



48" SNOWDOZER OPERATOR'S MANUAL

NOTE

Read this manual carefully and learn to operate and service your snowdozer before using it.

To keep the warranty, the snowdozer 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.

SNOWDOZER SERIAL NUMBER _____



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

SECTION 2

Operating Instructions

- 2.1 Read the tractor operator's manual and learn the location and operation of the controls.
- 2.2 Install wheel weights and tire chains for maximum traction needed for heavy snow dozing.
- 2.3 A light coat of wax applied to the working surface of the blade aids in preventing ice and snow build-up on the blade.
- 2.4 Mark any hidden obstructions such as driveway markers, water or gas shutoffs, spouting, stumps, etc. prior to operating the snowdozer.
- 2.5 Position the blade perpendicular to the tractor frame when transporting to provide maximum ground clearance.
- 2.6 To doze snow:
 1. Adjust the blade angle, wear plate and lift height as described in Section 3.
 2. Lower the blade.
 3. Select a low gear.
 4. Move the throttle to the fast position.
 5. Engage the forward clutch slowly.
 6. Adjust the tractor speed by selecting a faster or slower gear to match the operating conditions.

SECTION 3

Service Instructions

3.1 Blade Angle Adjustment:

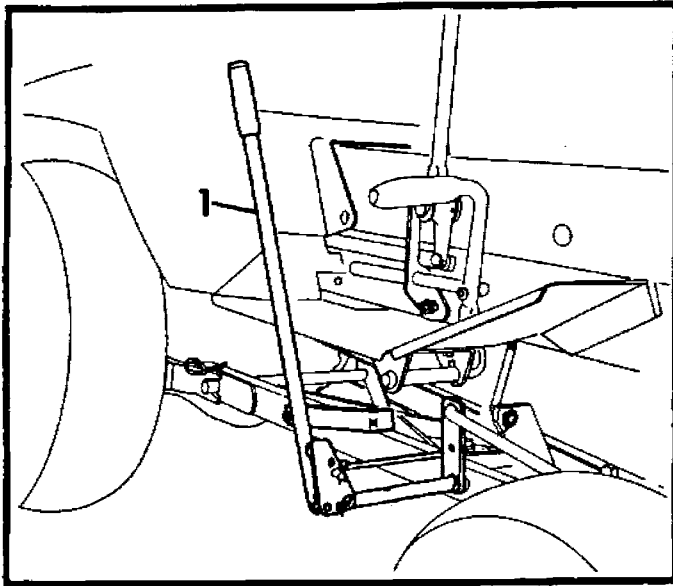
1. Raise the blade with the tractor lift.
2. Push the handle assembly out away from the operator. Then push the handle assembly either forward to rotate the blade to the left or rearward to rotate the blade to the right. See Figure 1.

3.2 Wear Plate Adjustment:

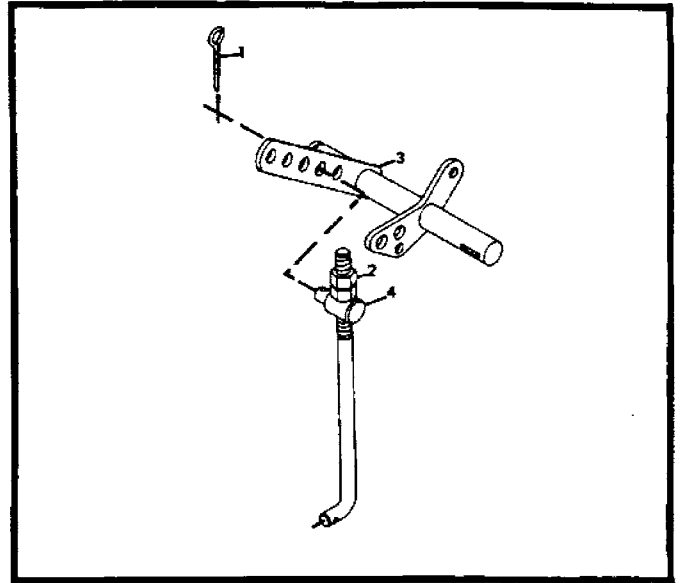
1. Block the blade in the "UP" position.
2. Loosen the 3/8-16 nuts which fasten the wear plate to the blade.
3. Move (rotate) the wear plate to the rear (counter-clockwise) to increase the bite of the wear plate.
4. Move (rotate) the wear plate to the front (clockwise) to decrease the bite of the wear plate.
5. Tighten the 3/8-16 nuts.

3.3 Lift Height Adjustment:

1. Remove the cotter pin from the lift pivot and remove the pivot from the attachment lift. Loosen the jam nuts on the height adjustment rod.
2. Block the blade in the "UP" position so that the push frame assembly just clears the bottom of the front axle of the tractor.
3. Put the attachment lift in the full "UP" position.
4. Turn the jam nuts on the height adjustment rod until the end of the pivot can be reinstalled in the attachment lift.
5. Lock the two jam nuts in this position. Retain the pivot with the cotter pin previously removed. See Figure 2.
6. Remove the block and lower the blade.
7. Move the attachment lift to the full "UP" position and check for clearance between the push frame assembly and the bottom of the tractor front axle. Readjust if necessary.



1 - Control Handle
FIGURE 1



1 - Cotter Pin
2 - Jam Nut
3 - Attachment Lift
4 - Lift Pivot
FIGURE 2

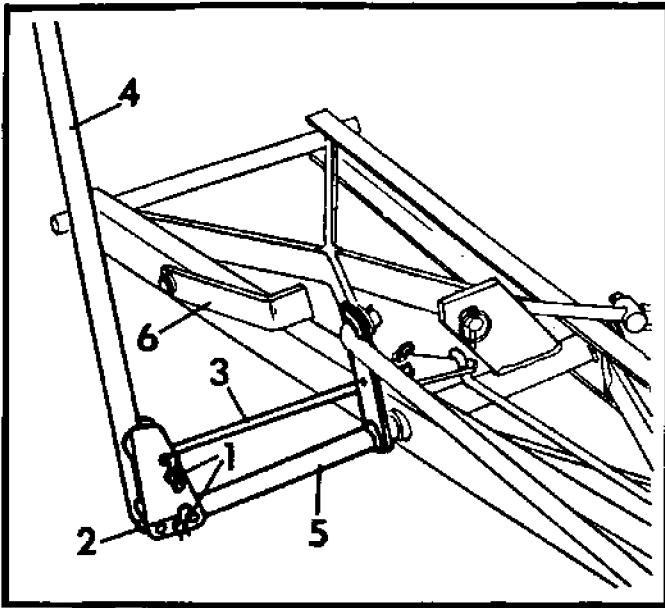
3.4 Adjustment of the Trip Springs:

1. Lower the blade.
2. Loosen the jam nut on each trip spring.
3. Adjust the first nut by hand until the spring is not loose.
4. Tighten the first nut three turns and lock in place with the jam nut.
5. The springs may be tightened more than three turns of the nut if unwanted tripping is a problem.

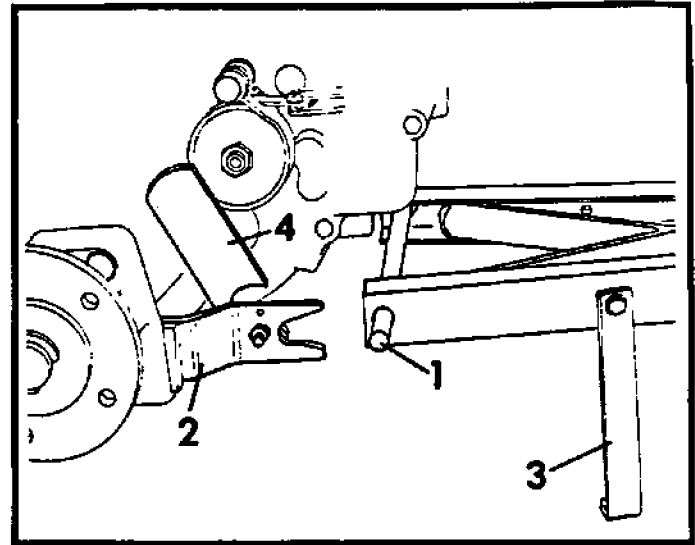
⚠ CAUTION: Do not adjust the trip springs too tight. To prevent damage and/or loss of control, the springs must be adjusted to allow the blade to trip when a fixed object is struck.

3.5 Installation:

1. Remove the hair pin cotters, clevis pin and latch control rod from the handle assembly. See Figure 3.
2. Position the rear of the push frame assembly in front of the tractor with the kick stand in the "UP" position.
3. Roll the tractor over the push frame assembly until the cross rod is near the axle latches.



- 1 - Hair Pin Cotters
 - 2 - Clevis Pin
 - 3 - Latch Control Rod
 - 4 - Control Handle
 - 5 - Pivot Shaft
 - 6 - Kick Stand (Up)
- FIGURE 3

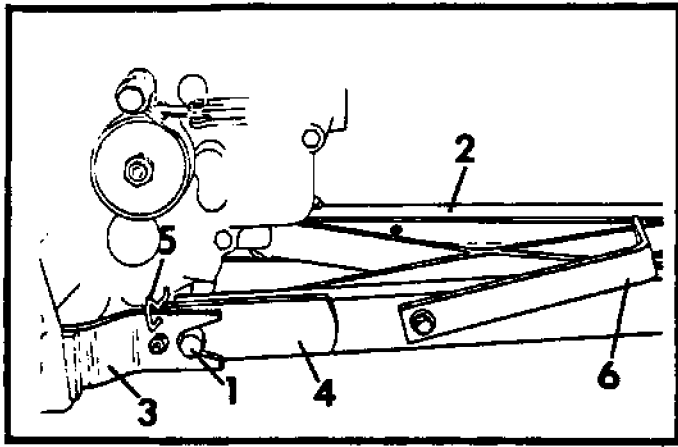


- 1 - Cross Rod
 - 2 - Axle Latch
 - 3 - Kick Stand (Down)
 - 4 - Locking Strap
- FIGURE 4

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4. Raise the push frame with the kick stand. Raise the locking straps on the axle latches. See Figure 4.
5. Roll the tractor forward so that the cross rod of the push frame assembly engages the axle latches.
6. Close the locking straps and retain with a hair pin cotter. See Figure 5.
7. Raise and lock the kick stand.
8. Connect the handle assembly and latch control rod as shown in Figure 6.
9. Lower the attachment lift. Put the end of the height adjustment rod in the hole in the tab on the frame assembly. Retain with the klik pin. See Figure 7.
10. Raise the blade and check to see that the frame assembly just clears the bottom of the front axle. If necessary, see Section 3.3 to adjust the lift height of the blade.
11. Raise the blade to the "UP" position with the attachment lift when the tractor is to be moved. Keep the blade down when the tractor is parked.

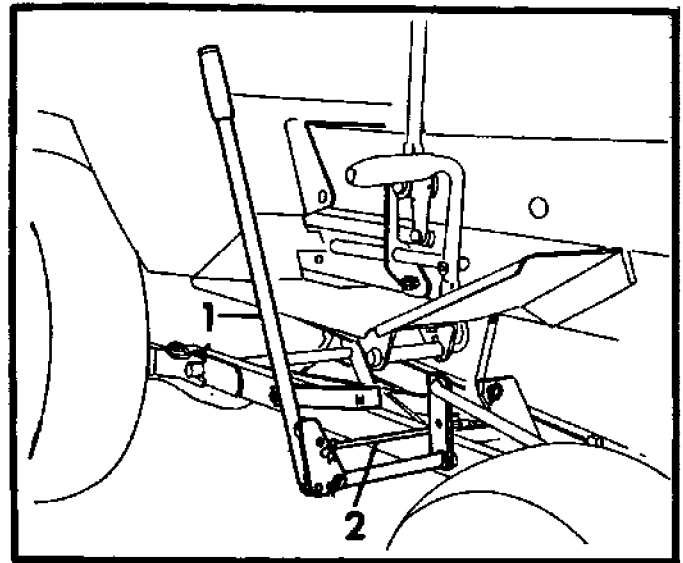
3.6 To remove, reverse the installation procedure except leave the kick stand in the "UP" position.



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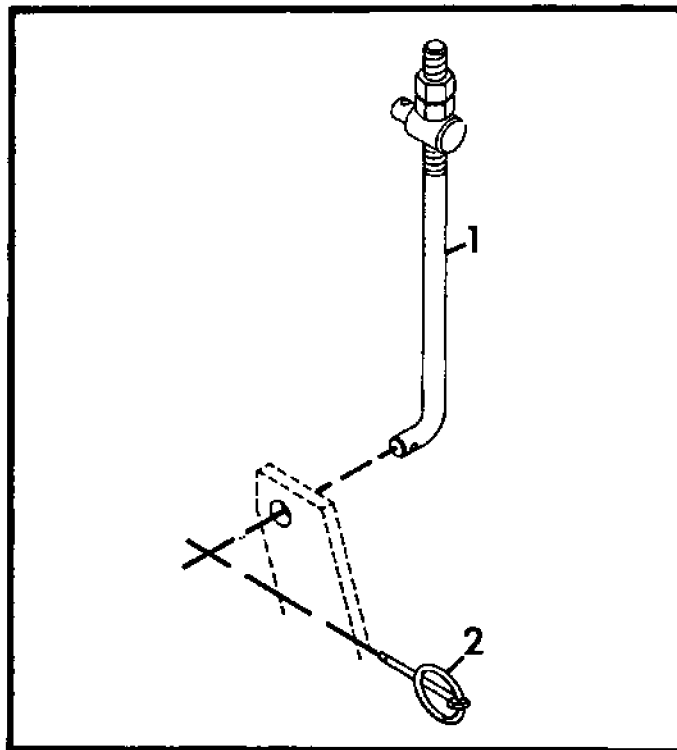
- 1 - Cross Rod
- 2 - Push Frame
- 3 - Axle Latch
- 4 - Locking Strap
- 5 - Hair Pin Cotter
- 6 - Kick Stand (Up)

FIGURE 5



- 1 - Control Handle
- 2 - Latch Control Rod

FIGURE 6



- 1 - Height Adjustment Rod
- 2 - Klik Pin

FIGURE 7

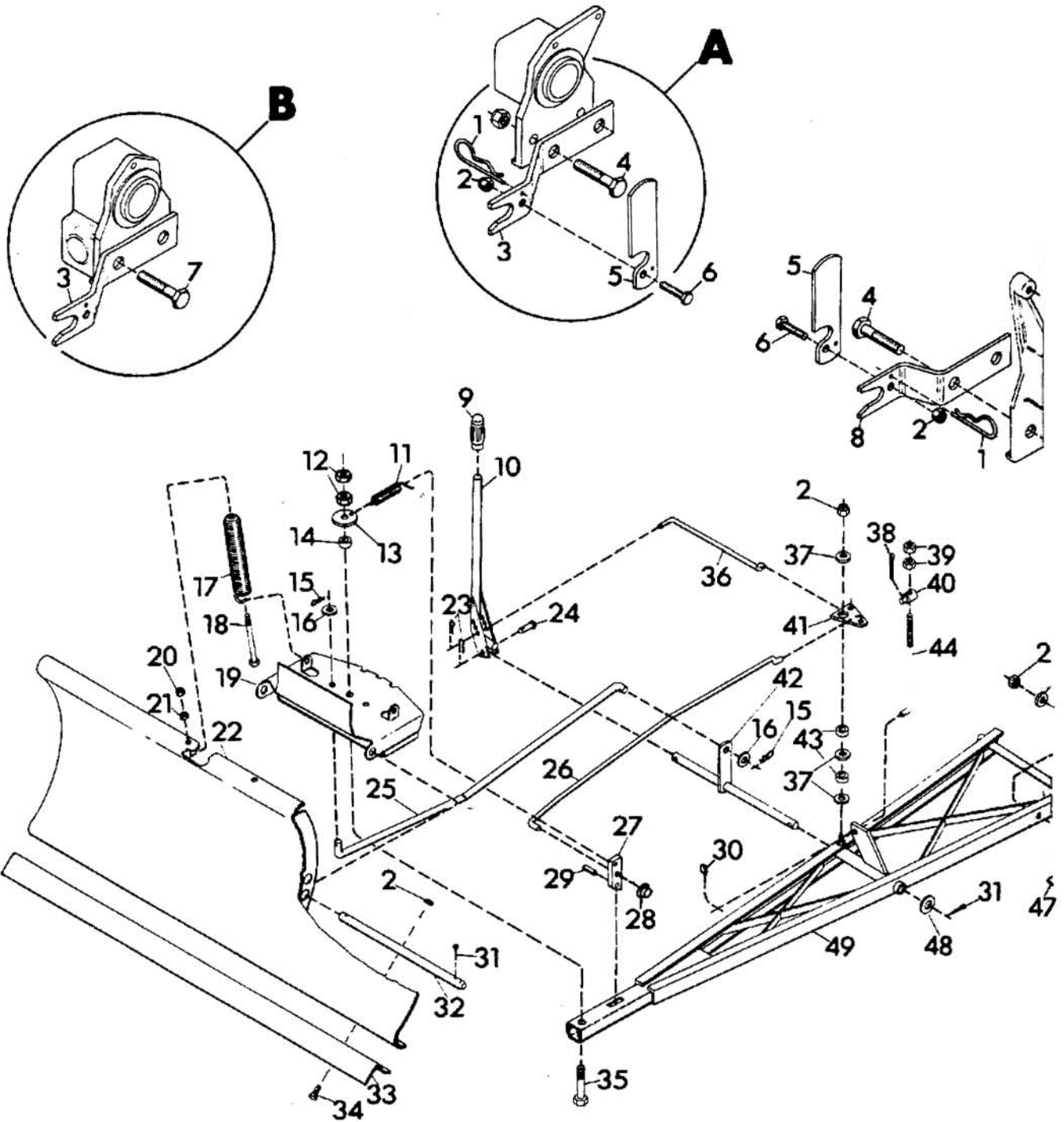
SECTION 4

Storage

- 4.1 Clean the snowdozer. Do not use harsh or abrasive cleaners on any painted surface.
- 4.2 Inspect for loose or missing fasteners and damaged parts. Tighten loose hardware and replace or repair damaged parts.
- 4.3 Put paint or a coat of oil on areas where the paint is missing.

SECTION 5

Illustrated Parts and Parts List



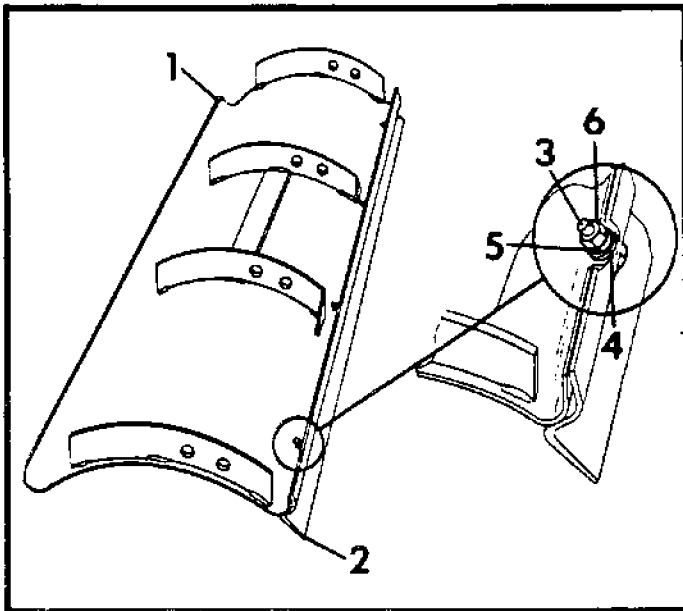
ITEM NO.	PART NO.	QTY.	DESCRIPTION
1	10405	2	Pin, Hair
2	456004	8	Nut, Lock 3/8-16
3	19766	1	Plate, Axle Latch R.H.
4	180181	4	Bolt, Hex 1/2-13x2.00
5	19172	2	Strap, Locking
6	180124	2	Bolt, Hex 3/8-16x1.25
7	180175	2	Bolt, Hex 1/2-13x1.25
8	19767	1	Plate, Axle Latch L.H.
9	11861	1	Grip, Handle
10	18503	1	Handle, Assembly
11	11851	1	Spring, Blade Angling
12	426897	2	Nut, Jam 3/4-10 Hex
13	11850	1	Washer, Spring Anchor
14	18506	1	Spacer, .824x1.050x.500
15	14412	2	Pin, Hair Cotter
16	131016	2	Washer, Flat .656x1.31x.095
17	11865	2	Spring, Trip
18	18505	2	Bolt, Hex 3/8-16x4.5 Gr 2
19	18501	1	Plate, Pivot Assembly
20	124829	2	Nut, Jam 3/8-16 Hex
21	120377	2	Nut, Hex 3/8-16
22	18499	1	Assembly, Blade 48"
23	11860	2	Pin, Cotter Hair
24	18507	1	Pin, Clevis
25	11864	1	Rod, Angling Control
26	34096	1	Rod, Latch Control (Long)
27	34098	1	Bar, Pivot Lock
28	14424	1	Nut, 5/6 Push
29	412281	1	Pin, Spring 1/4x1
30	23468	1	Pin, Klik
31	137218	3	Pin, Cotter .156x1.250
32	11846	1	Pivot, Blade
33	18500	1	Plate, Wear
34	120915	4	Bolt, 3/8-16x1.00 Rd Hd Sq Nk
35	271781	1	Bolt, Hex 3/4-10x4.50
36	18504	1	Rod, Latch Control (Short)
37	120394	4	Washer, Flat .406x.812x.065
38	120123	1	Pin, Cotter .125x1.25
39	120238	2	Nut, Hex 1/2-13
40	11262	1	Pivot, Mower Lift
41	14421	1	Bell Crank
42	18502	1	Shaft, Pivot Assembly
43	18508	2	Spacer, .423x.675x.205
44	35690	1	Rod, Height Adjustment
45	34099	1	Spring, Compression
46	180130	1	Bolt, Hex 3/8-16x2.00
47	34097	1	Stand, Kick
48	131017	1	Washer, Flat .812x1.469x.134
49	34101	1	Assembly, Push Frame
NS	19365	1	Decal, Gravely

NOTE: Item 4 (Part No. 180181) in circle "A" to be used on tractor with standard axle bearing retainer.
Item 7 (Part No. 180175) in circle "B" to be used on tractor with axle bearing retainer for rear PTO.

SECTION 6

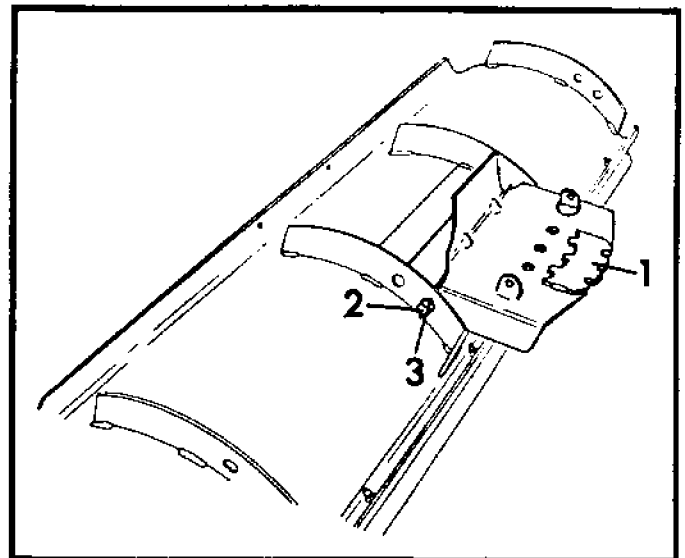
Set-Up Instructions

- 6.1 Remove the snowdozer from the shipping container.
- 6.2 Fasten the wear plate to the blade with four 3/8-16x1 round head square neck bolts, flat washers, lock washers and 3/8-16 nuts. See Figure 8. For adjustment see Section 3.2.
- 6.3 Connect the pivot plate to the blade with the blade pivot and fasten with a cotter pin in each end of the blade pivot as shown in Figure 9.
- 6.4 Put the threaded end of a 3/8x4-1/2 bolt into and through each trip spring, and put the hooks of the trip springs into the holes in the tabs on the pivot plate. Then put the bolts through the holes in the top of the blade and fasten them with a 3/8 hex nut on each bolt as shown in Figure 10. Tighten the nuts against the blade with your fingers, and then use a wrench to tighten the nuts three complete turns. Place a jam nut on each bolt; holding the hex nuts with a wrench, tighten the jam nut against the hex nut.
- 6.5 Put the end of the push frame in the pivot plate. Align the hole in the push frame with the center hole in the pivot plate and put a 3/4x4-1/2 bolt through the hole from the bottom as shown in Figure 11.



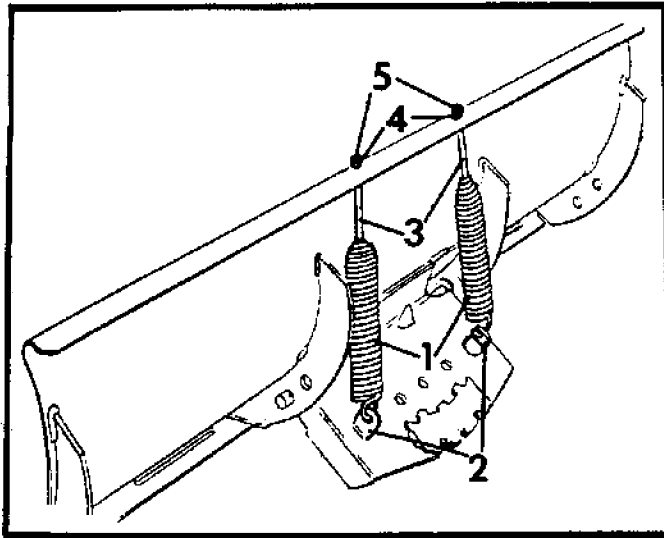
- | | |
|----------------|-----------------|
| 1 - Blade | 4 - Flat Washer |
| 2 - Wear Plate | 5 - Lock Washer |
| 3 - Bolt | 6 - Hex Nut |

FIGURE 8



- | |
|-----------------|
| 1 - Pivot Plate |
| 2 - Blade Pivot |
| 3 - Cotter Pin |

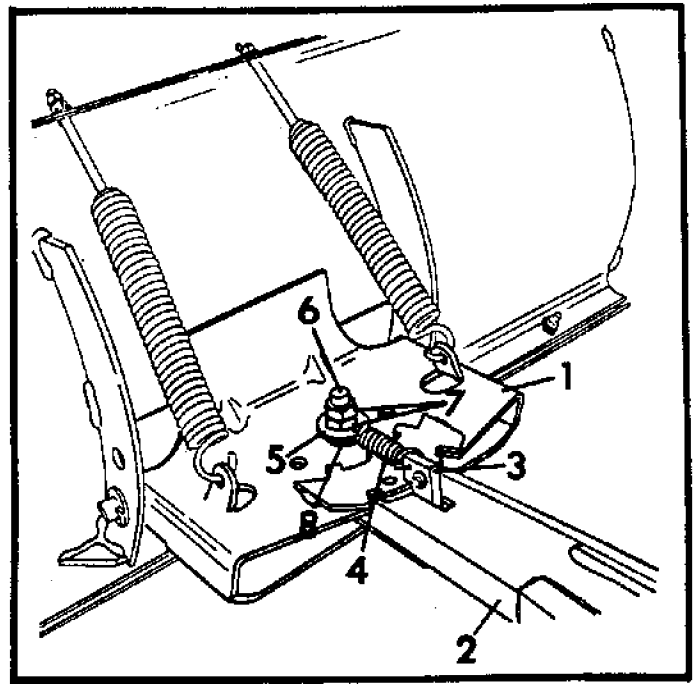
FIGURE 9



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- 1 - Trip Springs
- 2 - Tabs
- 3 - Bolts
- 4 - Hex Nuts
- 5 - Jam Nuts

FIGURE 10

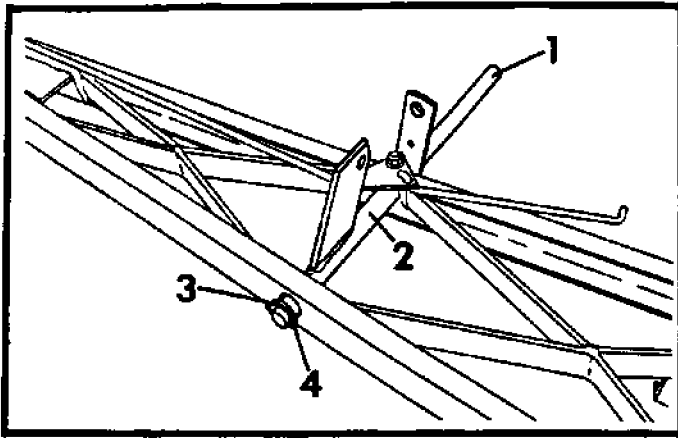


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- 1 - Pivot Plate
- 2 - Push Frame
- 3 - Pivot Lock Bar
- 4 - Blade Angling Spring
- 5 - Spring Anchor Washer
- 6 - Bolt
- 7 - Jam Nuts
- 8 - Spacer

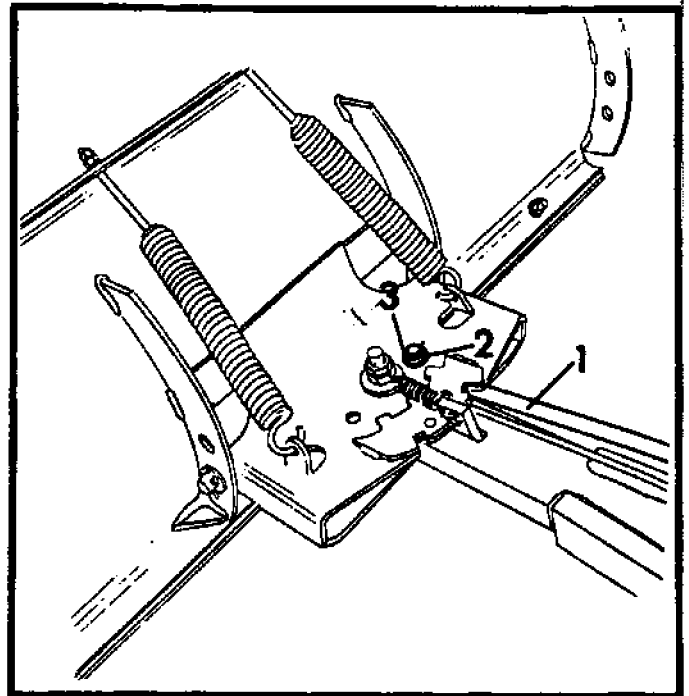
FIGURE 11

- 6.6 Put the hook of the blade angling spring in the small hole in the spring anchor washer and the other end of the spring in the pivot lock bar.
- 6.7 Put the spacer on the bolt and then slide the spring anchor washer onto the bolt. Fasten the bolt with a 3/4 jam nut. Tighten the nut until the push frame is barely free to pivot. Lock the nut with a second jam nut. See Figure 11.
- 6.8 Put the pivot shaft through the tube on the push frame and fasten with a flat washer and cotter pin as shown in Figure 12.
- 6.9 Fasten the angling control rod to the pivot plate with a flat washer and hair pin cotter as shown in Figure 13.
- 6.10 Fasten the other end of the angling control rod to the plate on the pivot shaft with a flat washer and cotter pin as shown in Figure 14.
- 6.11 Slide the handle grip onto the handle assembly and fasten the handle assembly to the pivot shaft with a clevis pin and hair pin cotter. Fasten the latch control rod to the handle assembly with a hair pin cotter. See Figure 15.



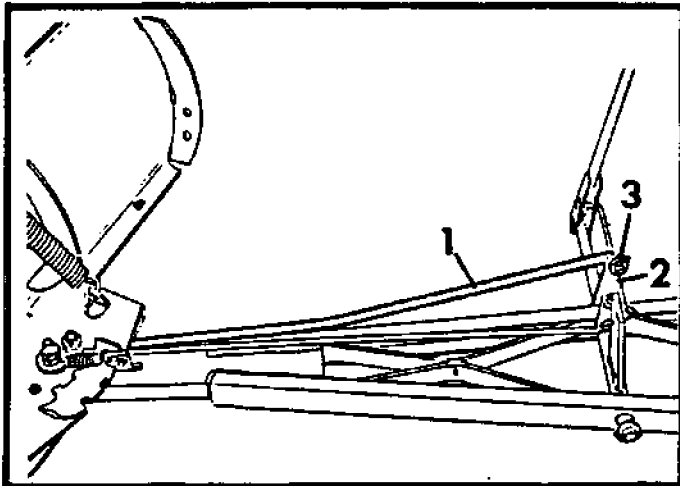
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- 1 - Pivot Shaft
 - 2 - Tube
 - 3 - Flat Washer
 - 4 - Cotter Pin
- FIGURE 12



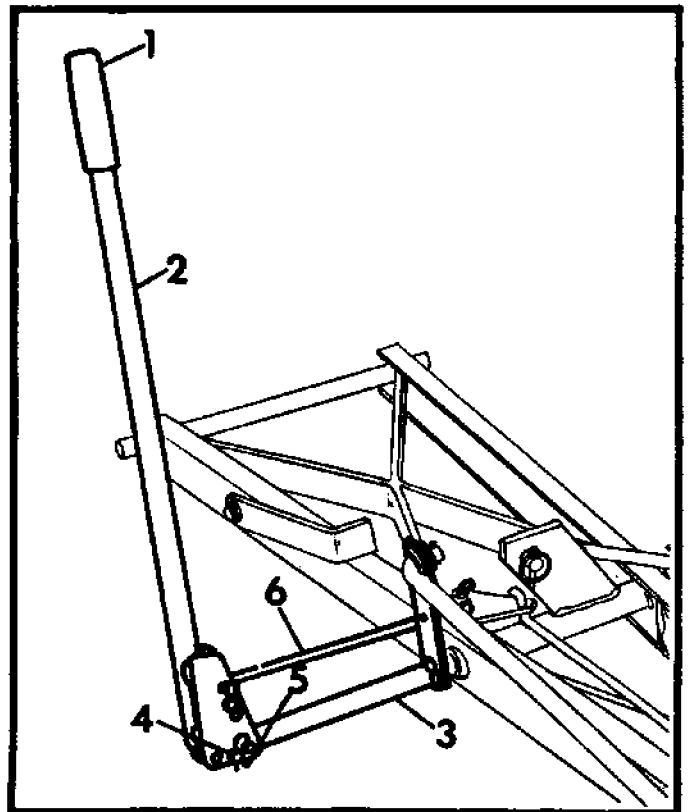
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- 1 - Angling Control Rod
 - 2 - Flat Washer
 - 3 - Cotter Pin
- FIGURE 13



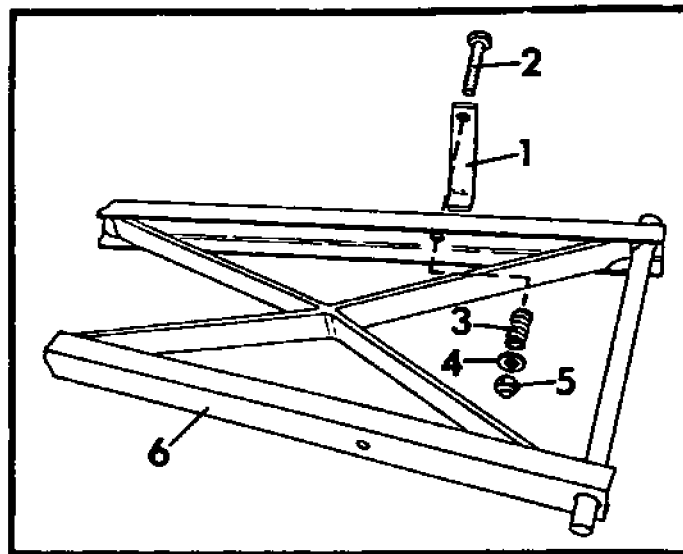
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- 1 - Angling Control Rod
 - 2 - Cotter Pin
 - 3 - Flat Washer
- FIGURE 14



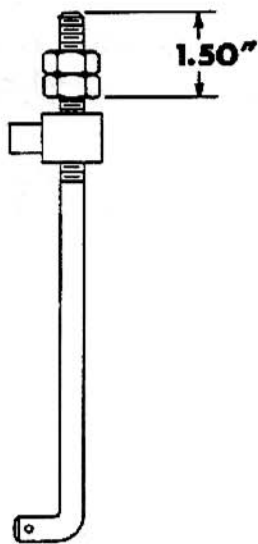
- 1 - Handle Grip
 - 2 - Control Handle
 - 3 - Pivot Shaft
 - 4 - Clevis Pin
 - 5 - Hair Pin Cotter
 - 6 - Latch Control Rod
- FIGURE 15

- 6.12 Fasten the kick stand to the push frame with the 3/8x2 bolt, compression spring, flat washer, and 3/8 lock nut as shown in Figure 16.
- 6.13 Put the lift pivot and two 1/2-13 hex nuts on the threaded end of the height adjustment rod. See Figure 17 for the correct location of the two nuts. Jam the two nuts together to lock them in place.
- 6.14 Put the end of the lift pivot through the second hole away from the shaft on the attachment lift arm of the tractor. Retain with the .125x1.25 cotter pin. See Figure 18.
- 6.15 Fasten the locking straps to the axle latch plates with the 3/8x1-1/4 bolts and 3/8 lock nuts. Do not overtighten the nuts; the locking straps must be free to move. The left hand assembly is shown in Figure 19. The right hand assembly is put together in the opposite manner.
- 6.16 Remove the bolts that fasten the right rear hitch arm to the tractor. Fasten the right hand axle latch assembly and the right rear hitch arm to the tractor with the 1/2x2 bolts and 1/2 nuts as shown in Figure 20. Do the same on the left side of the tractor. NOTE: Tractors with rear PTO require 1/2x1.25 bolts to fasten axle latch assemblies and rear hitch to the tractor.

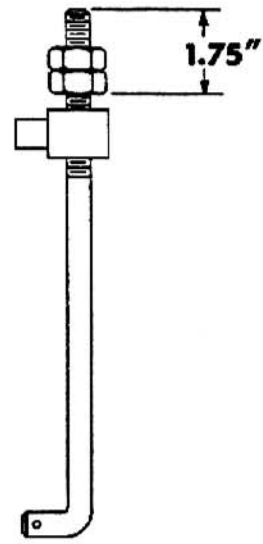


- 1 - Kick Stand
- 2 - Bolt
- 3 - Compression Spring
- 4 - Flat Washer
- 5 - Lock Nut
- 6 - Push Frame

FIGURE 16

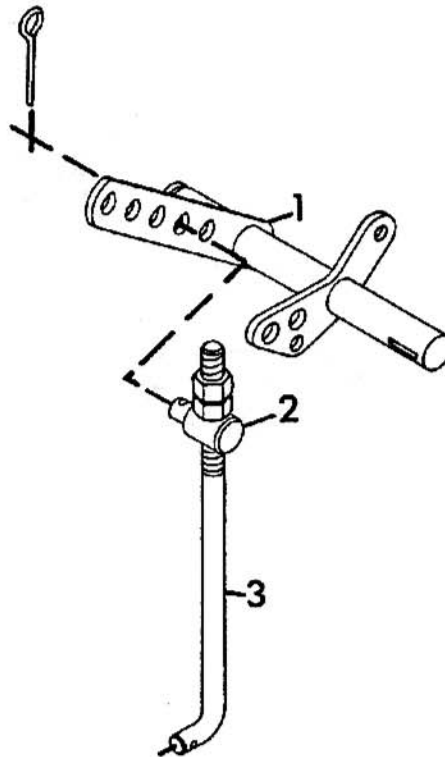


Manual Lift Tractors

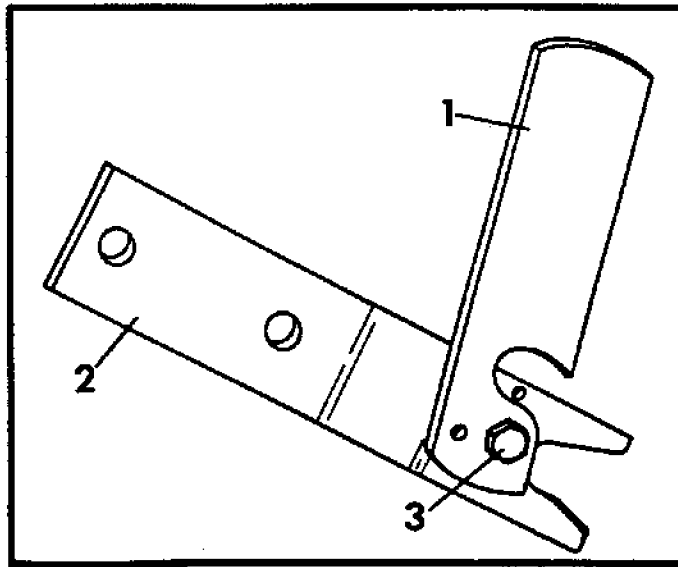


Hydraulic Lift Tractors

- 1 - 1/2-13 Hex Nut
 - 2 - Lift Pivot
 - 3 - Height Adjustment Rod
- FIGURE 17



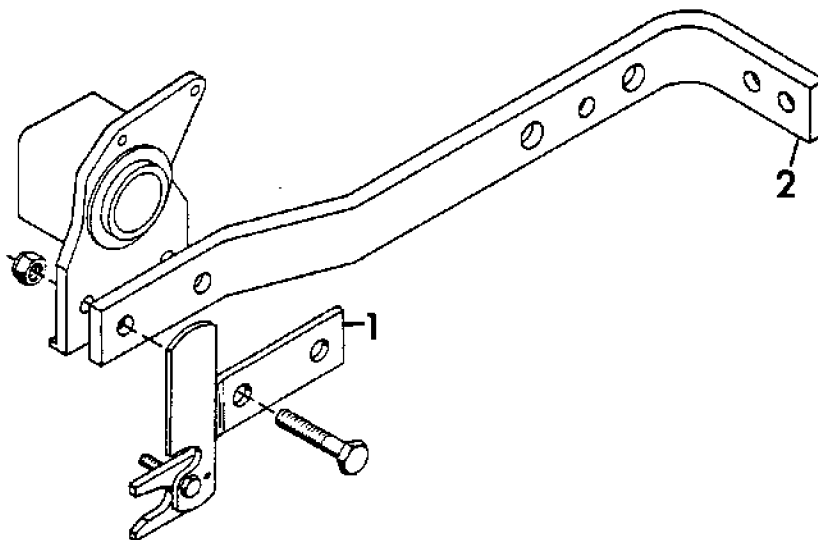
- 1 - Attachment Lift Arm
 - 2 - Lift Pivot
 - 3 - Height Adjustment Rod
- FIGURE 18



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- 1 - Locking Strap
- 2 - Axle Latch Plate
- 3 - Bolt

FIGURE 19



- 1 - Right Axle Latch Assembly
- 2 - Right Rear Hitch Arm

FIGURE 20

SECTION 7

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