



Roller Rebuild Tool Kit

Part No. 115-0803

Form No. 3359-980 Rev. A

Installation Instructions

The Roller Rebuild Tool Kit is used in conjunction with the Roller Rebuild Kit, Part No. 114-5430 which includes all the bearings, bearing nuts, inner and outer seals for rebuilding a roller.

1. Remove the roller from the cutting unit.
2. On Reelmaster cutting units, remove the grease fitting from each end of the roller shaft (Fig. 1). (This is not required on Groundsmaster cutting unit rollers)
3. Remove the bearing nuts, seals, roller shaft and bearings from the roller tube (Fig. 1).

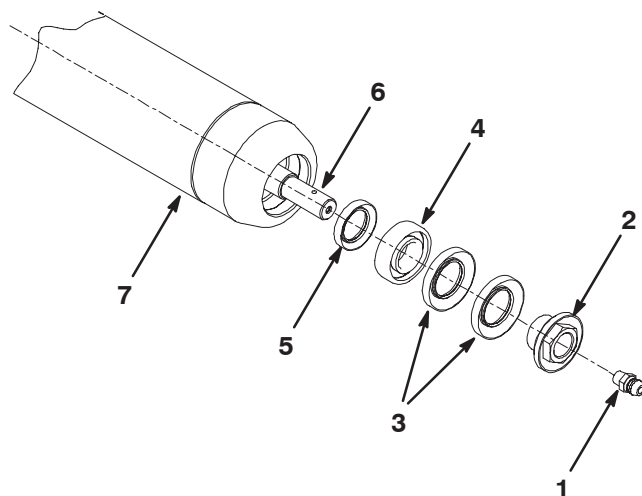


Figure 1

- | | |
|--|-----------------|
| 1. Grease fitting
(Reelmaster rollers only) | 4. Bearing |
| 2. Bearing nut | 5. Inner seal |
| 3. Outer seal | 6. Roller shaft |
| | 7. Roller tube |

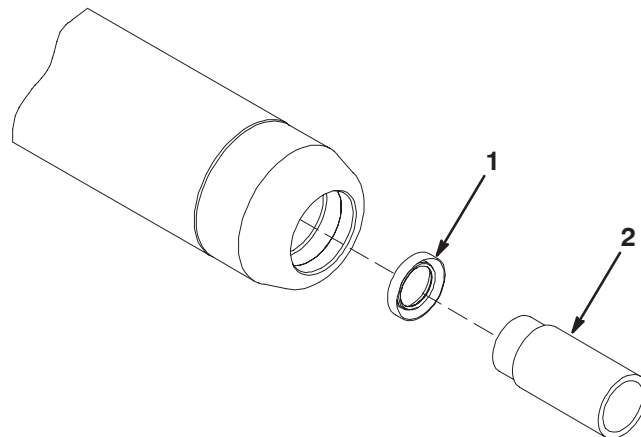


Figure 2

- | | |
|---------------|--------------------|
| 1. Inner seal | 2. Inner seal tool |
|---------------|--------------------|

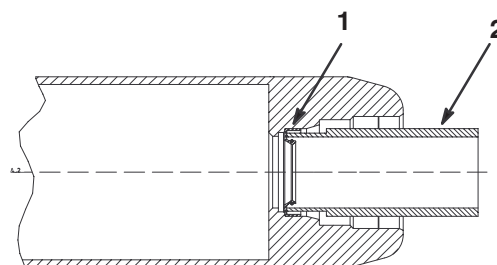


Figure 3

- | | |
|---------------|--------------------|
| 1. Inner seal | 2. Inner seal tool |
|---------------|--------------------|

4. Clean the roller shaft and all the surfaces on the inside of roller tube assembly. Inspect the shaft and tube assembly for wear. Replace as necessary.
5. Using the Inner Seal Tool, install an inner seal into each end of the roller tube. Install the seal gently into the tool (Fig 2), then, lightly tap the seal into the roller tube until it is seated (Fig. 3).

Note: Make sure the seal is installed as shown in figures 2 & 3. The garter spring is to be facing toward the outside of the roller.

6. Apply a small amount of grease around the inner lip of each inner seal.

7. Using the Bearing/Outer Seal Tool, install a bearing into one end of the roller tube. Slightly tap on the outer race of the bearing until the bearing is seated (Fig. 4 & 5).

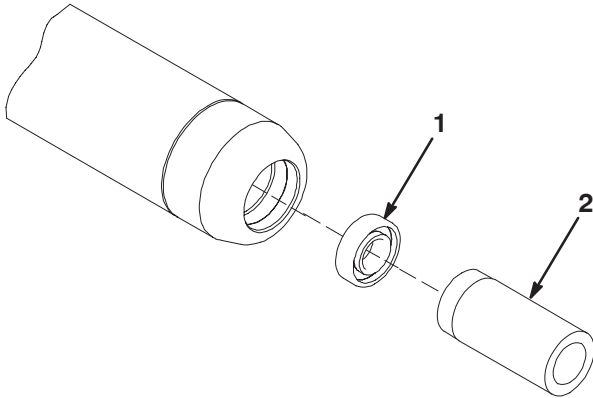


Figure 4

1. Bearing
2. Bearing/outer seal tool

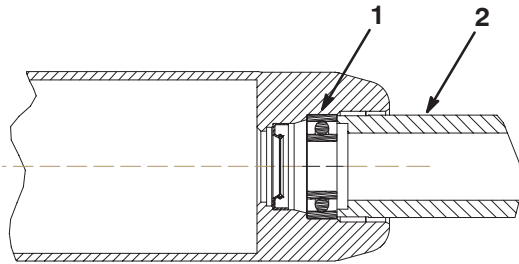


Figure 5

1. Bearing
2. Bearing/outer seal tool

8. Use your finger to check the rotation of the bearing. If any binding is detected, reinstall the bearing.
9. On the same end of the roller tube, use the Bearing/Outer Seal Tool to install (2) outer seals as follows:
 - Apply a small amount of grease around the lips of the seals.
 - Install the first seal gently into the tool (Fig. 6), and lightly tap the seal into the roller tube until it is seated (Fig. 7).

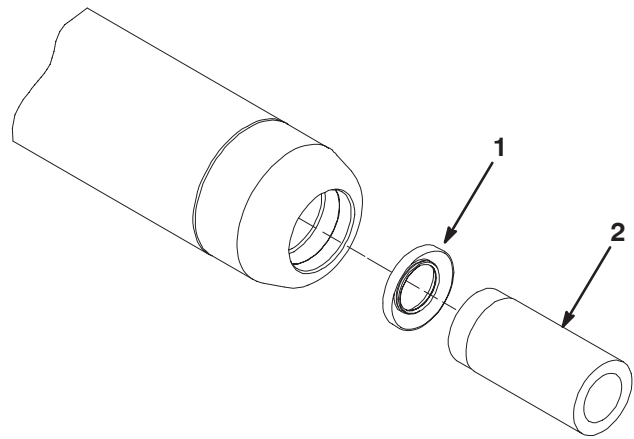


Figure 6

1. Outer seal
2. Bearing/outer seal tool

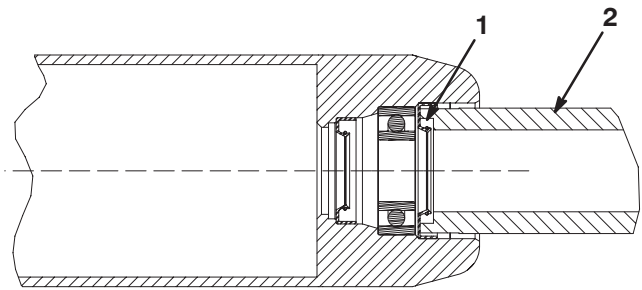


Figure 7

1. Outer seal
2. Bearing/outer seal tool

Note: Make sure the seal is installed as shown in figures 6 & 7. The garter spring is to be facing toward the outside of the roller.

10. Use your finger to check the rotation of the bearing. If any binding is detected, reinstall the seal(s).
11. Repeat the procedure to install the second outer seal (Fig. 8).

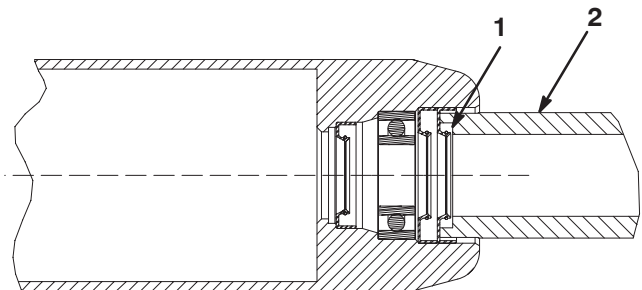


Figure 8

1. Second outer seal
2. Bearing/outer seal tool

12. From the end of the roller with only the inner seal installed, gently install the roller shaft into the roller.

Note: Damage can occur to the seal lips if the roller shaft is not installed gently.

Note: Remove any inner seal grease that may have gotten onto the roller shaft threads. Not removing the grease may affect the retaining torque of the bearing nuts.

13. Using the Washer and Bearing/Outer Seal Tool, install the second bearing onto the open end of the roller shaft. Lightly tap the bearing until the inner race is seated on the roller shaft (Fig. 9 & 10).

Important To prevent damage to the bearing, carefully press on the inner and outer bearing race with the washer when installing the bearing.

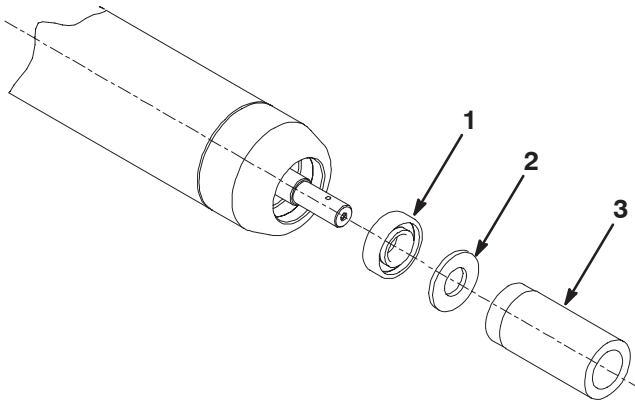


Figure 9

- | | |
|------------|----------------------------|
| 1. Bearing | 3. Bearing/outer seal tool |
| 2. Washer | |

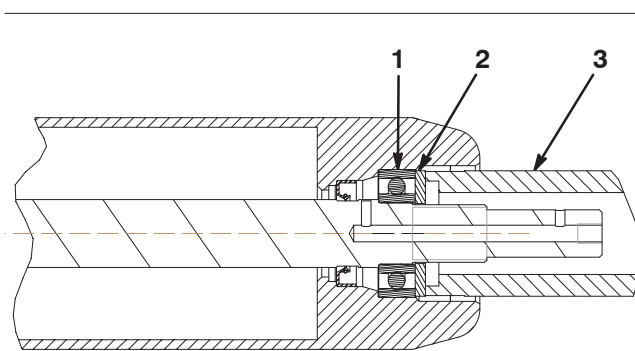


Figure 10

- | | |
|------------|----------------------------|
| 1. Bearing | 3. Bearing/outer seal tool |
| 2. Washer | |

14. Rotate the roller shaft to check for binding in the bearing. If binding is detected, lightly tap the bearing with the tool, and/or lightly tap each end of the roller shaft. If binding is still detected, reinstall the bearing

15. On the same end of the roller tube, use the Bearing/Outer Seal Tool to install (2) outer seals as follows:

- Apply a small amount of grease to outer lips of the seals.
- Install the first seal gently into the tool (Fig. 11), and lightly tap the seal into the roller tube until it is seated (Fig. 12).

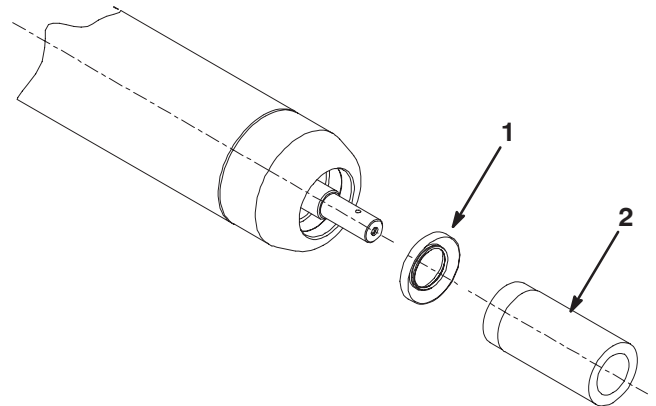


Figure 11

- | | |
|---------------|----------------------------|
| 1. Outer seal | 2. Bearing/outer seal tool |
|---------------|----------------------------|

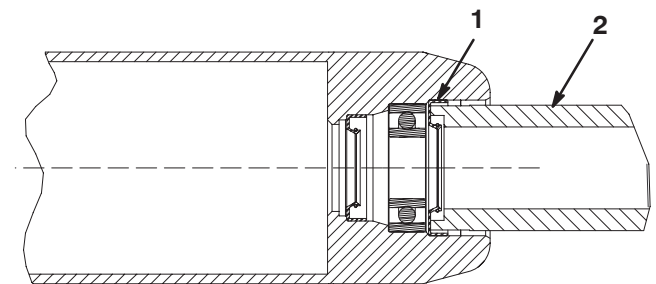


Figure 12

- | | |
|---------------|----------------------------|
| 1. Outer seal | 2. Bearing/outer seal tool |
|---------------|----------------------------|

Note: Make sure the seal is installed as shown in figures 11 & 12. The garter spring is to be facing toward the outside of the roller.

16. Rotate the roller shaft to check for binding in the bearing. If any binding is detected, reinstall the seal(s).

17. Repeat the procedure to install the second outer seal (Fig. 13).

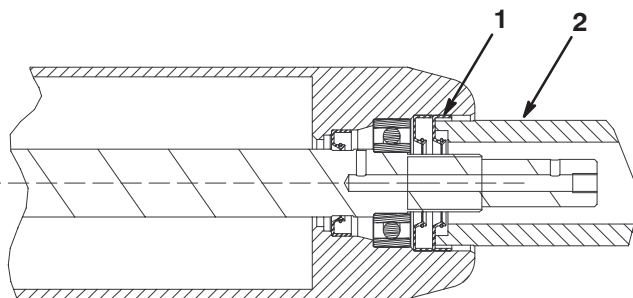


Figure 13

1. Second outer seal 2. Bearing/outer seal tool
-

18. Rotate the roller shaft to check for binding in the bearing. If any binding is detected, reinstall the bearing and seal.
19. Using two 1 inch wrenches, install the new roller bearing nuts onto each end of the roller shaft. Torque the nuts to 50–60 ft–lbs.
20. On Reelmaster cutting units, reinstall the grease fitting to each end of the roller shaft.
21. On Groundsmaster rollers, reinstall the roller into the roller mounts on the decks. Make sure the grease groove in each roller mount aligns with the grease hole in each end of the roller shaft.
- Note:** To help align the groove and hole, there is also an alignment mark on one end of the roller shaft.
22. Grease the roller to make sure grease properly flows thru the outer seals. Grease should purge around the outside of the adjuster nut.
23. Wipe off the excess grease from the roller.
24. Using a 1 inch wrench on the bearing nut, rotate the roller several times to lubricate all the seals inside roller and remove excess drag in the seals.
25. When the roller is properly assembled, the rolling torque should be 5 in–lbs or lower.