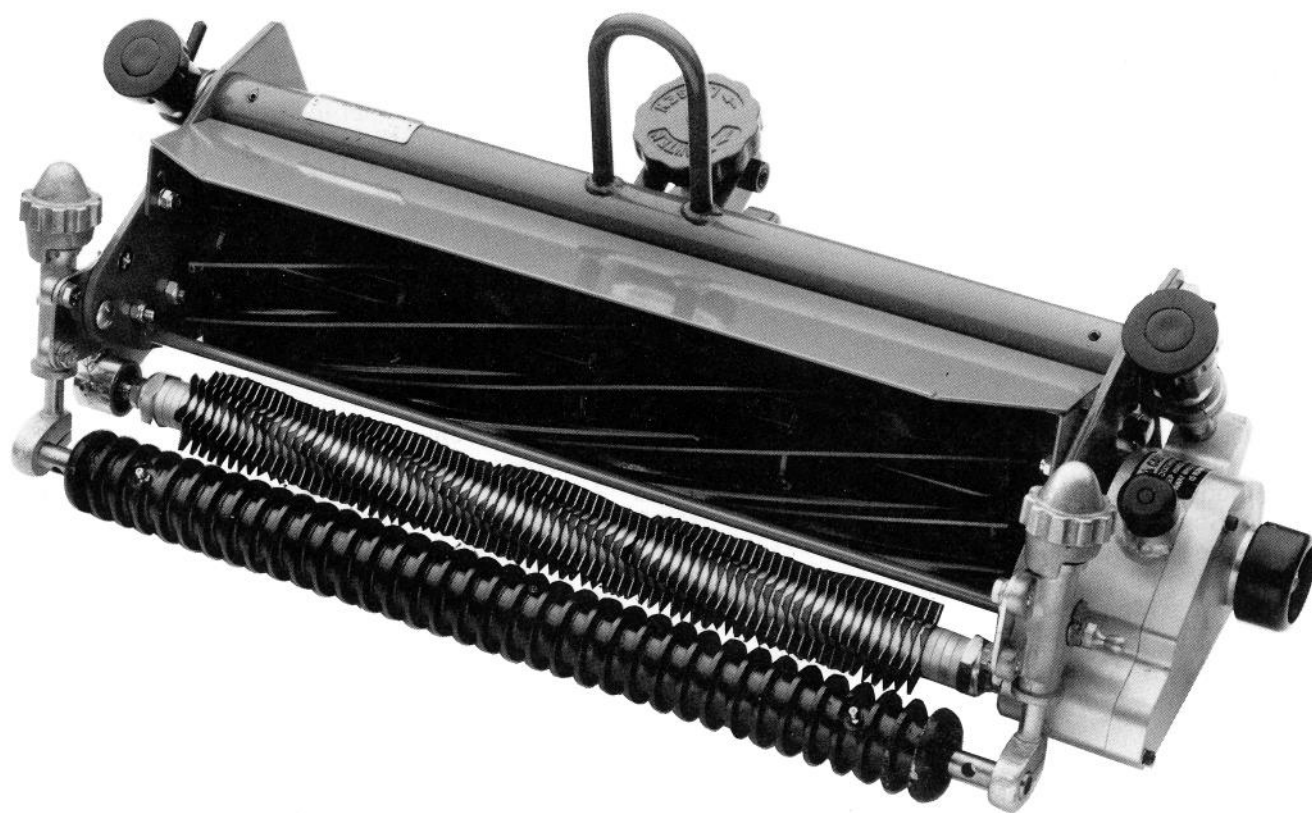




MODEL NO. 04455

**OPERATOR'S  
MANUAL**

**GROOMING REEL KIT FOR  
GREENSMMASTER® 3000 CUTTING UNIT**



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## LOOSE PARTS

DESCRIPTION	QTY.	USE
Frame Assembly, R.H.	3	Attaches to right frame
Frame Assembly, L.H.	3	Attaches to left frame
Bearing Adapter	6	Connects groomer to reel frame
Spacers	12	Connects groomer to reel frame
Bearing Adapter Studs	6	Fastens bearing adapters
Flat Head Screws	6	Fastens bearing adapters
Lock Nut	12	Fastens bearing adapters
Lock Nut	6	Secures hydraulic motor
Roll Pin	12	Fastens mounting block to reel frame tube
Grooming Reel Assembly	3	76 blades, 1/4" spacing
Pulley, Driven	3	Attaches to grooming reel
Lock Nut	3	Attaches to grooming reel
Roller Extension Assembly, RH	3	Holds roller
Roller Extension Assembly, LH	3	Holds roller
Clutch Assembly	3	Drives belt
Belt, Driven	3	Drives grooming reel
Splined Nut	3	Replaces right side reel nut
Pivot Screw	6	Replaces SPA shield pivots
Groomer Height/Depth Gauge	1	Used to adjust groomer height
Parts Manual	1	
Operator's Manual	1	

# SET UP INSTRUCTIONS

**IMPORTANT:** Read this Operator's Manual thoroughly before setting up or operating the groomer. Failure to follow the instructions in this manual may result in damage to the cutting unit and/or the groomer. Failure to follow the operating instructions may result in damage to the turf.

**IMPORTANT:** The additional weight of the Grooming Reel requires that the GREENSMaster 3000 Frame Brace Kit (#63-9990) be added to all traction units prior to Model #04350, Serial #80437.

**Note:** The GREENSMaster 3000 Grooming Reel Kit is designed to fit the following Toro riding greens mower cutting units: 04407, 04440, 04448, 04450, 04458, 04468.

**Note:** When the terms "left" and "right" are used they refer to the left or right side of the unit as the operator would see them when sitting in the seat.

To install the Grooming Reel Kit on Single Point Adjustment (SPA) cutting units (models 04440, 04448, 04450, 04458 & 04468) and 4 Bolt Adjustment (4 bolt) cutting units (Model 04407) use the following procedure:

1. Remove grass shield assembly. On SPA cutting units the two hex head cap screws and lock nuts should be saved for reuse but, the two pivot screws and lock washers can be discarded (Fig. 1). On 4 bolt cutting units the two cap screws, washers, lock washers and hex nuts should be saved for reuse (Fig. 2).

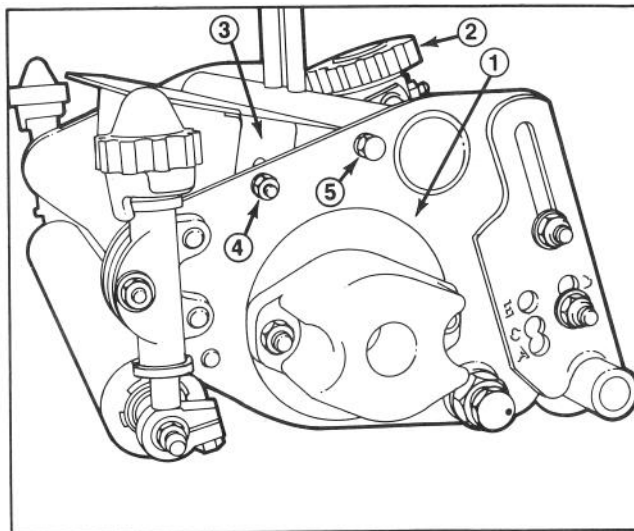


Figure 1

1. Single point adjustment cutting unit (SPA)
2. Bedknife adjusting knob (i.e. single point)
3. Shield
4. Shield fastening cap screw and lock nut (2)
5. Pivot screws and lock washers (2)

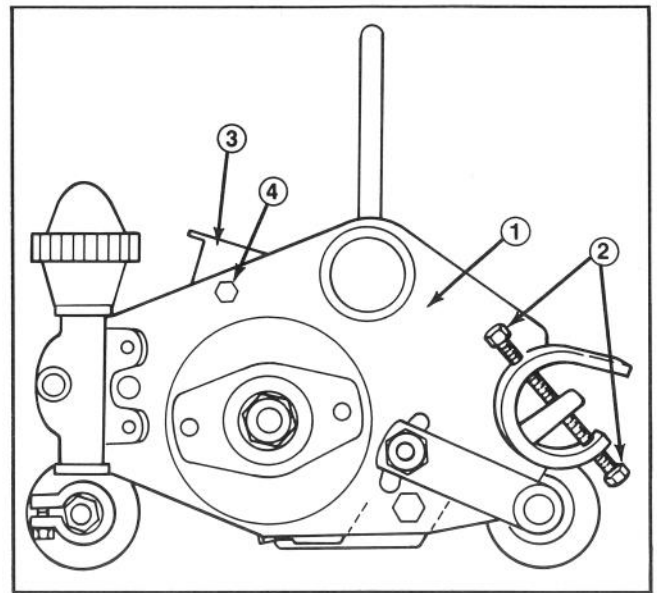


Figure 2

1. Four bolt cutting unit (i.e. 4 bolt)
2. Bed knife adjusting screws (4)
3. Shield
4. Shield fastening cap screw, washer, lockwasher, hex nut (2)

2. Remove the two front height of cut brackets and roller by removing the carriage bolts, flat head machine screws and cap screws securing the brackets to the cutting unit (Fig. 3). The roller is the only item that will be reused.

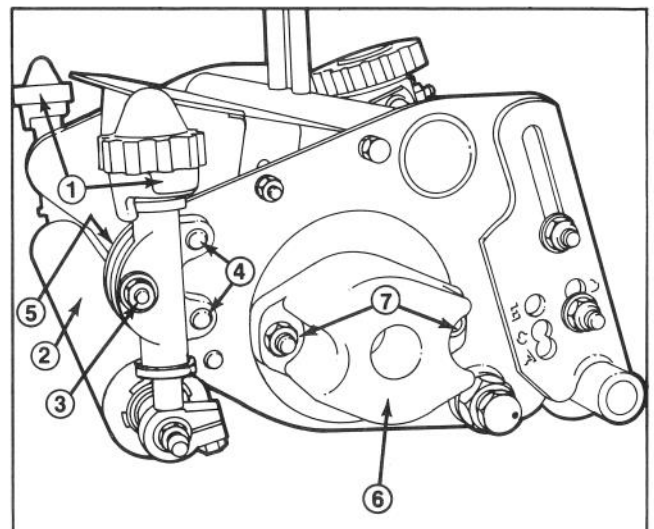


Figure 3

1. Front height of cut brackets (2)
2. Front roller
3. Carriage bolt, washer and nut (2)
4. Flat head machine screw (4)
5. Cap screw and lock washer (2) (hidden behind plate)
6. Left side counter balance end cap
7. Lock nut (4)

3. Remove the left side counter balance end cap by removing the two lock nuts (Fig. 3). Then remove the backlap screw (Fig. 4). These items will not be reused.

# SET UP INSTRUCTIONS

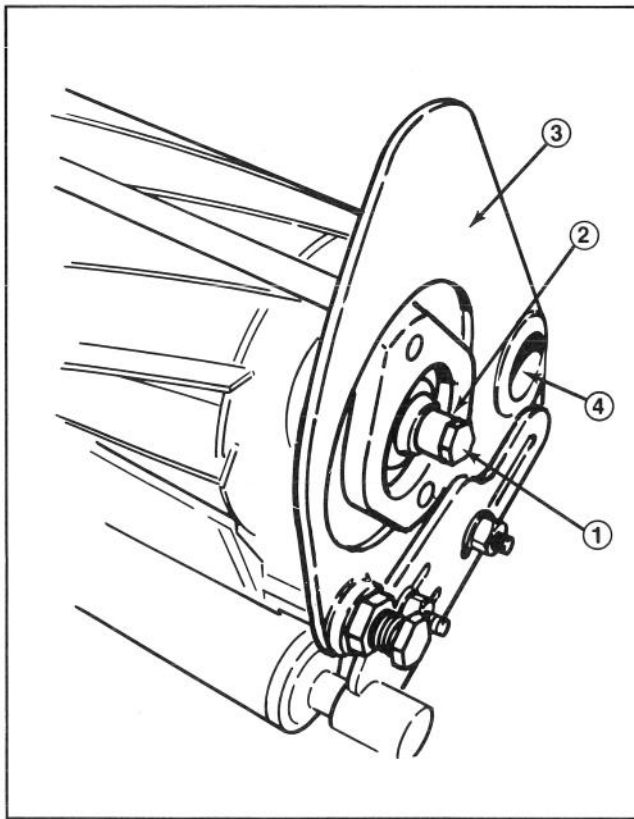


Figure 4

- 1. Backlap screw
- 2. Reel shaft extension
- 3. Left reel frame
- 4. Reel frame tube

4. Using a 1-1/4" socket wrench replace the right side splined nut with the new splined nut supplied with the Grooming Reel Kit (Fig. 5). Torque the new nut to 45 to 55 ft. lbs. Check to see that the drag on the reel bearings is 7 to 11 in. lbs. (refer to cutting unit operator's manual for drag setting procedure).

**Note:** Add never-seez to the splines of the spline nut.

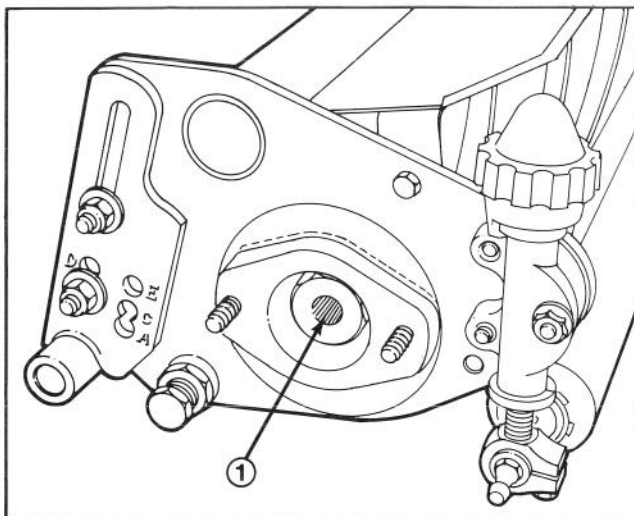


Figure 5

- 1. Right side splined nut

5. Measure the diameter of the reel shaft extension on the backlap (left) side (Fig. 4). The diameter must be .626" (+.000" -.005") over the length of the shaft extension so that the clutch adapter will fit over the extension.

If the extension shaft diameter is greater than .626" it should be reduced by applying a file or emery cloth to the shaft as it is being rotated by hand. Check internal threads. Make sure they are free of rust and debris.

6. Remove and discard the machine screws holding the right and left reel bearing housings to the cutting units (Fig. 6). The machine screw heads will have to be cut off before the screw can be completely removed. The procedure would be to unscrew the machine screw a couple of turns, cut off the head (Fig. 6), and then back out the remainder of the screw from the side plate with a screw driver (outwards not inwards towards the reel). If the machine screw does not have a screw driver slot, use a pliers to back out the screw.

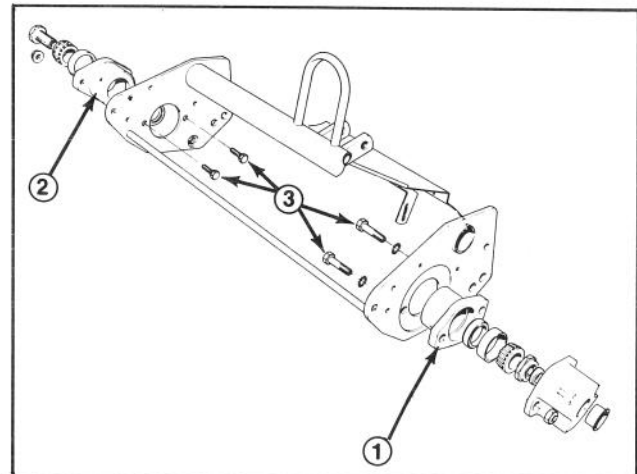


Figure 6

- 1. Left reel bearing housing
- 2. Right reel bearing housing
- 3. Machine screws (4)

7. Install the left grooming reel housing (Fig. 7) assembly onto the left reel frame (Fig. 4) using the following procedure:

- A. Remove housing assembly cover (Fig. 7).
- B. Remove paint and flash from the inside of the reel frame tube (Fig. 4). Wrap shim stock (.004-.005 thick X 1.75 wide) around mounting block (Fig. 7) to compensate for looseness. Slide mounting block (Fig. 7) into reel frame tube. Fit should be snug without free play.
- C. Insert the flat head screws (3/8-16 UNC x 1.75") through the bearing adapter and then put a spacer over each screw before positioning the adapter into the reel bearing housing (Fig. 8 & insert). Slide bearing adapter

# SET UP INSTRUCTIONS

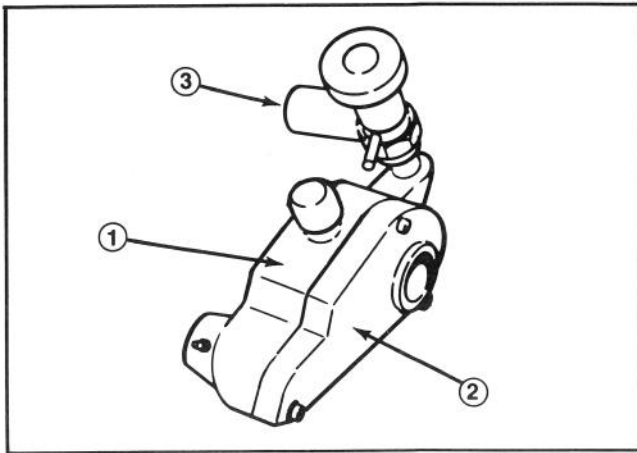


Figure 7

- 1. Left groomer reel housing assembly
- 2. Housing cover
- 3. Mounting block

through the bronze bearing in the assembly and into the reel bearing housing (Fig. 8). Secure adapter with flat head screws (Fig. 8) and torque the screws to 17 to 21 ft. lbs. Install lock nuts onto the inside of the flat head screws and torque to 23 to 27 ft. lbs.

**Note:** Quick up knob may need to be turned to align flat head machine screw with threaded hole in housing.

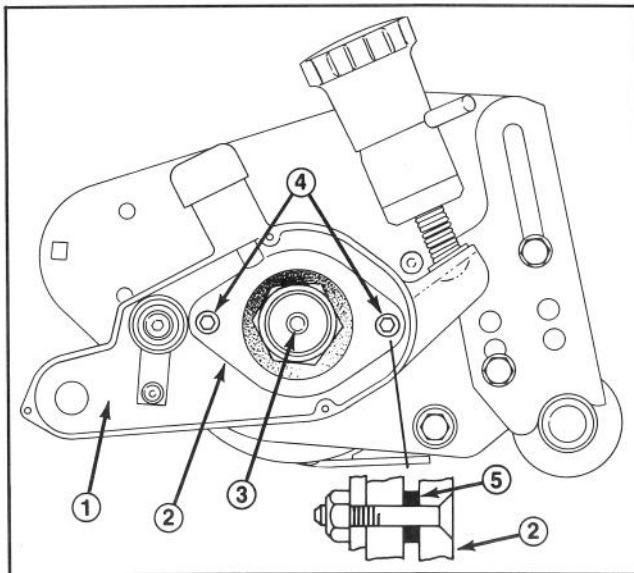


Figure 8

- 1. Left side groomer housing
- 2. Bearing adapter
- 3. Reel bearing housing
- 4. Flat head screws
- 5. Spacer

8. Slide the grooming shaft assembly into the bearing supports in the left side cast housing (Fig. 9). Install the driven pulley (left hand thread) and torque to 29 to 35 ft lbs. using a 3/8" allen socket on a torque wrench (Fig. 10).

9. Install the right hand groomer plate assembly onto the right reel frame plate using the following procedure (Fig. 11):

- A. Remove paint and flash from the inside of the reel frame tube. Wrap shim stock (.004 - .005 thick x 1.75 wide) around mounting block to compensate for looseness. Slide right mounting block into tube opening on right reel frame. Simultaneously slide the right groomer plate bearing over the end of the groomer shaft (Fig. 11). Mounting block should be snug without free play in the reel frame tube.
- B. Continue sliding the right groomer plate bearing adapter into the right reel bearing housing (Fig. 11).

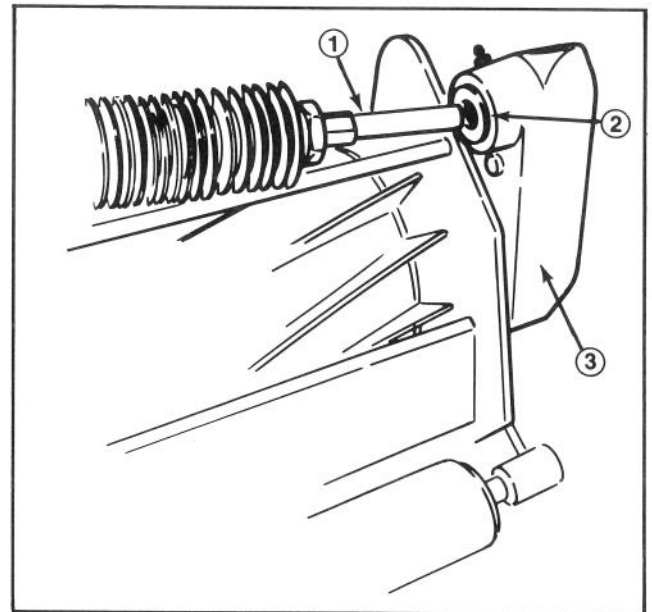


Figure 9

- 1. Groomer shaft assembly
- 2. Bearing support
- 3. Left side cast housing

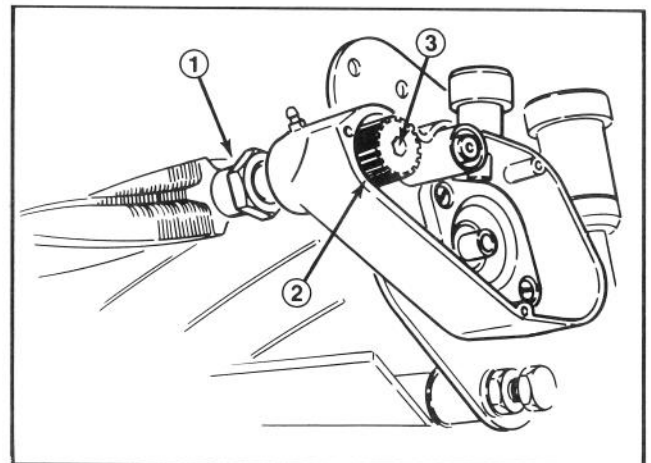


Figure 10

- 1. Groomer shaft assembly
- 2. Driven pulley (left hand thread)
- 3. 1/4" allen head socket



# SET UP INSTRUCTIONS

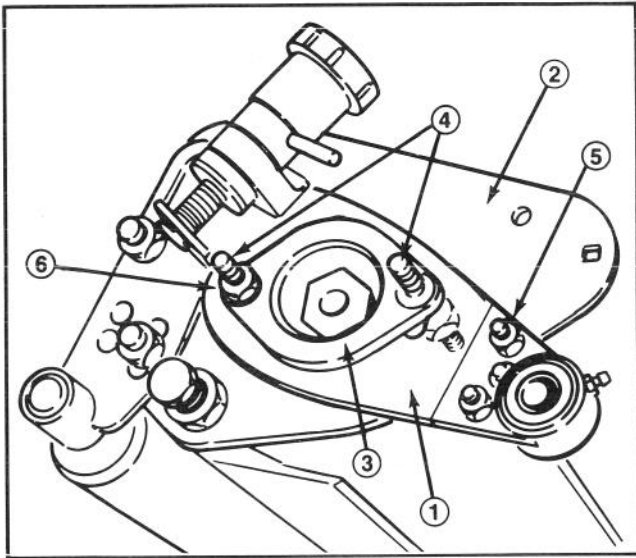


Figure 11

- |                                       |                          |
|---------------------------------------|--------------------------|
| 1. Right side, groomer plate assembly | 4. Special studs (2)     |
| 2. Right reel frame plate             | 5. Inside lock nuts (2)  |
| 3. Groomer bearing adapter            | 6. Outside lock nuts (2) |

- C. Secure adapter with special studs (2) supplied with the Grooming Reel Kit (Fig. 11). The use of a stud driver or double nuts to fasten the special studs is recommended. Be sure to position a spacer over the end of each stud between the Grooming Reel adapter and the right reel bearing housing. Torque studs to 17 to 21 ft. lbs.
- D. Install lock nuts on the insides of the studs from step 9C (Fig. 11). Lock nuts should be put on the inside of the reel frame plate and torqued to 23 to 27 ft. lbs.
- E. Install flange lock nuts on the outsides of the studs from step 9C (Fig. 11) These lock nuts will eventually be used to mount the reel drive motor.
- F. Install the lock nut on the right side of the groomer shaft (see step 9B). This nut has a left hand thread and should be torqued to 29 to 35 ft. lbs.

10. Install Belt Drive Clutch using the following procedure:

- A. Remove the clutch engagement knob from the clutch assembly by loosening the two allen head set screws (Fig. 12). Then remove the nut and washer from the clutch adapter shaft (Fig. 12).
- B. Remove the adapter from the clutch assembly and screw the adapter onto the left reel shaft extension (Fig. 13). Use a piece of wood to hold the reel so that it does not rotate and tighten the clutch adapter to a minimum of 17 ft. lbs. of torque.

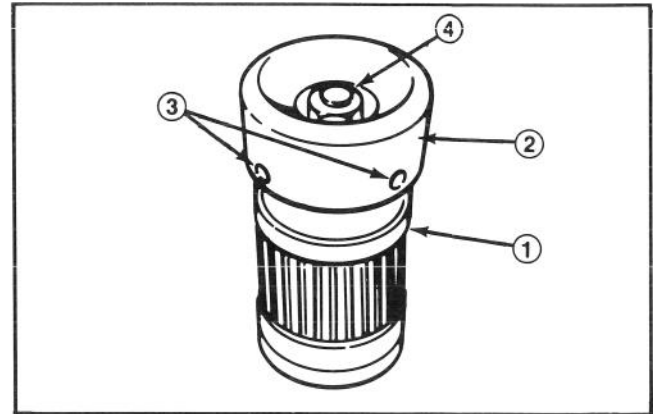


Figure 12

- |                               |                              |
|-------------------------------|------------------------------|
| 1. Belt drive clutch assembly | 3. Allen head set screws (2) |
| 2. Engaged/disengagement knob | 4. Nut and washer            |

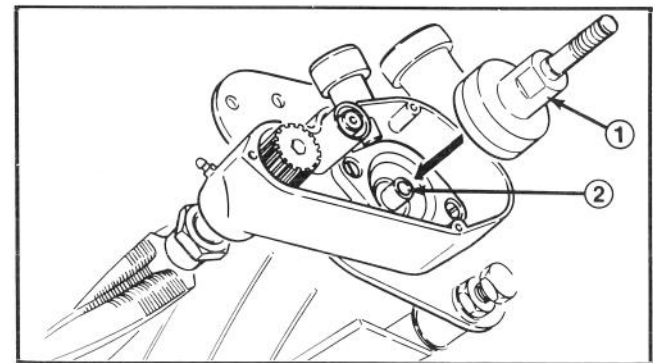


Figure 13

- |                         |
|-------------------------|
| 1. Clutch adapter       |
| 2. Reel shaft extension |

- C. Position the toothed belt over the drive pulley (that was removed from the clutch in step 10B). While holding the belt on the drive pulley, simultaneously slide the drive pulley back into place on the clutch adapter and position the belt around the driven pulley and under the backside idler (Fig. 14).

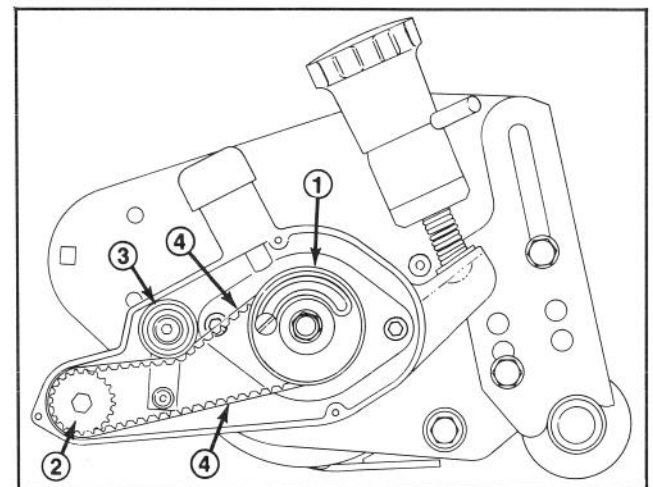


Figure 14

- |                  |                   |
|------------------|-------------------|
| 1. Drive pulley  | 3. Backside idler |
| 2. Driven pulley | 4. Drive belt     |

# SET UP INSTRUCTIONS

**IMPORTANT:** If the clutch mechanism has come apart since the nut and washer were removed in step 10A be sure that the belleville washers are installed as shown in (Fig. 15).

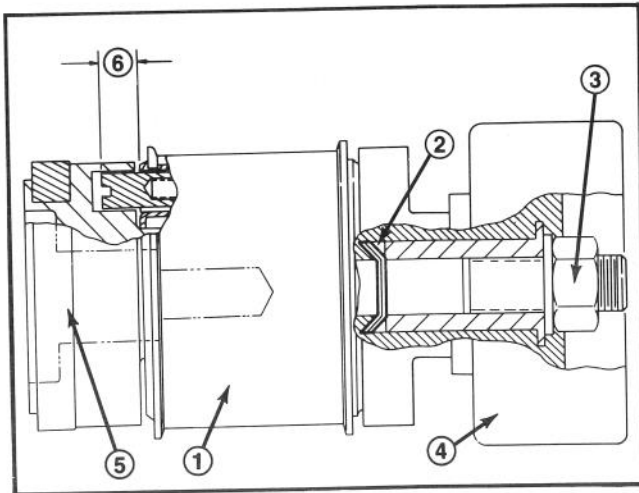


Figure 15

1. Clutch body
2. Belleville washers (2)
3. Nut and washer
4. Engaged/disengage knob
5. Clutch to reel shaft adapter
6. .270 inch  $\pm$  0.010 (with pin fully extended)

- D. Install the washer and nut (that was removed in step 10A) onto the clutch adapter shaft. Use a piece of wood to hold the reel from rotating and tighten this nut to 10 to 14 ft. lbs. of torque.

- E. Check the tension on the drive belt by depressing it at the point midway between the drive pulley and the driven pulley (Fig. 14). A force of 5 to 10 lbs. should be required to depress the midpoint of the belt 1/4 inch. To adjust tension, loosen the backside idler pulley pivot allen head bolt, pivot the idler to achieve the proper tension, and tighten the allen head bolt 7 to 10 ft. lbs. of torque.

11. Reinstall the left assembly housing cover (that was removed in step 7A) using the three socket head screws and lock washers (Fig. 16).

12. Reinstall the clutch engagement knob to the clutch assembly with the two allen head set screws (Fig. 16).

13. With a pliers remove the cotter pins from the right and left grooming reel position adjustment carriage bolts (Fig. 17). Make sure that the washers are in place at the ends of the carriage bolts and in particular, make sure that the right square holded washer is properly seated on the square end of the carriage bolt.

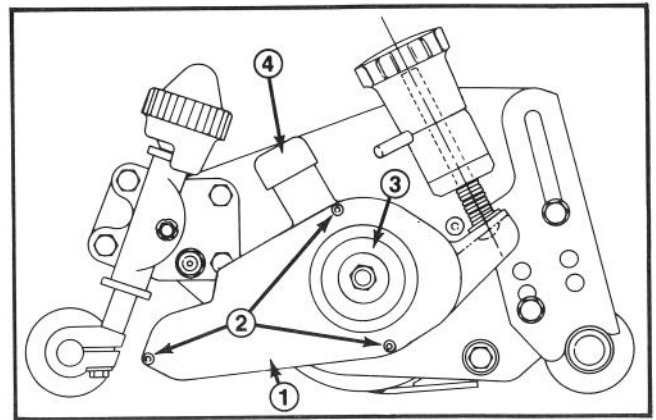


Figure 16

1. Left assembly housing cover
2. Socket head screws and washers (3)
3. Clutch engagement knob
4. Clutch snubber

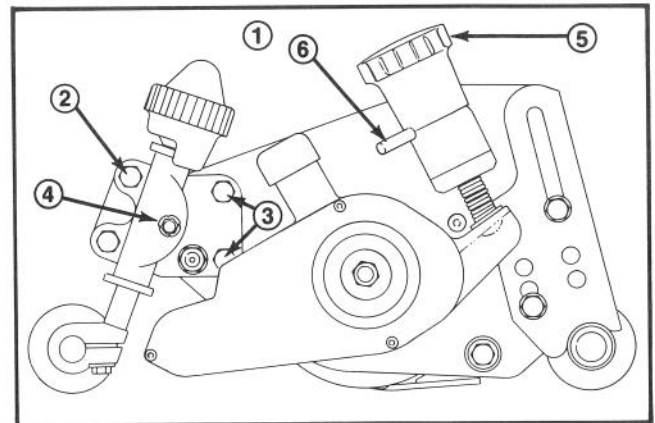


Figure 17

1. Left roller extension assembly (i.e. front height of cut adjustment bracket)
2. Cap screw and lock nut hidden behind assembly (2)
3. Flat head screws (4)
4. Carriage bolt and pallet nut
5. Groomer height of adjustment knob
6. Quick up lever (2) (in raised position)

14. Install right and left roller extension assemblies and the roller removed in step 2 using the cap screw and lock nut, flat head screw and lock nut, and carriage bolt and pallet nut provided with the Grooming Reel Kit (Fig. 18). It may be necessary to turn the groomer height of adjustment knob to get access to the bolt holes. The hex head capscrew must be installed with the head facing outboard (nuts to the inside).

15. Secure the right and left mounting blocks using the following procedure:

- A. Turn the grooming reel adjustment knob until the spring is compressed all the way (Fig. 18).
- B. Make sure that the carriage bolt which runs through the center of the spring is in 90° alignment (Fig. 18). Spring should be centered in adjustment mechanism.

# SET UP INSTRUCTIONS

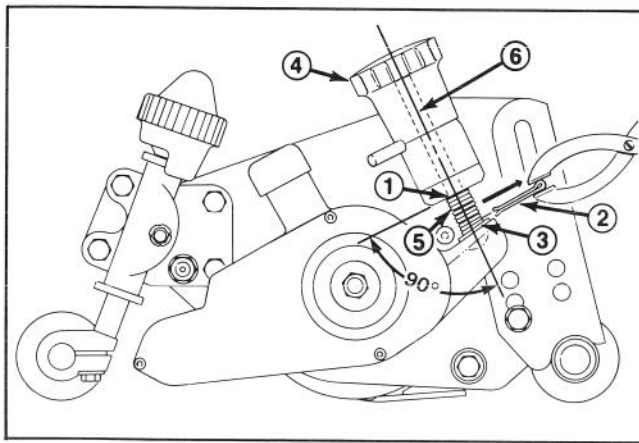


Figure 18

1. Carriage bolt (2)
2. Remove cotter pin (2)
3. Washer (2)
4. Adjustment knob (2)
5. Compressed spring (2)
6. Center line through housing and carriage bolt

- C. With the carriage bolt in alignment, drill a 7/32" hole through the frame tube and mounting block 3/4" in from the left and right side frame plates (Fig. 19). Adjustment mechanism must maintain proper orientation during drilling.

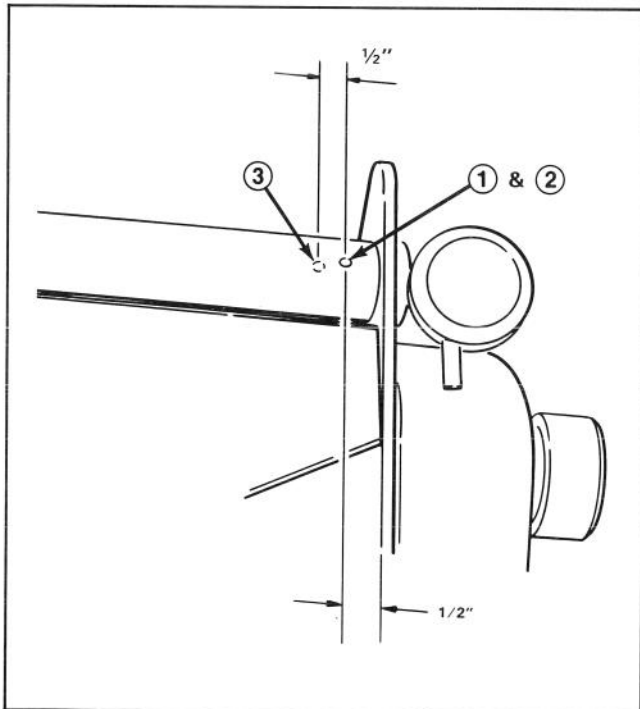


Figure 19

1. Drill 7/32" hole (2)
2. Install roll pin (2)
3. Second hole and roll pin 90° from the first pin

- D. Install the 7/32" roll pins in the holes drilled in step 15C.
- E. Drill a second hole and install the second roll pin perpendicular to the first pin and 1-1/4" in from the side plate.

16. Reinstall the grass shield using the bolts removed in step 1. For SPA units, new rear pivot screws are supplied. The right hand side is secured with an Allen head pivot screw. A hole in the grooming reel side plate permits access for installation.

The left hand side is secured with a headless Allen screw and hex full nut. An area of the housing has been relieved to ease installation. Insert the pivot screw into the full nut. Insert assembly into the reel frame grass shield. Thread pivot screw into reel frame, preventing rotation of the full nut. Thread pivot screw in until it clears the drive housing. Tighten nut to lock assembly.

Movement of the cast housing and/or sideplate may be necessary for installation of the pivot screw. This may be accomplished by turning the height adjustment knobs.

17. Use the Quick Up Levers (both sides) to raise the grooming reel into the transport position (Fig. 17). Hold the clutch snubber down and disengage the clutch by turning the clutch knob clockwise (Fig. 16). Lubricate the grooming reel shaft bearings with a hand pump grease gun (2 or 3 pumps maximum). Do not over grease as excess grease may cause seal failure (Fig. 20).

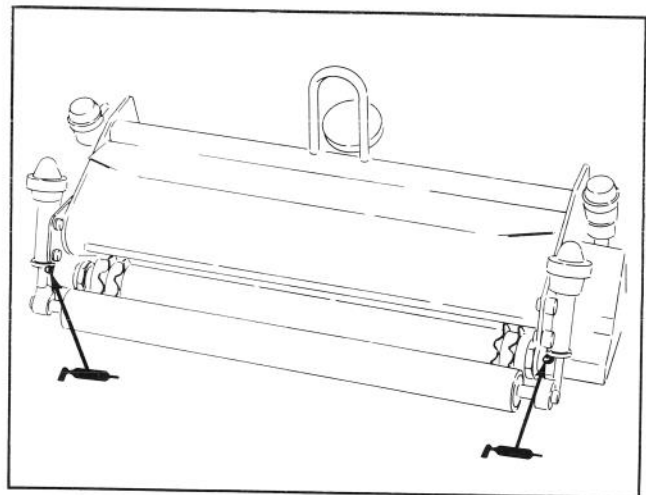


Figure 20



# OPERATING INSTRUCTIONS

## INTRODUCTION

Grooming golf course greens is a variation of an old technique that is receiving new found popularity. It is associated with the golfer's desire for faster and truer greens. Grooming is usually performed above the soil level. Grooming promotes vertical growth of the grass by cutting runners (stolons), removing thatch and encouraging denser growth and deeper rooting (Fig. 21). This can, in effect, yield a more even grass with less "grain" for faster and truer action of the golf ball.

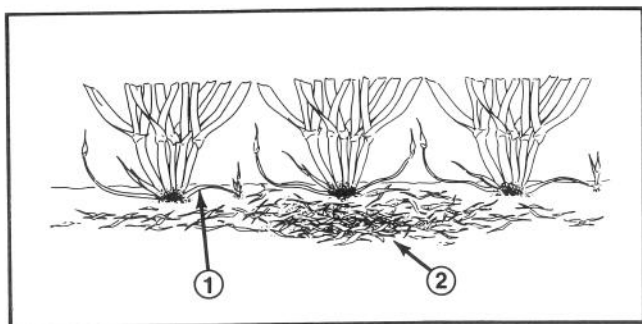


Figure 21

1. Grass runners (Stolons)
2. Thatch

Grooming is similar to verti-cutting in its runner cutting action. Grooming however, can not deeply penetrate the soil like verti-cutting. Groomer blades are spaced closer together and are used more often than verti-cutters so that they are more effective in cutting runners and removing thatch. Verti-cutters are used primarily for greens renovation while groomers are used for ongoing greens upkeep.

It is difficult to make precise recommendations on the use of grooming reels because so many variables affect the performance of grooming, including:

- A. The time of the year (ie. the growing season) and weather pattern.
- B. The general condition of each green.
- C. The frequency of grooming/cutting — both how many cuttings per week and how many passes per cutting.
- D. Which Toro grooming reel is used — the 1/4" spacing or the 3/4" spacing.
- E. The height of cut setting on the main cutting reel.
- F. The height/depth setting on the grooming reel.
- G. How long the grooming reel has been in use on this green.
- H. Type of grass on the green.

- I. The overall greens management program (ie. irrigation, fertilizing, spraying, coring, over setting, etc.).
- J. Traffic.
- K. Stress periods (ie. high temperatures, high humidity, unusually high traffic).

These factors can vary from golf course to golf course and from green to green. It is important, therefore, to inspect the greens frequently and vary the grooming practice in accordance with the need.

The grooming reel with 1/4" blade spacing is recommended for fast growth periods (spring through early summer). The grooming reel with 3/4" blade spacing is recommended for slower growth periods (late summer through fall and winter). During high stress periods it may be desirable to not use the grooming reel.

**Note:** The grooming reel with 1/4" blade spacing will tend to remove grass blades and thatch and cut runners. The grooming reel with 3/4" blade spacing primarily removes thatch and cuts runners. If the grooming reel with 1/4" blade spacing is being used, up to two groomings per week will probably be sufficient except during maximum growth periods.

**Note:** The practice of changing the direction of cut each time the green is cut should be continued when a groomer is used. This rotation will enhance the effects of the grooming.

## TEST GROOMER PERFORMANCE

**IMPORTANT:** Improper or over aggressive use of the grooming reel (ie. too deep or too frequent grooming) may cause unnecessary stress on the turf leading to severe greens damage. Use the groomer cautiously.



**DANGER**

Before making any adjustments to cutting units disengage the reels, set the parking brake, turn the engine off and remove the key.

It is important to determine the performance of the groomer before putting it into regular use on greens. Toro strongly suggests that a formal test procedure be used. The following is a practical way of determining the proper height/depth setting:

# OPERATING INSTRUCTIONS

1. Set the main cutting reels to the height of cut that would normally be used without the grooming reel. Use a Wiehle roller on the front and a full roller with scrapers on the rear (a Wiehle roller can be used on the rear at height of cut settings 3/16" or below but this may result in a slightly deeper cut).

2. Set each of the grooming reels at a different setting as follows:

- A. One groomer 1/32" above the roller level.
- B. One groomer flush with the roller level.
- C. One groomer disengaged and raised into the transport position.

3. Make a pass over the test green and look at the results. The reel with the groomer set at 1/32" above the roller level will have removed more grass and thatch than the reel with the groomer disengaged. The reel with the groomer set flush with the roller level will have removed significantly more grass and thatch than the other two reels.

4. Examine the test green and determine if one of the two groomed areas gives the desired results. If not, lower and engage the third groomer, increase or decrease the height/depth of the groomers and make another test pass. The amount of grass removed is a key indicator in determining the height/depth setting of the grooming reel.

Check the test green 2 or 3 days after the first grooming for general condition/damage. If the groomed areas are turning yellow/brown, and the non groomed areas are green, then the grooming was too aggressive.

**Note:** The color of the grass will change when the grooming reel is used. This can be observed with the first grooming and will continue over time. Experience will allow the greens superintendent to judge by color of the turf (along with close examination) if the current grooming practice is appropriate for the particular green. Because the grooming reel stands up more grass and removes thatch, the quality of the cut will not be the same as without the groomer. This effect is most noticeable the first few times a groomer is used on a green.

**Note:** On multiple passes (ie. double and triple cutting), the groomer will continue to penetrate deeper on each successive pass. Multiple passes are not recommended.

5. After testing the performance of the groomer on a test green and satisfactory results are obtained, grooming on the playing greens can begin. It is important to realize however, that each green may respond differently to grooming. In addition, growing conditions are constantly changing. Inspect the

groomed greens frequently and make adjustments to the grooming procedure as often as necessary.

## HEIGHT/DEPTH OF GROOMER SETTING

The groomer blade height/depth of grooming can be set using the following procedure:

1. Remove the cutting unit from the traction unit. Clean the cutting unit and make sure that the rollers are clean.
2. Set the height of cut on the cutting reel following the procedure in the GREENSMaster Cutting Unit Operator's Manual.
3. Hold the clutch snubber down and disengage the clutch by turning the clutch knob clockwise (Fig. 16). Use the Quick Up Levers (both sides) to lower the grooming reel into the grooming position (Fig. 17).
4. With one hand, hold the groomer height/depth gauge, securely against the front and rear rollers on one side of the cutting unit (Fig. 22). With the other hand lift and turn the micro adjustment knob so that the groomer blade just barely contacts the gauge (rotating the groomer blade by hand will help determine if the blades just barely touch the surface of the gauge) (Fig. 22). Each notch on the micro adjustment knob is approximately equally to .007 inch of groomer depth.

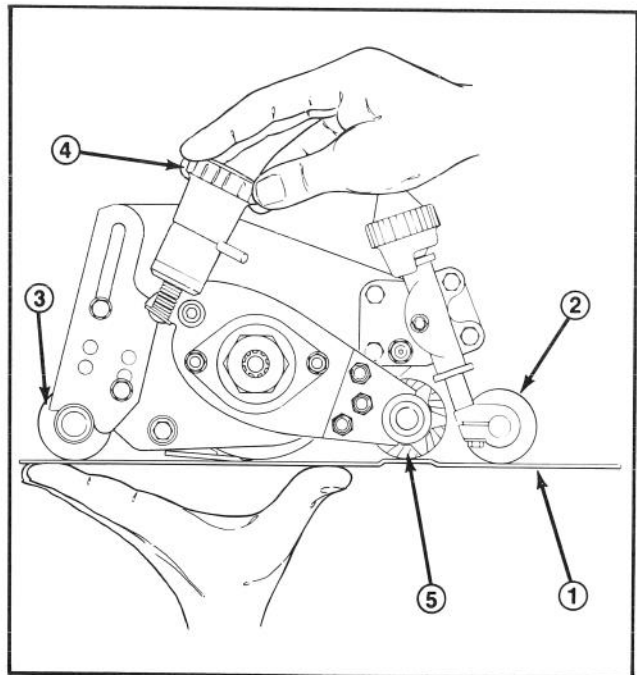


Figure 22

- 1. Groomer height/depth gauge
- 2. Front roller
- 3. Rear roller
- 4. Micro adjustment knob (2)
- 5. Groomer reel touching gauge

# OPERATING INSTRUCTIONS

5. Repeat step 4 on the other side of the groomer blade. Go back to the first side and check height/depth setting.
6. Reinstall the cutting unit on the traction unit. Put the grooming reel into the transport position and disengage the clutch.

## CLUTCH ENGAGE/DISENGAGE



### CAUTION

The clutch engagement knob rotates during normal operation of the grooming unit. Keep loose clothing, hair, etc. away.

The grooming reel should be disengaged at all times except during grooming. To operate the clutch depress the clutch snubber and engage the clutch by turning the clutch knob counter clockwise — turn the clutch knob clockwise to disengage the clutch (Fig. 16).

**IMPORTANT:** When engaging or disengaging the clutch be sure to turn the knob all the way (it will come to a firm stop). Failure to do so could cause damage to the clutch.

## TRANSPORT MODE

**IMPORTANT:** When transporting the traction unit be sure to disengage the groomer clutch and raise

the grooming reel into its transport (raised) position. To raise the grooming reel grab the right and left quick up levers and turn them so that they face to the rear (Fig. 17). To lower the grooming reel turn the quick up levers forward and engage the clutch.

## GRASS BASKET AND ROLLERS

When using the grooming reel with grass baskets check the gap between the basket and the grooming reel. The reel to basket gap should be 1/4 inch. When the reel is in the fully raised (transport) position it may contact the basket and damage it if the clutch is engaged. To change the basket gap, adjust the pull arms (see procedure in the GREENSMaster Cutting Unit Operator's Manual).

The grooming reel will increase the amount of grass and thatch picked up. This means that the grass baskets will have to be emptied more often.

If the grooming reels are set to a negative depth relative to the rollers, the groomer will penetrate deeper than the cutting unit. Because of this, the groomer will cut into the base of the grass blade which is stickier. Grass will tend to build up on the rear roller faster than without the groomer. A rear roller scraper is strongly advised when grooming reels are used.

A Wiehle roller is recommended on the front when using a grooming reel. A Wiehle roller can also be used on the rear to avoid grass build up if the height of cut is at or below 3/16". If the height of cut is set over 3/16" then a full roller with scrapers is advised.

# MAINTENANCE

**IMPORTANT:** The reel bearing drag (7 to 11 in lbs.) should be checked more often on units with the grooming reel kit. The drive belt and clutch require removal for drag measurement and adjustment.

## CLEANING

Hose off the grooming reel after use. Do not direct the water stream directly at the groomer bearing seals. Do not permit the grooming reel to stand in water so that the components rust.

## LUBRICATION

Lubricate the grooming reel shaft bearings with a hand pump or grease gun (2 or 3 pumps maximum) (Fig. 20). Do not over grease as excess grease may cause seal failure.

**Note:** When lubricating the main reel bearings, do not over lubricate because excess grease can work its way into the grooming reel clutch and drive belt mechanism.

## BLADE INSPECTION

Inspect grooming reel blades frequently for damage and wear. Bent blades may be straightened with a pliers. Worn blades can be replaced or the grooming reel shaft can be reversed to put the sharpest edge of the blade forward (Fig. 23). When inspecting the blades, check to see that the right and left blade shaft end nuts are tight.

**Note:** Because the groomer may introduce more debris (ie. dirt and sand) into the cutting unit than the reel would normally be exposed to, the bed knife and

# MAINTENANCE

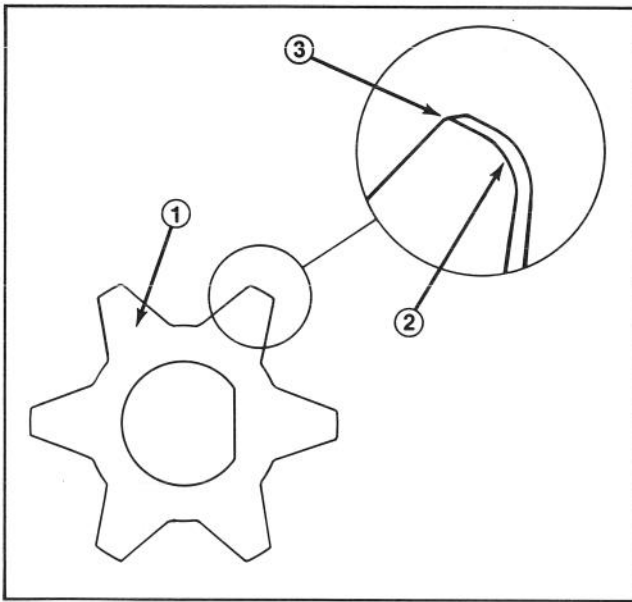


Figure 23

1. Grooming blade
2. Dull (rounded) edge
3. Sharp edge

main reel should be checked for wear more frequently. This is especially important in sandy soil and/or when the groomer is set for penetration.

## GROOMING REEL REPLACEMENT

The grooming reel can be removed in order to replace individual blades, replace the entire shaft, or to

reverse the shaft so that the sharpest edge of the blades is forward. Remove and replace the grooming reel shaft using the following procedure:

1. Remove the left side grooming reel housing cover (Fig. 16). Remove the drive belt by loosening the idler pulley (Fig. 14).
2. Remove the grooming reel shaft drive pulley (left hand thread) using an allen head wrench (Fig. 10). Then remove the lock nut that secures the grooming reel to the right bearing housing bracket.
3. Remove the right side grooming reel housing bearing bracket by unfastening the three bolts and nuts (Fig. 11). Remove the grooming reel shaft.
4. Replace the shaft or install a new shaft in the opposite order. Tighten the drive pulley and lock nut (left hand thread) to 29 to 35 ft. lbs. of torque (Fig. 10). Check the tension on the drive belt by depressing it at the point midway between the drive pulley and the driven pulley (Fig. 14). A force of 5 to 10 lbs. should be required to depress the midpoint of the belt 1/4 inch. To adjust tension, loosen the backside idler pulley pivot allen head bolt, pivot the idler to achieve the proper tension, and tighten the allen head bolt 7 to 10 ft. lbs. of torque.
5. Lubricate the grooming reel shaft bearings with a hand pump grease gun (2 or 3 pumps maximum) (Fig. 20). Do not over grease as excess grease may cause seal failure.
6. Check grooming reel height/depth setting.