



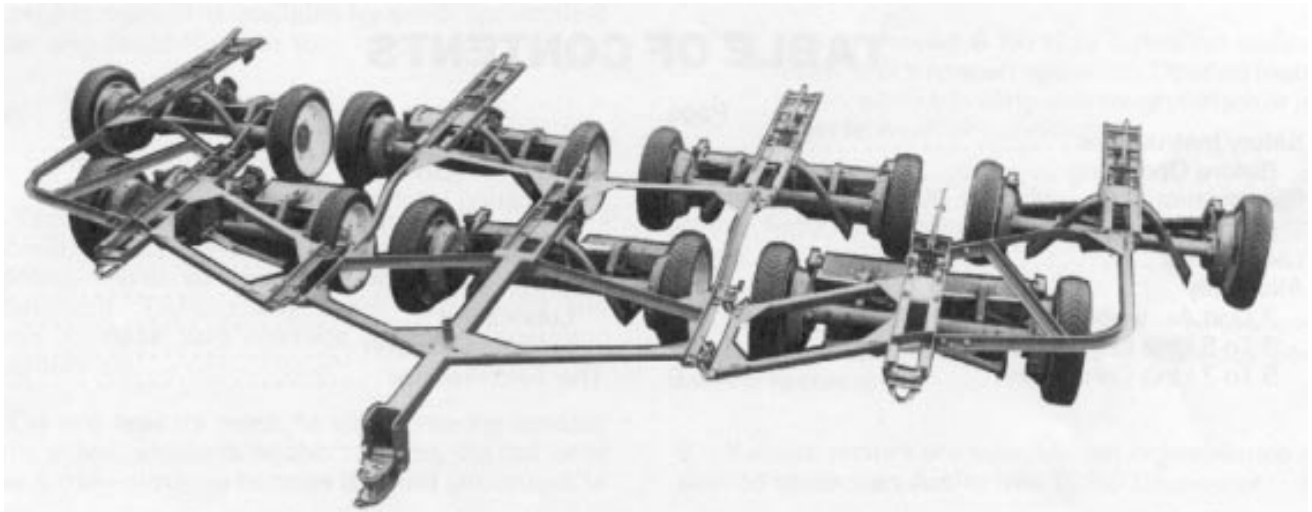
3 UNIT MODEL NO. 33145  
 3-5 CONVERSION MODEL NO. 33155  
 5-7 CONVERSION MODEL NO. 33165

**OPERATOR'S  
 MANUAL**

**REELMASTER™ UNIVERSAL FRAME  
 (3-5-7 Unit)**

To assure maximum safety, optimum performance, and to gain knowledge of the product, it is essential that you or any other operator of the mower read and understand the contents of this manual before the engine is ever started. Pay particular attention to the **SAFETY INSTRUCTIONS** highlighted by this symbol.

The safety alert symbol means **CAUTION, WARNING** or **DANGER** – personal safety instruction. Failure to comply with the instruction may result in personal injury.



# FOREWORD

The REELMASTER Universal Frame was developed to meet the ever increasing demand for fine turf—grass mowing and proper turf care.

We know, since you have purchased the industry leader in mowing excellence, that future performance and dependability are of prime importance. TORO also is concerned about future use of the machine and of safety to the user. Therefore, this manual should be read by you and those involved with the REELMASTER Universal Frame to ensure that safety, proper set-up, operation and maintenance procedures are followed at all times.

Safety, mechanical and some general information in this manual is emphasized. DANGER, WARNING and CAUTION identify safety messages. Whenever the triangular safety alert symbol appears, it is followed by a safety message that must be read and understood. For more complete details concerning safety, read the safety instructions on pages 4 and 5. IMPORTANT identifies special mechanical information and NOTE identifies general information worthy of special attention.

Whenever you have questions or need service, contact your local authorized Toro Distributor. In addition to having a complete line of accessories and professional turf care service technicians, the distributor has a complete line of genuine TORO replacement parts to keep your machine operating properly. Keep your TORO all TORO. Buy genuine TORO parts and accessories.

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## SAFETY INSTRUCTIONS

Improper use or maintenance by the operator or owner of the machine can result in injury. To reduce the potential for any injury, comply with the following safety instructions.

### BEFORE OPERATING

1. Operate the machine only after reading and understanding the contents of this manual. A replacement manual is available by sending complete model and serial number to:

The Toro Company  
8111 Lyndale Ave. S.,  
Bloomington, MN 55420–1196.

2. Keep all shields, safety devices and decals in place. If a shield, safety device or decal is damaged or illegible, repair or replace it before operating the machine.

3. Always wear substantial shoes. Do not operate machine while wearing sandals, tennis shoes or sneakers. Do not wear loose fitting clothing because it could get caught in moving parts and possibly cause personal injury.

4. Never carry passengers on either the tractor or the frame.

5. Using the machine demands attention and to prevent loss of control:

A. Operate only in daylight or when there is good artificial light.

B. Drive slowly. Avoid sudden stops and starts.

C. Watch for holes or other hidden hazards.

D. Do not drive close to a sand trap, ditch, creek or other hazard.

E. Reduce speed when making sharp turns and turning on a hillside.

F. Do not exceed 6 MPH (9.7 Km/hr) during mowing or transport operation. Operate more slowly while traveling over rough terrain or in adverse weather conditions.

6. Make sure frame is parked on a level surface when disconnecting from tow tractor so it does not move.

7. Refer to Operator's Manual for tractor or tow unit for complete operating and safety instructions pertaining to that unit.

8. If major repairs are ever needed or if assistance is desired, contact an Authorized Toro Distributor.

9. To insure optimum performance and safety, use genuine TORO replacement parts and accessories. Replacement parts and accessories made by other manufacturers could be dangerous, and such use could void the product warranty of The Toro Company



# LOOSE PARTS

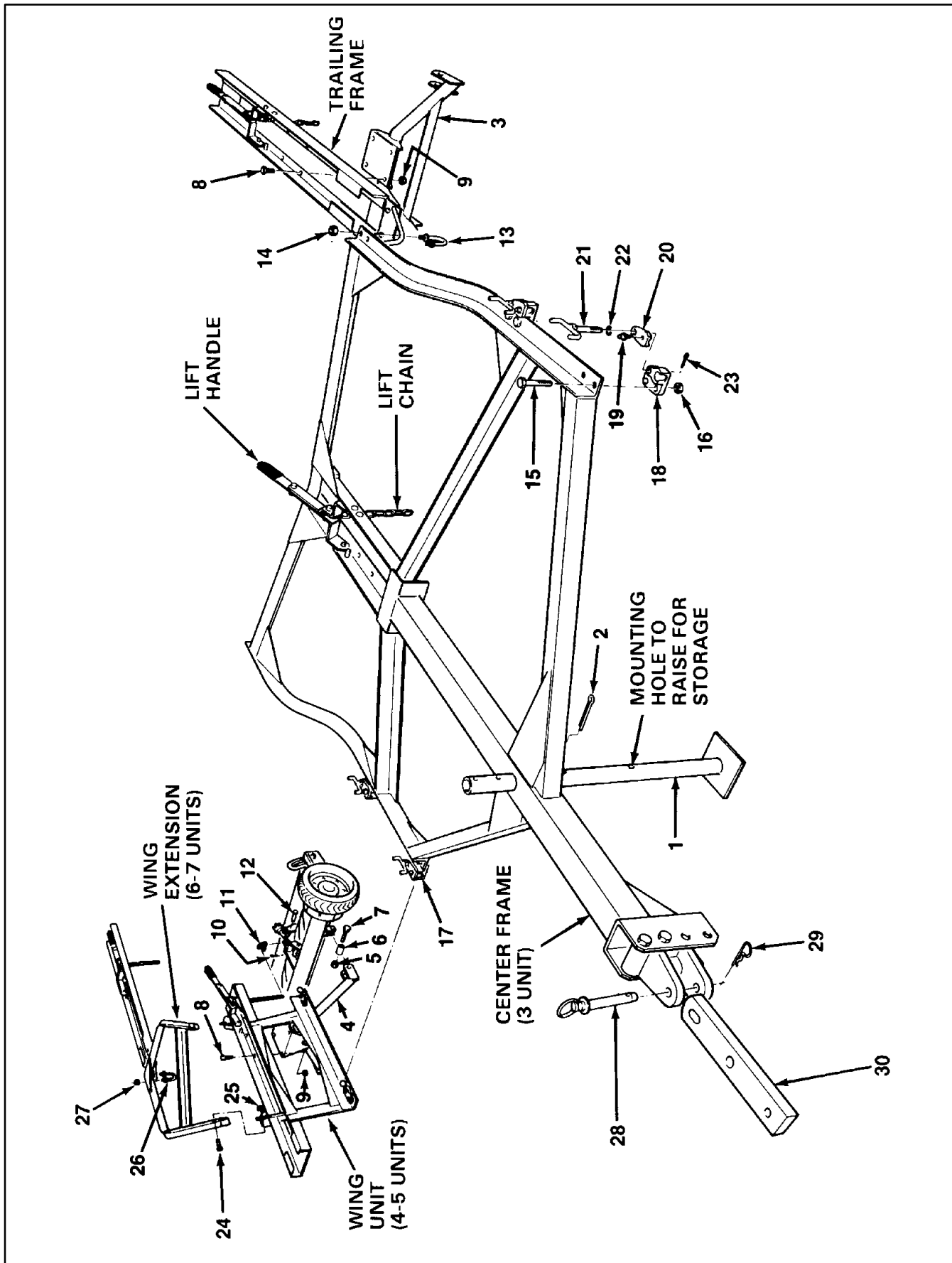


Figure 1

# LOOSE PARTS

ITEM NO.	PART DESCRIPTION	APPLICATION	3 UNIT	5 UNIT	7 UNIT
1	Frame Support	Supports center frame when not mounted on tractor	1	1	1
2	Cotter Pin – 5/16 x 3”	Secures frame support to center frame	1	1	1
3	Drawbar (Stationary)	Attaches cutting units to 3 Unit Center Frame & all trail units	3	3	3
4	Drawbar (Pivoting)	Attaches cutting units to all wing units	–	2	2
5	Locknut – 1/2–13	Mounts cutting units to Drawbar Assembly	6	10	14
6	Spacer		6	10	14
7	Capscrew – 1/2–13 x 2–1/2		6	10	14
8	Capscrew – 1/2–13 x 1–1/4	Mounts Drawbar Assemblies (Stationary & Pivoting) to center frame, wing and trailing units	12	20	28
9	Locknut – 1/2–13		12	20	28
10	Cotter Pin – 1/8 x 3/4”	Secures lift chains to cutting units	3	5	7
11	Shackle		3	5	7
12	Clevis Pin – 3/8 x 1–1/2”		3	5	7
13	U–Bolt	Connects trailing units to center frame	2	2	2
14	Locknut – 1/2–13		4	4	4
15	Capscrew – 1/2–13 x 1–1/4”	Secures hinge to center frame	–	8	8
16	Locknut – 1/2–13		–	8	8
17	Hinge Socket (left)	Mounts left wing unit to center frame	–	2	2
18	Hinge Socket (right)	Mounts right wing unit to center frame	–	2	2
19	Grease Fitting	Mount to hinge cap	–	4	4
20	Hinge Cap	Mount wing units to center frame	–	4	4
21	Hinge Clamp Bolt		–	4	4
22	Lockwasher – 1/2”		–	4	4
23	Cotter Pin – 3/32 x 3/4”		–	–	4
24	Capscrew – 1/2–13 x 1”	Mounts wing extensions to wing units	–	–	12
25	Locknut – 1/2–13		–	–	12
26	U–Bolt	Mount trailing units to wing extensions	–	–	2
27	Locknut – 1/2–13		–	–	4
28	Pointed Hitch Pin	Connect hitch to tractor	1	1	1
29	Hairpin Cotter		1	1	1
30	Hitch Extension	Extends hitch	1	1	1

# ASSEMBLY

**Note** Remove parts from shipping container and lay out all hardware and fasteners to ease assembly. Use loose parts chart and illustration to identify and locate parts.

## 3 UNIT ASSEMBLY (Fig. 2)

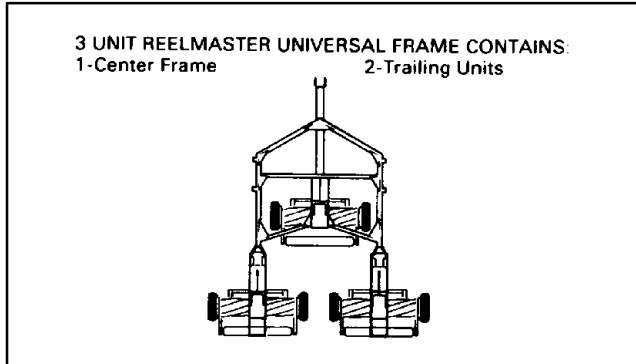


Figure 2

### Install Drawbars to Reelmaster Cutting Units

1. Align holes in stationary (non pivoting) drawbars with brackets on mower crosstube. Secure each side with 1/2-13 x 2-1/2" lg. capscrew, spacer, and 1/2-13 locknut. Position capscrew heads to the inside of brackets when mounting. Use same procedure on remaining stationary drawbars.

**Note** If Spartan mowers are to be attached, drawbar clamps, part no. 5-1090 and mounting fasteners will be required to mount drawbar to cross tube of mower (Fig. 3). Contact your local Authorized Toro Distributor to order parts or for assistance.

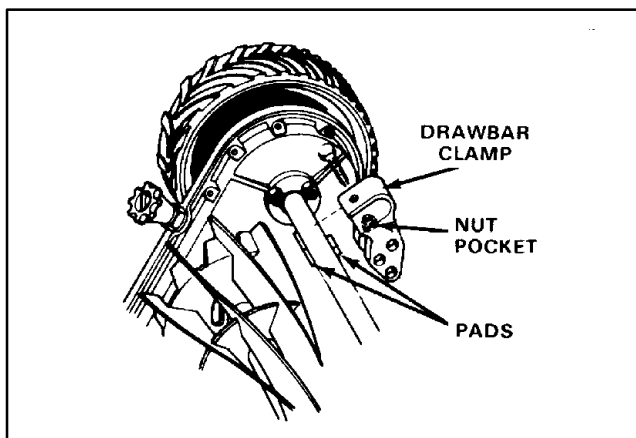


Figure 3

2. Install lift chain to mower 1/8 x 3/4 cotter pin, shackle, and 3/8 x 1-1/2 clevis pin.

### Install Trailing Frames

1. Align mounting holes in trailing frame with holes in drawbar/cutting unit. Secure with 1/2-13 x 1-1/4" lg. capscrews and 1/2-13 locknuts.

2. Install lift chain from trailing unit to mower with 1/8 x 3/4 cotter pin, shackle and 3/8 x 1-1/2 clevis pin. Repeat assembly procedure to remaining trailing units.

3. Connect trailing units to rear corners of center frame with U-bolts and 1/2-13 locknuts.

4. Lubricate all moving parts of frame; refer to lubrication, page 10.

## 3 TO 5 UNIT CONVERSION (Fig. 4)

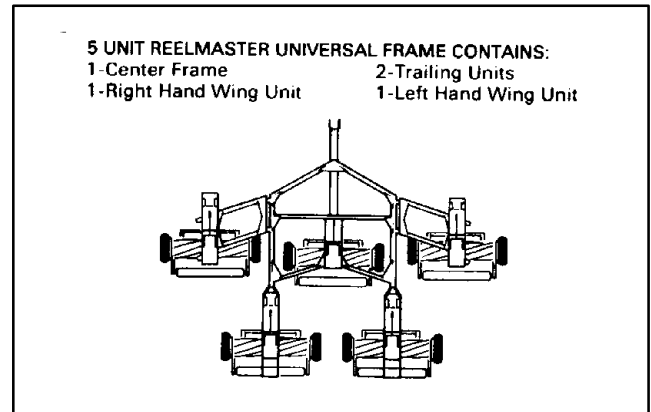


Figure 4

### Install Drawbars to Cutting Units

1. Align holes in pivoting drawbar with brackets on mower crosstube. Secure each side with 1/2-13 x 2-1/2" lg. capscrew, Spacer, and 1/2-13 locknut. Position capscrew head to the inside of bracket when mounting. Use same procedure on remaining pivoting drawbar.

### Install Wing Units

1. Align mounting holes in wing units with mounting holes in drawbar/cutting units. Secure with 1/2-13 x 1-1/4" lg. capscrews and 1/2-13 locknuts.

2. Install lift chains from wing units to mower with 1/8 x 3/4 cotter pins, shackles, and 3/8 x clevis pins.

3. Attach (2) left hand and (2) right hand hinge sockets to respective sides of center frame with 1/2-13 x 1-1/4" lg. capscrews and 1/2-13 locknuts. The ball socket openings should be facing toward the front of the frame.

4. Install a grease fitting into each hinge cap.

5. Install a hinge clamp bolt and lockwasher into each hinge cap.

6. Move wing nuts into position so hinge balls are inserted into hinge sockets.

7. Position hinge caps over hinge balls and tighten hinge clamp bolts. Secure hinge clamp bolt with 3/32 x 3/4 cotter pin.

8. Lubricate all grease fittings and moving parts of frame members; refer to lubrication, page 10.

# ASSEMBLY

## 5 TO 7 UNIT CONVERSION (Fig. 5)

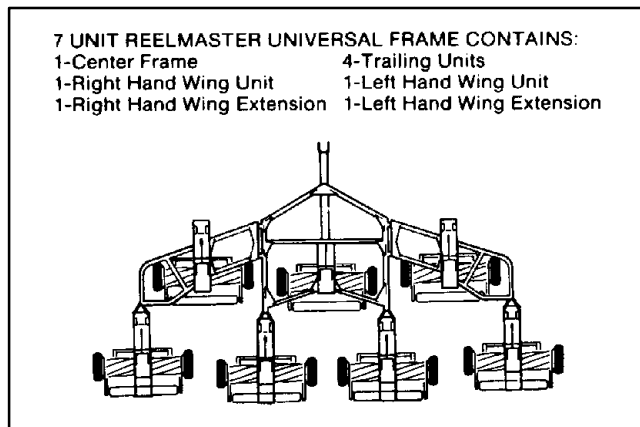


Figure 5

### Mount Wing Extensions to Wing Units

1. Align mounting holes of right and left wing extensions with mounting holes in respective wing units. Secure with 1/2–13 x 1" lg. capscrews and 1/2–13 locknuts.

### Install Drawbars to Cutting Units

1. Align holes in stationary (non pivoting) drawbars with brackets on mower crosstube. Secure each side with 1/2–13 x 2–1/2" lg. capscrew, spacer, and 1/2–13 locknut. Position capscrew heads to the inside of brackets when mounting. Use same procedure on remaining stationary drawbars.

### Install Trailing Frames

1. Align mounting holes in trailing frame with holes in drawbar/cutting unit. Secure with 1/2–13 x 1–1/4" lg. capscrews and 1/2–13 locknuts.

2. Install lift chain from trailing unit to mower mounting bracket with 1/8 x 3/4 cotter pin, shackle and 3/8 x 1–1/2 clevis pin. Repeat assembly procedure to remaining trailing units.

3. Connect trailing units to rear corner of each wing extension with U–bolts and 1/2–13 locknuts.

4. Lubricate all moving parts of frame members, refer to Lubrication, page 10.

# OPERATING INSTRUCTIONS

## INSTALL TRACTOR HITCH EXTENSION

The tractor hitch extension must be installed on all tow vehicles, to allow frame operation on undulating terrain.

Mounting holes must be drilled in hitch extension to accommodate tow vehicle hitch.

## ADJUSTING HITCH HEIGHT

To accommodate varying heights of tractor hitches, the hitch height can be raised or lowered.

1. Be sure the frame is located on a level surface and frame support is adjusted to level frame.

2. Back the tractor up close to the frame hitch to gauge the difference in height between the tractor hitch extension and the frame hitch.

3. If the frame hitch height must be changed, remove the capscrews and locknuts securing hitch to frame. Move hitch to one of the other settings or, if these settings do not exactly match, a more optimal adjustment may be achieved by rotating the hitch 180°.

4. Secure tractor hitch extension to frame hitch with hitch pin and hair pin cotter.

5. Remove cotter pin securing frame support to frame hitch, push frame support up through hitch and re-secure to hitch. Frame support is now in storage position.

## PROPER FRAME USE

Never exceed 6 MPH (9.66 km/hr) ground speed or quality of cut will be greatly reduced and damage to the frame and mowers more likely to occur. Best quality of cut under most normal conditions is while operating at approximately 4–6 MPH (6.4–9.66 km/hr). Reduce ground speed when turning to be sure the outer mowers do not bounce and skip on the turf.

Before leaving the tractor to adjust the frame or mowers, be sure the tractor and frame is on a level surface, the engine is stopped and the parking brake set. To transport the mowers from one area to another:

1. Disengage the mower reels by rotating the reel throwout knobs outward; refer to the Operators Manual for the mowers.

2. Grasp the handle grip of the lift handles on the frame and rotate each handle 180° forward. This will raise the mower/s rear roller/s off the ground.

**IMPORTANT: Do not back up tractor with frame attached. If unit must be backed up, each trailing and wing unit must be removed and manually repositioned. Failure to do so will result in damage to frame.**

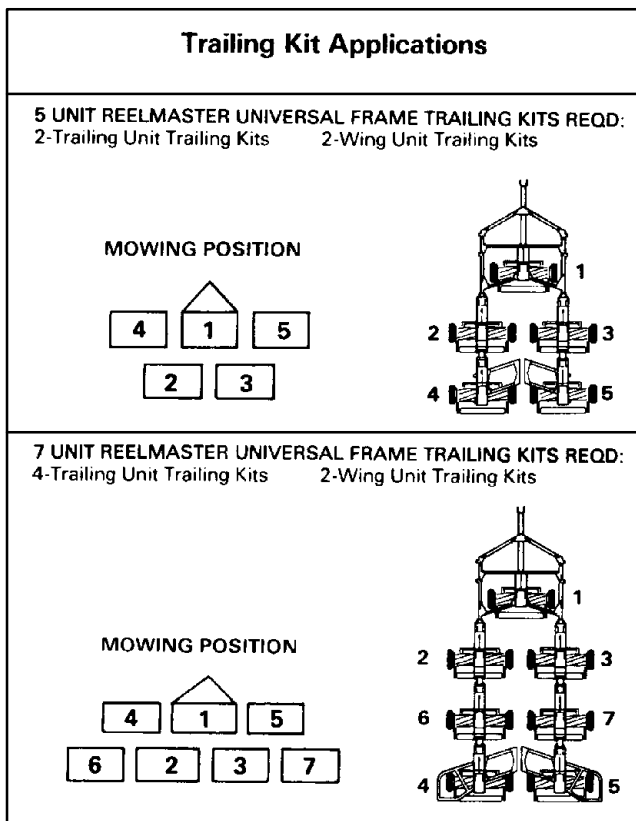
# OPERATING INSTRUCTIONS

## OPTIONAL TRAILING KITS

To reduce the width of the frame when narrow areas must be traversed between mowing areas, optional trailing kits with fasteners are available.

Refer to the Parts Catalog for part numbers and order the required parts from your Authorized Toro Distributor.

Use the following illustrations and instructions for positioning and installing the kits.



### Installation Of Trailing Kits

1. Locate and drill required mounting holes in trail-mg units and wing units (Fig. 6 & 7).
2. Install kit parts to trailing unit by mounting trailing bar to rear of frames with hinge pin and (2) cotter pins. Secure snap hook to underside of frame with (2) capscrews and locknuts (Fig. 6).

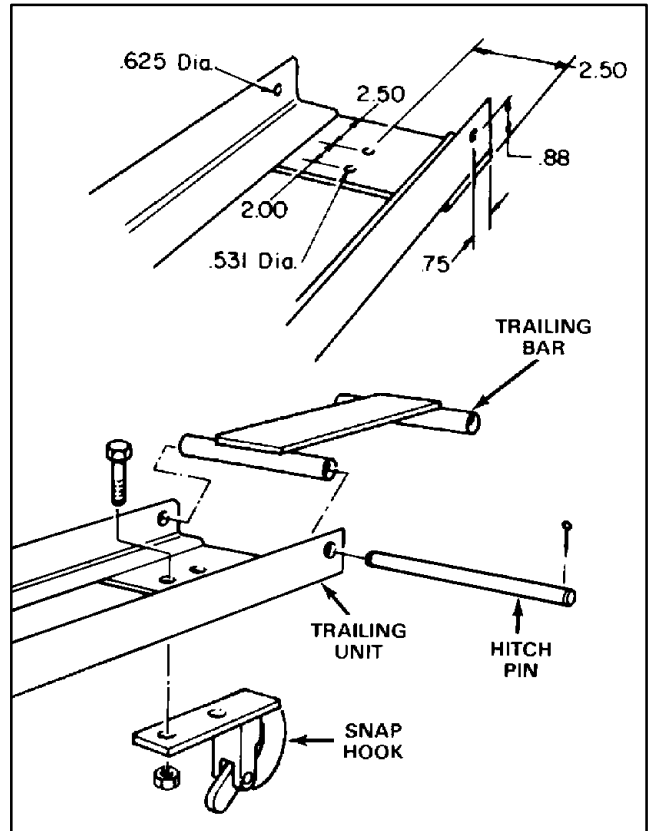


Figure 6

3. Install kit parts to wing unit by securing trailing hitch to underside of frame with (2) capscrews and locknuts (Fig. 7)

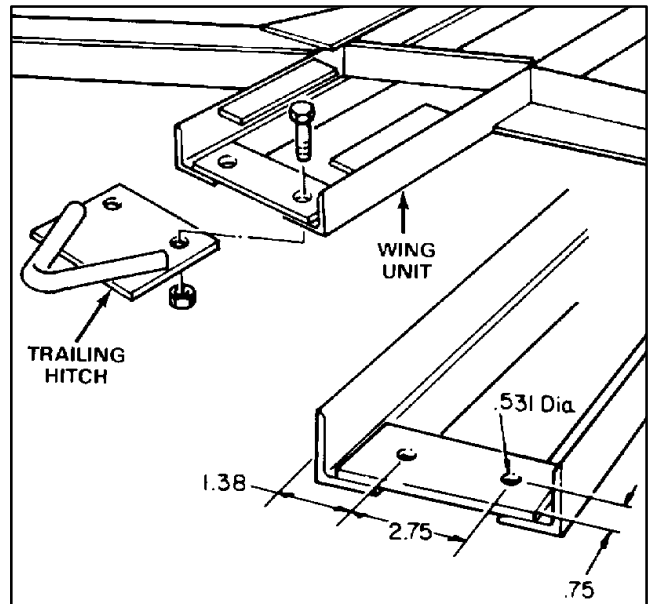


Figure 7

4. Pull entire trailing unit forward and insert bar under two welded plates on frame. Pull unit back snapping the hitch into the snap hook.

# MAINTENANCE

## LUBRICATION

Every eight hours or daily, whichever occurs first, grease the ball sockets and the drawbars equipped with greaseable pivots with General Purpose No.2 Lithium Base grease.

1. Wipe each fitting with a clean rag.
2. Apply grease with the gun until clean grease appears around the ball socket openings or around the pivot shafts of the drawbars.
3. Wipe the excess grease away.

## FRAME INSPECTION

Once each week or every 40 hours, check the frame for loose or missing fasteners and broken or damaged frame members. Repair or replace components as necessary.



## **The Toro Promise** **A One Year Limited Warranty**

*The Toro Company promises to repair your TORO product if defective in materials or workmanship. The following time periods from the date of purchase apply:*

**Commercial Products ..... 1 Year**

*The cost of parts and labor are included, but the customer pays the transportation costs.*

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If you feel your TORO Product is defective and wish to rely on The Toro Promise, the following procedure is recommended:

1. Contact your Authorized TORO Distributor or Commercial Dealer (the Yellow Pages of your telephone directory is a good reference source).
2. The TORO Distributor or Commercial Dealer will advise you on the arrangements that can be made to inspect and repair your product.
3. The TORO Distributor or Commercial Dealer will inspect the product and advise you whether the product is defective and, if so, make all repairs necessary to correct the defect without an extra charge to you.

If for any reason you are dissatisfied with the distributor's analysis of the defect or the service performed, you may contact us.

Write:

TORO Commercial Products Service Department  
8111 Lyndale Avenue South  
Minneapolis, MN 55420

The above remedy of product defects through repair by an Authorized TORO Distributor or Commercial Dealer is the purchaser's sole remedy for any defect.

**THERE IS NO OTHER EXPRESS WARRANTY. ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR USE ARE LIMITED TO THE DURATION OF THE EXPRESS WARRANTY.**

Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

This Warranty applies only to parts or components which are defective and does not cover repairs necessary due to normal wear, misuse, accidents, or lack of proper maintenance. Regular, routine maintenance of the unit to keep it in proper operating condition is the responsibility of the owner.

All warranty repairs reimbursable under The Toro Promise must be performed by an Authorized Toro Commercial Dealer or Distributor using Toro approved replacement parts.

Repairs or attempted repairs by anyone other than an Authorized TORO Distributor or Commercial Dealer are not reimbursable under the TORO Promise. In addition, these unauthorized repair attempts may result in additional malfunctions, the correction of which is not covered by warranty.

**THE TORO COMPANY IS NOT LIABLE FOR INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES IN CONNECTION WITH THE USE OF THE PRODUCT INCLUDING ANY COST OR EXPENSE OF PROVIDING SUBSTITUTE EQUIPMENT OR SERVICE DURING PERIODS OF MALFUNCTION OR NON-USE.**

Some states do not allow the exclusion of incidental or consequential damages, so the above exclusion may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

### **COUNTRIES OTHER THAN THE UNITED STATES OR CANADA**

Customers who have purchased TORO products exported from the United States or Canada should contact their TORO Distributor (Dealer) to obtain guarantee policies for your country, province, or state. If for any reason you are dissatisfied with your Distributor's service or have difficulty obtaining guarantee information, contact the TORO importer. If all other remedies fail, you may contact us at The Toro Company.