (Fig. 10).

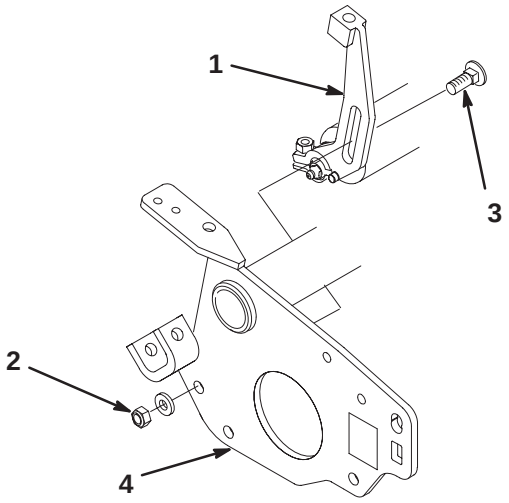


Figure 10

1. Height-of-cut bracket
2. Locknut and flat washer
3. Carriage bolt
4. Cutting unit side plate

3. Thread a long hex extension (1.8” lg.) onto the carriage bolt (Fig. 11). Tighten the long hex extension securely against the cutting side plate.

4. Repeat steps 2 & 3 on the opposite end of the cutting unit using the **long** hex extension (1.8” lg.). Check and adjust the height-of-cut as required.

Note: On cutting unit models 04470, 04471, 04480 and 04481 only, remove the lower bedbar adjuster bolts and install new special bolts reversed as shown in Figure 11. The bedbar may have to be removed to install the new special bolt.

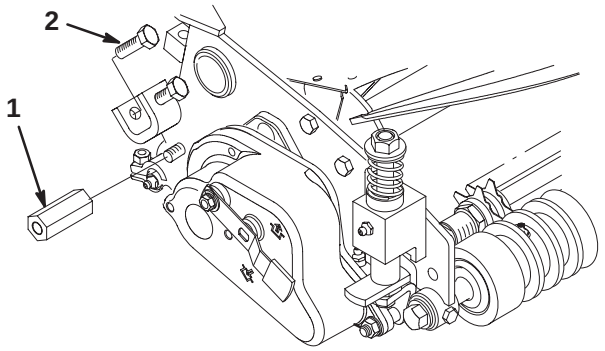


Figure 11

1. Long hex extension (1.8” lg.)
2. Lower bedbar adjuster bolt

5. Remove the plastic belt cover from the brush kit drive assembly (Fig. 12).

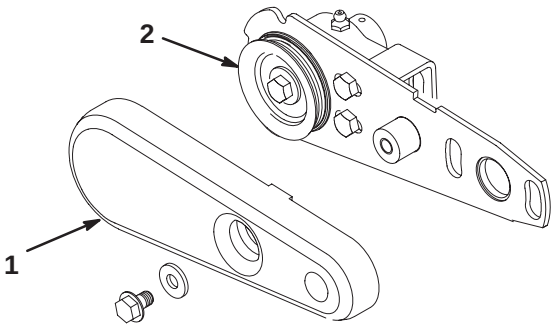


Figure 12

1. Belt cover
2. Drive assembly

6. Insert the lip of the drive assembly pivot plate into the hole in the groomer drive cover. Secure the pivot plate to the groomer drive cover with 2 special shoulder bolts (Fig. 13). Tighten the bolts securely.

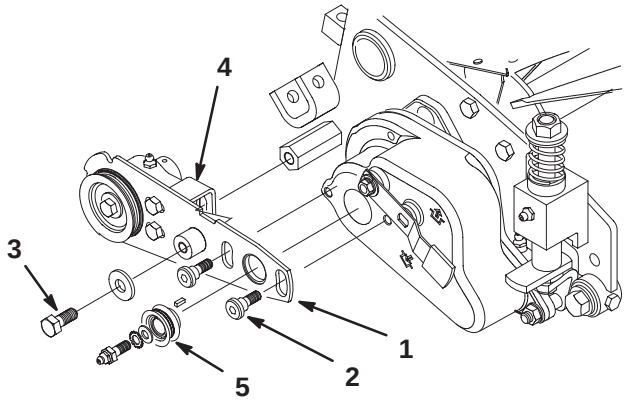


Figure 13

1. Pivot plate
2. Special shoulder bolt
3. Hex head screw, M10
4. Pivot plate slotted bracket
5. Small drive pulley

7. Loosely secure the pivot plate slotted bracket to the long hex extension with a hex head screw (M10) and flat washer (Fig. 13).

8. Install the small drive pulley and square key to the groomer drive shaft with the screw with the grease fitting or relief valve (previously removed), the external tooth lockwasher, and the flat washer. Tighten it securely (Fig. 13).

9. On the other end of the cutting unit, loosely secure the bearing adjustment plate to the hex extension with a hex head screw (M10) and flat washer (Fig. 14). Do not overtighten; the brush must pivot freely.

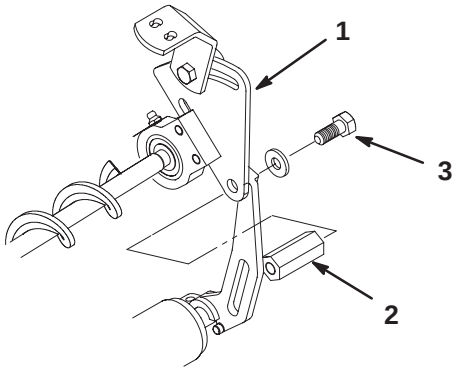


Figure 14

1. Bearing adjustment plate
2. Hex extension
3. Hex head screw, M10

10. Secure the support bracket to the underside of the cutting unit tab with 2 hex head screws (M6) and locknuts. Tighten the screws (Fig. 15).

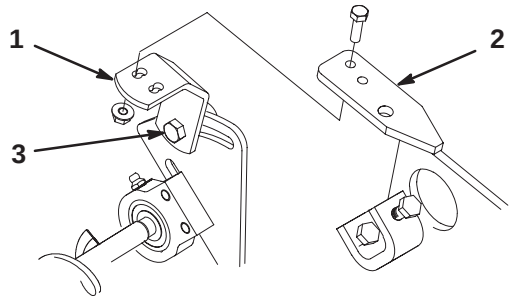


Figure 15

1. Support bracket
2. Cutting unit tab
3. Capscrew and flange nut

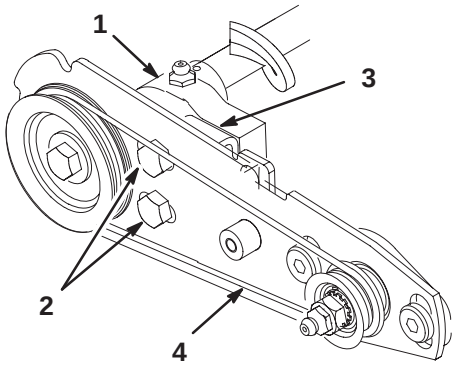


Figure 16

1. Brush shaft bearing housing
2. Bearing housing mounting screws
3. Pivot plate slotted bracket
4. Drive belt

11. Install the drive belt (Fig. 16) and adjust the belt tension as follows:

A. Loosen the 2 capscrews securing the brush shaft bearing housing to the pivot plate.

B. Install the belt onto the large and small pulleys.

C. Insert a screwdriver between the brush shaft bearing housing and slotted bracket.

D. Pry the bearing housing rearward and tighten the belt until there is 3/32 in. deflection midway between the pulleys with a force of 2 lb. applied at a right angle to the belt.

E. Tighten the 2 bearing housing mounting screws to lock the adjustment.

12. Adjust the axial movement of the brush shaft (Fig. 16) as follows:

A. Loosen the set screw securing each locking collar to the ends of the brush shaft.

B. Rotate each locking collar to unlock them from the bearing.

C. On the pulley end of the shaft, pull the shaft inward and rotate the collar forward (in the direction of brush rotation) into the locking position. Use a hammer and punch to ensure that the collar is tight.

D. Tighten the collar set screw to secure the adjustment.

E. Repeat the procedure on the opposite end of the shaft.

13. Pivot the brush assembly onto the roller. The brush should lightly contact the entire length of the roller and should be parallel to the roller.

14. While holding each hex extension with a wrench, tighten each hex head screw to 60 ft.-lb. Tighten the capscrew and flange nut securing the bearing adjustment plate to the support bracket (Fig. 15). Make sure that the brush to roller contact is not disturbed.

15. Lubricate the brush shaft bearing housing and small drive pulley grease fittings with general purpose lithium grease.

16. Install the belt cover to the drive assembly with a screw and flat washer. Tighten the screw securely but do not overtighten as damage to the cover may occur.

17. Repeat procedure on the 2 remaining left-hand brush drives.

Important Use caution if tipping the cutting unit onto the roller brush. Roller brush misadjustment and/or damage to the brush may occur, resulting in poor performance or a ruined brush. After completion of the cutting unit maintenance, check the brush-to-roller contact and reset it as required.


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