



# 30" ROTARY MOWER OPERATORS MANUAL

NOTE

Read this manual carefully and learn to operate and service your 30-inch mower before using it.

To keep the warranty, the 30-inch mower must be maintained and operated as directed in this manual.

All references to "left-side", "right-side", "front", and "back" are given from the operator's position.

Use the serial number to ensure prompt and correct service when ordering parts, requesting service, or making inquiries.

30-INCH MOWER DECK SERIAL NUMBER: \_\_\_\_\_

30-INCH MOWER DRIVE SERIAL NUMBER: \_\_\_\_\_



Look for this symbol to point out important safety precautions. It means -- ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED.

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## SECTION 1.0

### Instructions for Safe Operation

Improper use of this equipment can injure people and damage the equipment. People using or servicing this equipment must read and follow the instructions in this manual.

It is important to understand that this manual and any other Gravely instruction manuals do not cover every possible danger. It is impossible for Gravely to know all possible dangers in operating and servicing the equipment.

The purchaser must give these instructions to the people operating and maintaining this equipment. These people must use eye and foot protection.

#### 1.1 Preparation:

1. Read this manual carefully.
2. Learn the location and function of all controls.
3. Learn how to use the controls to stop the wheels and mower quickly.
4. Use caution with gasoline. Gasoline is very flammable. Keep it in a clean and tight container away from flames or hot items. Never put gasoline in the fuel tank while the engine is running or hot. Clean up spilled gasoline before starting engine.
5. Be certain that all shields, guards, and interlock switches are in the correct positions.
6. Never permit children to operate the equipment.
7. Inspect area to be mowed and remove all material which could be thrown by the mower.
8. Before starting the engine, put the PTO control switch in the "OFF" position and the gear shift lever in the neutral "N" position.
9. When hauling the equipment, connect the chassis to the transporting vehicle. Never connect from control levers, rods, or like items that could be damaged.
10. Replace all parts that become damaged or lost.

## 1.2 Operation:

1. Wear foot and eye protection. Do not wear loose clothing.
2. Do not use the equipment in the dark without adequate lighting.
3. Keep the equipment in good condition. Maintain it as directed in this manual.
4. USE ONLY GRAVELY ACCESSORIES AND ATTACHMENTS.
5. Do not overspeed the engine. Do not override the governor.
6. Keep away from moving parts.
7. Keep people and animals away from the operating area.
8. Do not let people other than the operator near the operating equipment.
9. Use a slow speed and engage the shift lever slowly when operating on slopes.
10. Look for and keep away from hazards.
11. After hitting an object, stop the equipment and engine. Check for damage. Repair any damage before operating.
12. Look behind when operating in reverse. Look for people and hazards.
13. Operate only from the operator's position, just behind the handlebars.
14. Travel across slopes, not up and down.
15. If there is a sudden change in the sound or vibration of the equipment, stop the engine and check for damage. Repair any damage or failure before continuing operation.
16. Never run the engine indoors except to move it outside. Exhaust fumes are dangerous.
17. Go slowly on slick surfaces.
18. Follow traffic laws when operating on or near a road.
19. Before making adjustments or servicing, move the PTO to "OFF," turn the ignition switch to "OFF," and wait until all moving parts completely stop.
20. Before leaving the operator's position, put the PTO switch in the "OFF" position, turn the ignition key to the "OFF" position.



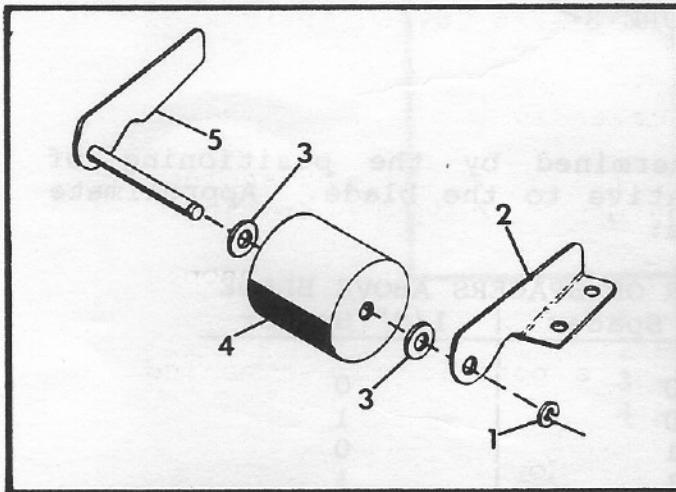
## SECTION 2.0

### Assembly

#### 2.1 Gauge Roller Assembly

Place a flatwasher, gauge roller, flatwasher, and wheel bracket on the bracket weldment and secure with an E-ring. See Figure 1.

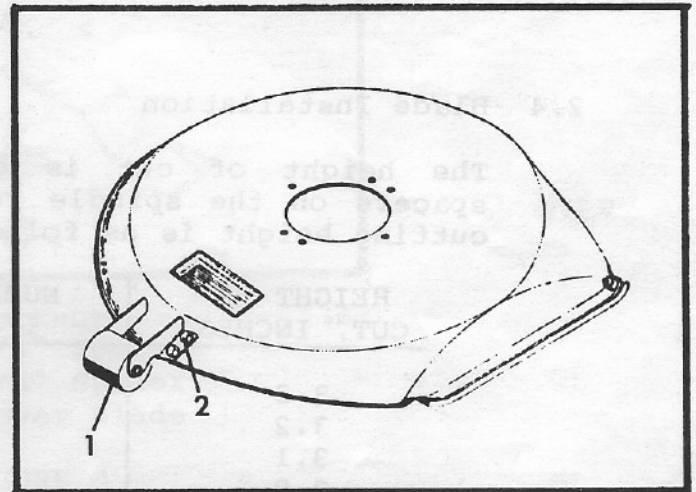
2.2 Attach the gauge roller assembly to the mower deck with 5/16-18x.75 bolts and 5/16" locknuts. Torque to 14 ft.-lb. (19 N.m). See Figure 2.



- 1 - E-Ring
- 2 - Wheel Bracket
- 3 - Flat Washer
- 4 - Gauge Roller
- 5 - Bracket Weldment

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FIGURE 1



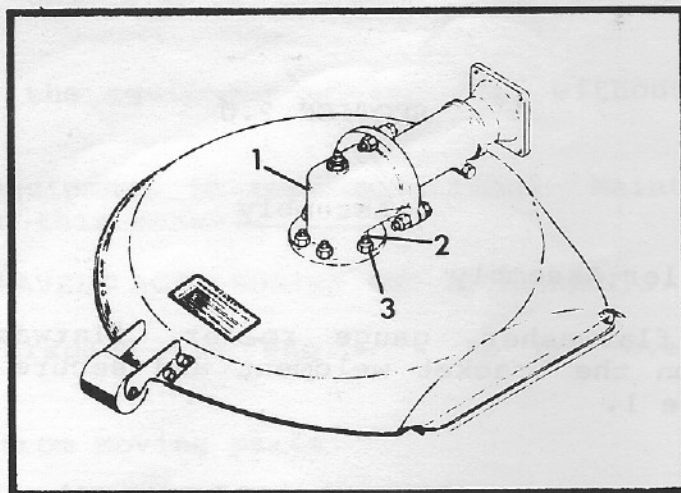
- 1 - Gauge Roller
- 2 - Hex Bolt

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FIGURE 2

#### 2.3 Mower Drive Attachment

Set the mower drive on the deck from above as shown in Figure 3. Secure with 1/2-13x1.50 bolts from below the deck through the deck support. Torque the bolts to 60 ft.-lb. (82 N.m).



- 1 - Mower Drive
- 2 - Hex Bolt
- 3 - Locknut

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FIGURE 3

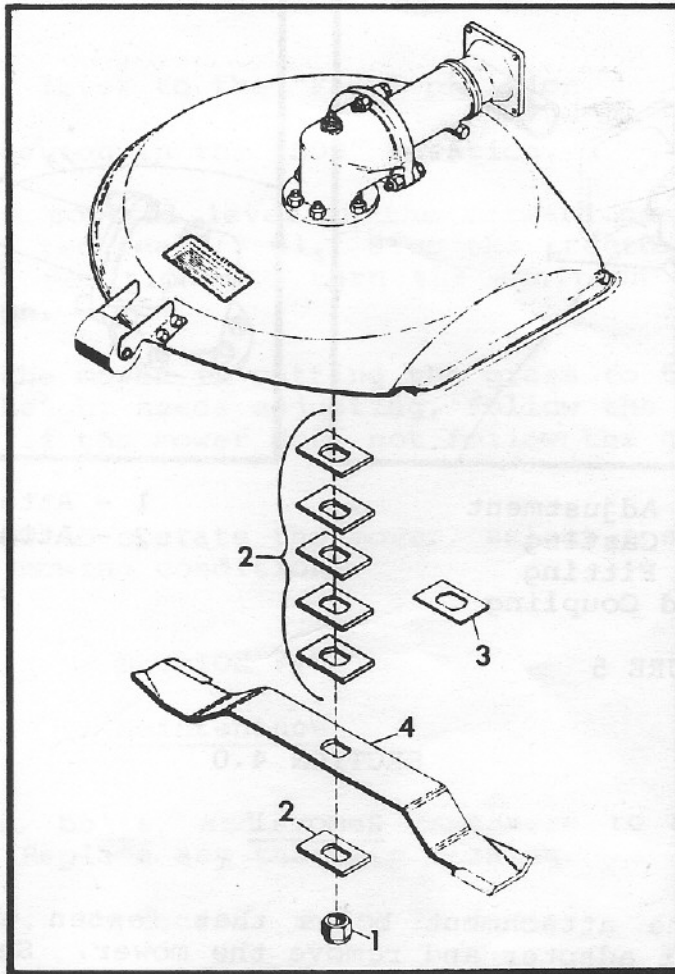
#### 2.4 Blade Installation

The height of cut is determined by the positioning of spacers on the spindle relative to the blade. Approximate cutting height is as follows:

HEIGHT OF CUT, INCHES	NUMBER OF SPACERS ABOVE BLADE	
	1/4" Spacer	1/8" Spacer
3.3	0	0
3.2	0	1
3.1	1	0
2.9	1	1
2.8	2	0
2.7	2	1
2.6	3	0
2.4	3	1
2.3	4	0
2.2	4	1
2.1	5	0
1.9	5	1

Install the spacers on the spindle according to the desired height of cut. Install the blade, the remaining spacer(s) and the nut. Torque the nut to 100 ft.-lb. (135 N.m). See Figure 4.

NOTE: Always place a 1/4" spacer next to the nut.



- 1 - Locknut
- 2 - 1/4" Spacers
- 3 - 1/8" Spacer
- 4 - Mower Blade

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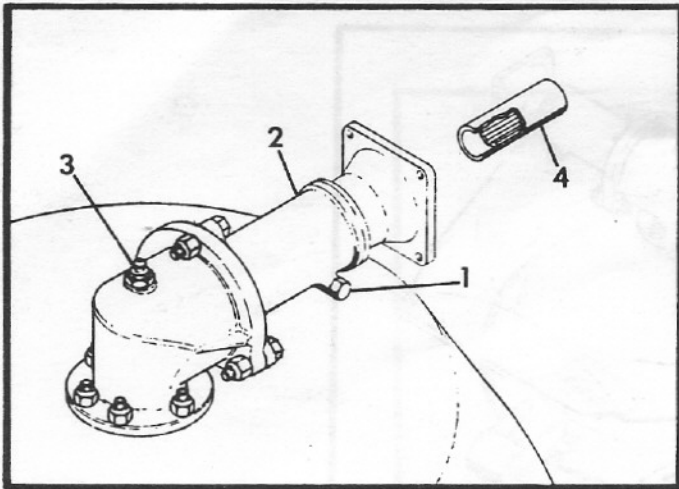
FIGURE 4

### SECTION 3.0

#### Installation

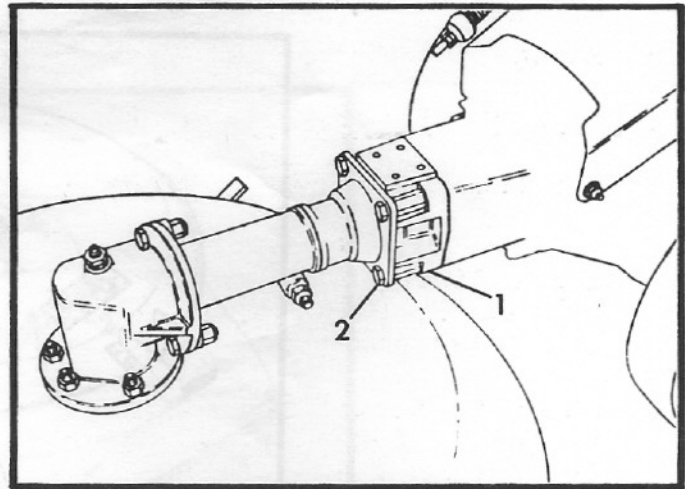
- 3.1 Engage the splined coupling to the mower with the counter bored end of the coupling towards the mower as shown in Figure 5.
- 3.2 Fasten the mower to the attachment adapter with the attachment bolts as shown in Figure 6.





- 1 - Swivel Adjustment
- 2 - Swivel Casting
- 3 - Grease Fitting
- 4 - Splined Coupling

FIGURE 5



- 1 - Attachment Adapter
- 2 - Attachment Bolts

FIGURE 6

#### SECTION 4.0

##### Removal

- 4.1 Remove the attachment bolts that fasten the mower to the attachment adapter and remove the mower. See Figure 6.
- 4.2 Remove the coupling from the splined PTO shaft. See Figure 5. Keep the coupling with the mower.

#### SECTION 5.0

##### Adjusting the Mower Deck to Follow the Ground

The swivel adjustment is correct when the mower will not turn on the swivel when raised by pushing down on the tractor handlebars but will follow the ground when mowing. Turn the nut on the swivel adjustment clockwise to tighten and counterclockwise to loosen the swivel. See Figure 5.

#### SECTION 6.0

##### Operating the Mower

Read this Operator's Manual and the tractor Operator's Manual before operating.

**CAUTION:** Use a slow tractor speed until you know how to operate the mower.

- 6.1 Start the tractor engine. Wait until the engine is running smoothly before operating.

- 6.2 Put the RANGE selector in the "LOW" position.
- 6.3 Engage the PTO.
- 6.4 Move the throttle lever to the "FAST" position.
- 6.5 Put the gear selection in the "LOW" position.
- 6.6 Put the direction control lever in the forward position and mow a distance of ten feet (3 m). Stop the tractor, put the PTO in the "OFF" position and turn the ignition switch to the "OFF" position.
- 6.7 Check to see if the mower is cutting the grass to the needed height. If the height needs adjusting, follow the procedure in Section 2.4. If the mower does not follow the ground see Section 5.0.
- 6.8 After you know how to operate the mower, select a speed that is best for your mowing conditions.

## SECTION 7.0

### Maintenance

- 7.1 Inspect all nuts, bolts, and other fasteners to make sure they are tight. Replace any that are missing.
- 7.2 Inspect the blade. Replace if there is damage.
- 7.3 Remove the spark plug wire from the engine spark plug and turn the mower deck on its side and check to see that the blade is sharp. If the blade is not sharp, remove the blade and grind the edges that have the bevel until they are sharp. Grind each edge the same amount. Make sure the blade has balance before reinstalling.
- 7.4 Every 40 hours of operation, clean the grease fitting shown in Figure 5 and add multi-purpose grease until it shows at the mower shaft under the mower deck.

## SECTION 8.0

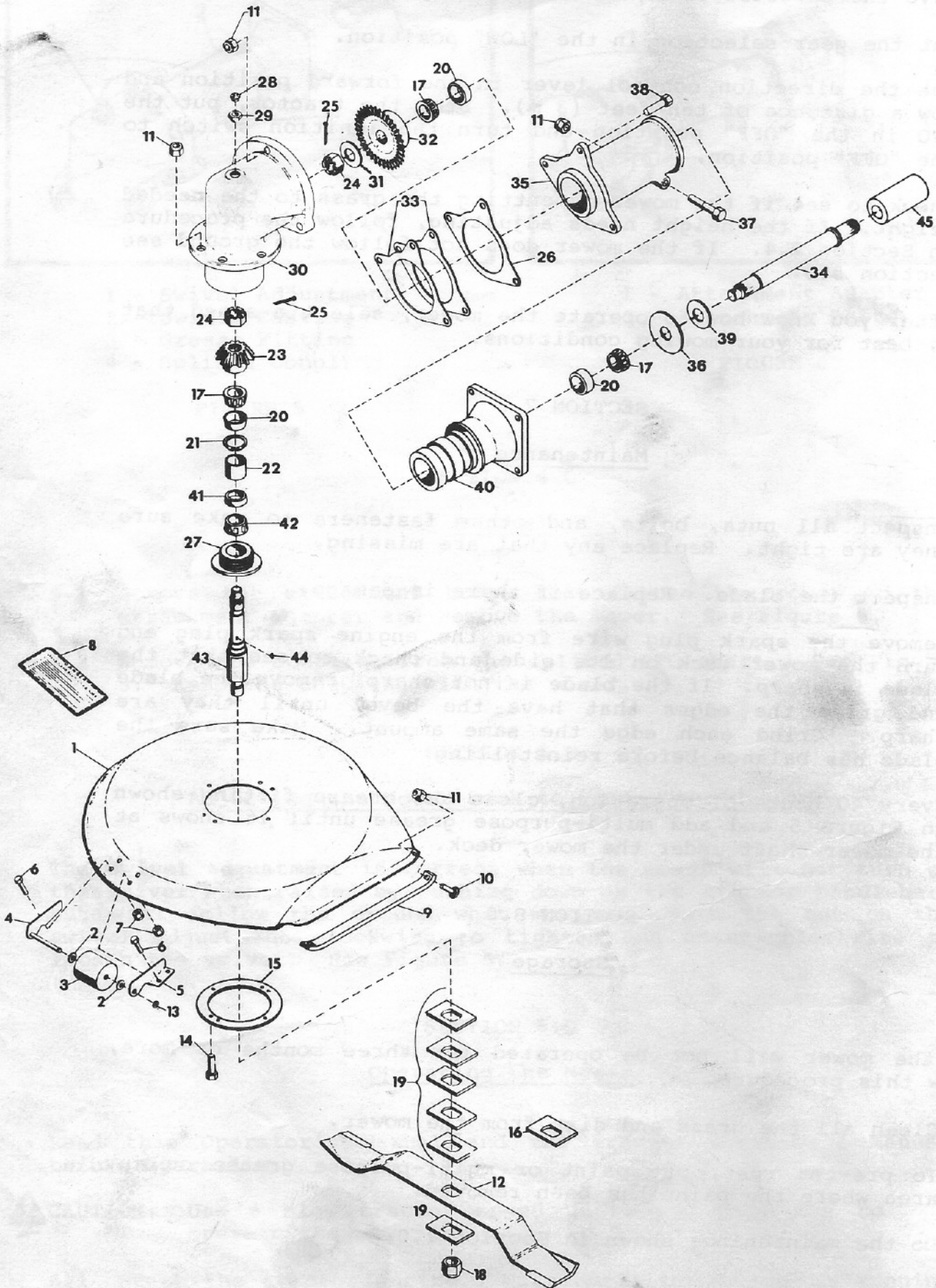
### Storage

When the mower will not be operated for three months or more, follow this procedure.

1. Clean all the grass and dirt from the mower.
2. To prevent rust, put paint or multi-purpose grease on any area where the paint has been removed.
3. Do the maintenance shown in Section 7.0.

SECTION 9.0

Illustrated Parts and Parts List





30 INCH ROTARY MOWER DECK 3/8" BLADE  
30 INCH ROTARY MOWER DRIVE

Item No.	Part No.	Qty.	Description
1	23074	1	Deck, 30 In. Rotary Mower
2	421879	2	Washer, Flat .656x1.250x.100
3	15351	1	Roller, Gauge
4	21400	1	Weldment, Bracket
5	21399	1	Bracket, Wheel L.H.
6	180077	4	Bolt, Hex 5/16-18x.75
7	419455	4	Nut, Lock 5/16-18
8	18549	1	Decal, Danger
9	23073	2	Skid, Rotary Mower
10	120917	4	Bolt, 1/2-13x1.50 RD HD SQ NK
11	435507	14	Nut, Lock 1/2-13
12	22528	1	Blade, Rotary Mower 3/8
13	18053	1	E-Ring; .625 Shaft
14	180177	6	Bolt, Hex 1/2-13x1.50
15	37062	1	Support, Deck
16	22527	1	Spacer, Cutting Height Thin (1/8)
17	9246	3	Cone, Roller Bearing
18	17313	1	Nut, Lock ESNA 7/8-9 HT
19	22526	6	Spacer, Cutting Height (1/4)
20	9245	3	Cup, Roller Bearing
21	22497	1	Ring, Retaining 2.000 Bore
22	22521	1	Spacer 1.75x1.936x1.967
23	22519	1	Pinion, Bevel
24	125267	2	Nut, Slotted 5/8-18 Hex
25	119120	2	Pin, Cotter .094x1.25
26	23081	1	Shim, .020
27	22522	1	Seal
28	271434	1	Fitting, Lube 1/8
29	144044	1	Bushing, 1/2 Pipe Reducing
30	22513	1	Housing, Gear
31	33845	1	Washer, Flat .687x1.312x.122
32	22518	1	Gear, Bevel
33	23082	2	Shim, .005
34	35036	1	Shaft, Drive
35	22514	1	Casting, Swivel
36	35034	1	Washer, Grease
37	180191	1	Bolt, Hex 1/2-13x3.25
38	180179	3	Bolt, Hex 1/2-13x1.75
39	19340	1	Race, Thrust
40	22515	1	Housing, Shaft
41	22524	1	Cup, Bearing
42	22523	1	Cone, Bearing
43	22520	1	Shaft, Rotor
44	271089	1	Key, Woodruff .125x.375 Hard
45	35035	1	Coupling

## LIMITED FIVE-YEAR WARRANTY

1. This Limited Five-Year Warranty is issued by Gravely International, Inc., only to the original purchaser. If Gravely equipment is leased by Gravely, this Warranty shall extend also to the original lessee as if such lessee were the original purchaser.
2. Gravely warrants that all new equipment manufactured by Gravely ("Gravely Products") shall be free of defects in material and workmanship for the term described in paragraph 4, below. Except as hereinafter provided, this Warranty does not cover any engine, tires or battery forming a part of the Gravely Product. Engine and tires are covered by and subject to separate warranties of the manufacturers thereof.
3. In the event that any Gravely Product warranted hereunder shall be defective or fail to conform with this Warranty, Gravely shall, subject to the provisions hereof, pay for, or provide labor and materials for, the repair or replacement of such defective Gravely Product.
4. This Warranty is for five years (60 months) from purchase date for Gravely Products used exclusively for personal, family or household purposes, and two years (24 months) for products used for other purposes (commercial use), excluding rental firms. Gravely products used for rental purposes will be warranted for 90 days. Repair of Gravely Products after the second year (24 months from date of purchase) shall be subject to a \$50.00 deductible for each repair. (After two years, Gravely agrees to repair or replace defective Gravely Products used exclusively for personal, family or household purposes only to the extent that the cost of such warranty covered repair or replacement exceeds \$50.00.)

Batteries are warranted by Gravely for a period of twelve (12) months only. If a battery shall fail within twelve (12) months of purchase, the replacement cost thereof shall be prorated over a twelve-month term based upon the number of months since purchase.

5. To obtain Warranty Service on a Gravely Product (including any battery or other component not manufactured by Gravely), use this procedure:
  - a. Notify the Gravely dealer from whom you purchased the equipment.
  - b. If you have moved and it is not convenient to notify the selling dealer, notify the nearest Gravely dealer. You should supply this dealer with a copy of the bill of sale as proof of the date of purchase.
  - c. Make arrangements to have the equipment delivered to the dealer (refer to paragraph 6 a., below).
  - d. If you have any questions concerning the Gravely Limited Warranty, they should be referred to:

Gravely International, Inc.  
One Gravely Lane  
Clemmons, NC 27012  
Attn: Customer Service Department

- e. Warranty service on Gravely Products must be performed by an authorized Gravely dealer.

6. This Warranty does not cover the following:
  - a. Transportation to the Gravely dealership. (If the Gravely dealer provides transportation, he will charge for such service.)
  - b. Normal maintenance services and normal replacement of items such as spark plugs, belts, oil, oil filters, air filters, and mower, plow or cultivator blades, gauge wheels, skids and other wear items.
  - c. Any Gravely Product which has been altered or modified in any way.
  - d. Any repair or replacement occasioned by customer neglect or lack of proper maintenance. (The purchaser is responsible for making sure that Gravely Products are operated and serviced as directed in the applicable manual or service instruction. Incorrect use or maintenance will void this Warranty.)
  - e. Any repair occasioned by the use of any attachment not approved by Gravely. (The use of any such unapproved attachment will void this Warranty.)
7. GRAVELY MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES, OR WARRANTIES AS TO THE MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ALL WARRANTIES ARE LIMITED IN DURATION TO THE TERMS SET OUT IN PARAGRAPH 4, ABOVE. GRAVELY SHALL HAVE NO LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE BREACH OF ANY WARRANTY, INCLUDING, BUT NOT LIMITED TO, LIABILITY FOR INCONVENIENCE, RENTAL OR PURCHASE OF REPLACEMENT EQUIPMENT, OR FOR LOSS OF PROFITS OR OTHER COMMERCIAL LOSS.
8. Some states do not allow limitations on how long an implied warranty lasts, so the above statement may not apply to you. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.
9. This Warranty gives you specific legal rights, and you may have other rights which vary from state to state.
10. A Gravely product registration card is supplied with each Gravely Product. Please complete the card and return it to Gravely at the address listed on the card. The equipment registration card will be used by Gravely for:
  - a. Recording date of purchase.
  - b. Notification of owners in compliance with the Consumer Product Safety Act, should any notification be necessary.The return of such card is necessary for your warranty to be effective.
11. This Warranty is not subject to change or modification by anyone, including Gravely dealers and no Gravely dealer is authorized to make any representations or promises on Gravely's behalf.

 **GRAVELY**

One Gravely Lane, Clemmons, NC 27012