

# **GRAVELLY OPERATOR'S MANUAL**

**NAME: 40 INCH TWO-BLADE MOWER**

**PART NUMBER(S): 25120**



79024

The 40 Inch Two-Blade Mower is for use with the Gravely 5000 Series tractors.

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

To continue its program of quality and design improvement, the manufacturer reserves the right to change specifications, designs and prices without notice and incurring obligation.

Form No. 34162 (7-81)


Printed in U.S.A.



# CONTENTS

1.0	.....	<b>Warnings - For Your Safety</b>
1.1	.....	Instructions Before Operation
1.2	.....	Preparation For Operation
1.3	.....	Operation
2.0	.....	<b>Connecting the Mower to the Tractor</b>
3.0	.....	<b>Removing the Mower from the Tractor</b>
4.0	.....	<b>Adjusting the Cutting Height</b>
5.0	.....	<b>Adjusting the Gauge Wheels</b>
6.0	.....	<b>Operating the Mower</b>
7.0	.....	<b>Maintaining the Mower</b>
7.1	.....	Checking the Blades
7.2	.....	Lubricating the Mower
7.3	.....	Lubricating the Gear Box
7.4	.....	Adjusting the Tension of the Belt
7.5	.....	Replacing the Belt
8.0	.....	<b>Preparing the Mower for Storage</b>
9.0	.....	<b>Illustrated Parts Lists</b>

## 1.0 **WARNINGS - FOR YOUR SAFETY**

**NOTE:** This warning symbol  indicates that there is danger to persons. Read these warnings carefully and follow them.

Using this equipment the wrong way can cause injury to persons and damage to the equipment. Persons operating or maintaining this equipment must read this Operator's Manual and follow the instructions.

It is important to understand that this Operator's Manual and other Gravely instruction books do not list every possible danger. It is not possible for Gravely to know and tell of all the dangers in operating and maintaining the equipment.

The purchaser must give these instructions to the persons operating and maintaining this equipment. The purchaser must get the operator and person maintaining this equipment to use eye and foot protection.

### 1.1 INSTRUCTIONS BEFORE OPERATION

1. Read this Operator's Manual and the Operator's manual for the tractor carefully before operating or doing maintenance.
2. Learn the location and the function of all the tractor and the attachment controls.
3. Learn how to use the controls to stop the tractor and the mower quickly.
4. Never permit children to operate or ride on the tractor or the mower.
5. Use caution with gasoline. Gasoline is very flammable. Keep gasoline in a clean and tight container. Keep gasoline away from fire or hot items. Never put gasoline in the fuel tank while the engine is running or hot. Clean any leakage of gasoline from the tractor before starting the engine.

### 1.2 PREPARATION FOR OPERATION

1. Check the area of operation and remove all material that may be thrown by the mower.
2. Make sure all shields and guards are in the correct position before operating.
3. Wear strong shoes. Wear clothing that is not loose. Wear eye protection.

4. Before starting the engine, put the direction control lever in the "NEUTRAL" position and the "PTO" control in the "OFF" position.
5. Keep the tractor and the mower in good operating condition. Maintain as shown in the Operator's Manual.
6. Do not operate the tractor where the area of operation is too dark for the operator to see.
7. Never operate the tractor or the mower when there is damage to any part or when any part is not in the correct position. Replace all parts that are damaged or missing before operating.

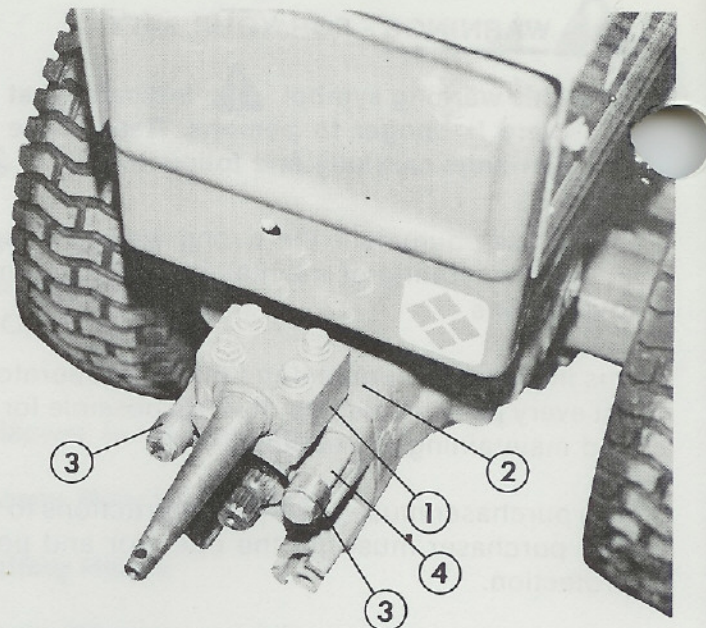
### 1.3 OPERATION

1. Keep away from moving parts.
2. Keep all persons and animals away from the area of operation.
3. Do not let persons ride on the tractor or the mower.
4. When operating on slopes, use a slow speed and engage the direction control lever slowly.
5. When operating on slopes, go across the slope.

6. Always look for and keep away from holes and other hazards.
7. Use caution when moving backwards. Look for persons and hazards in the way.
8. After hitting an item, stop the tractor and the engine. Check for damage. If there is damage, make repairs before restarting.
9. Operate the equipment only from the operator's position.
10. Before leaving the tractor, put the PTO control in the "OFF" position. Turn the ignition switch to the "OFF" position and remove the ignition key.
11. If there is a sudden change in the sound or vibration of the tractor or the mower, stop the tractor and check for damage. If there is damage, make repairs before operating.
12. Never start and run the engine inside a building except to move the equipment outside. Exhaust fumes are dangerous.
13. Always follow traffic laws while going on or near a road.
14. Go slow on surfaces where the tractor can slide.
15. Before leaving the operator's position to make adjustments or to do maintenance, put the PTO control lever in the "OFF" position. Turn the ignition switch to the "OFF" position. Wait until the engine and moving parts have stopped.

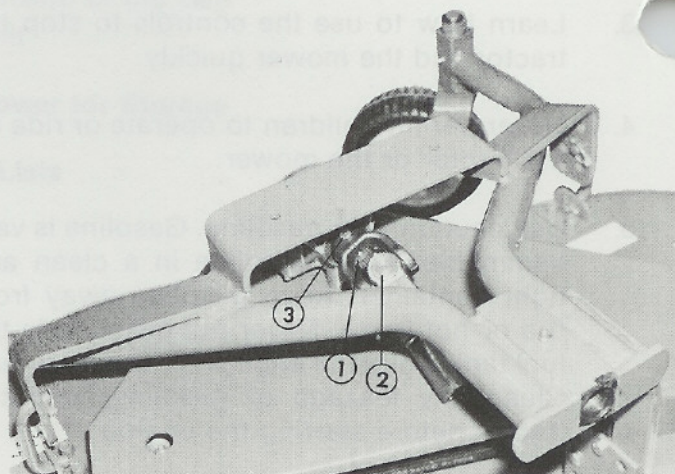
## 2.0 CONNECTING THE MOWER TO THE TRACTOR

1. Install the quick hitch pin on the attachment adapter of the tractor. See figure 2.0-1.
2. Install the spacers on the top attachment studs. See figure 2.0-1.
3. Align the hole in the female end of the universal joint with the second hole in the splined shaft of the mower, the hole next to the gear box. Slide the universal joint on the shaft. Fasten the universal joint in position with the 1/4" x 2" bolt and 1/4" lock nut. See figure 2.0-2.



- 79029
- 1 - Quick Hitch Pin
  - 2 - Attachment Adapter
  - 3 - Spacer
  - 4 - Attachment Stud

Figure 2.0-1



- 79026
- 1 - Drive Shaft
  - 2 - Universal Joint
  - 3 - Bolt

Figure 2.0-2

4. Raise the rear of the tractor and lock the stand down.

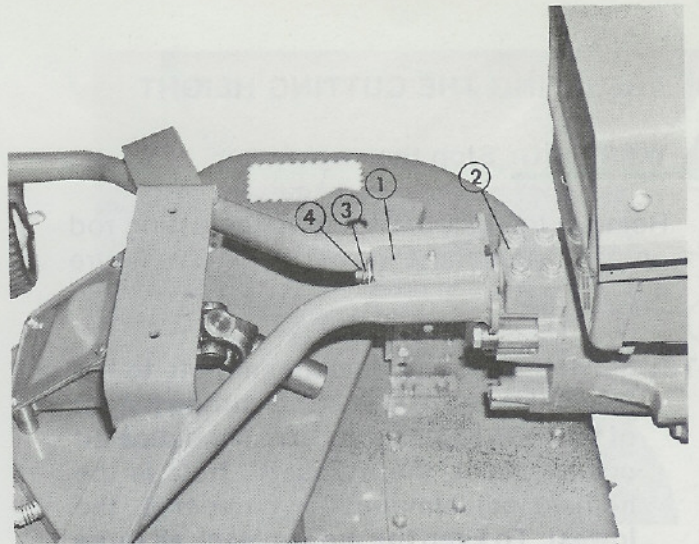
Put multipurpose grease on the quick hitch pin. Put the mower support on the quick hitch pin and install the washer and the klik pin. See figure 2.0-3.

6. Put multipurpose grease on the square shaft of the universal joint. Put the square shaft into the tube of the universal joint that is fastened to the gear box of the mower. See figure 2.0-4.
7. Hold the locking collar on the universal joint open and slide it halfway on the PTO shaft of the tractor. Release the locking collar and push the universal joint onto the PTO shaft until the collar locks in position. See figure 2.0-4.

### 3.0 REMOVING THE MOWER FROM THE TRACTOR

**WARNING:** Stop the engine before removing the mower from the tractor.

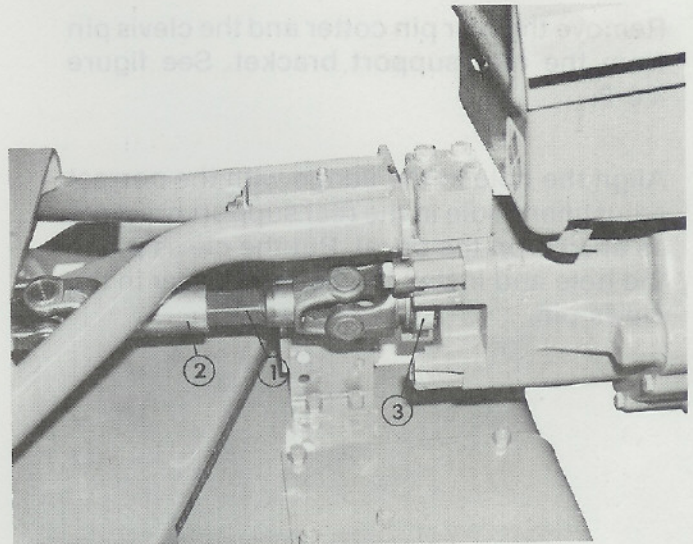
1. Lower the stand on the tractor and lock it down.
2. Release the locking collar on the universal joint and pull the universal joint from the PTO shaft of the tractor.
3. Remove the klik pin and the washer from the quick hitch pin. See figure 2.0-3.
4. Pull the mower forward to remove the mower support from the quick hitch pin.
5. Install the klik pin and the washer on the quick hitch pin.



79022

- 1 - Mower Support
- 2 - Quick Hitch Pin
- 3 - Washer
- 4 - Klik Pin

Figure 2.0-3



79025

- 1 - Square Shaft
- 2 - Tube
- 3 - Locking Collar

Figure 2.0-4

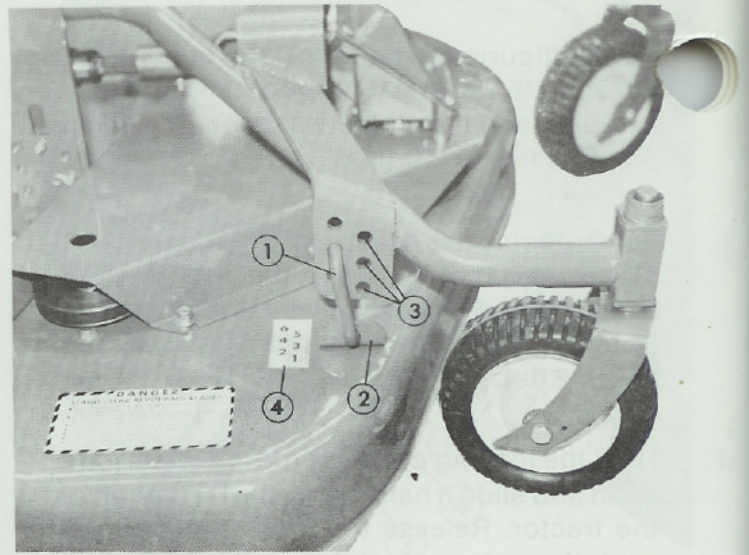
## 4.0 ADJUSTING THE CUTTING HEIGHT

**⚠ WARNING: Stop the engine.**

1. Remove the klik pin from the adjusting rod on each side of the mower deck. See figure 4.0-1.

**NOTE: Moving from one adjustment hole to the next will raise or lower the cutting height of the mower 1/2" (1.27 cm). As indicated on the decal, the number 6 hole is the highest adjustment; the number 1, the lowest. To keep the mower level, all three supports must be in the same number adjustment holes.**

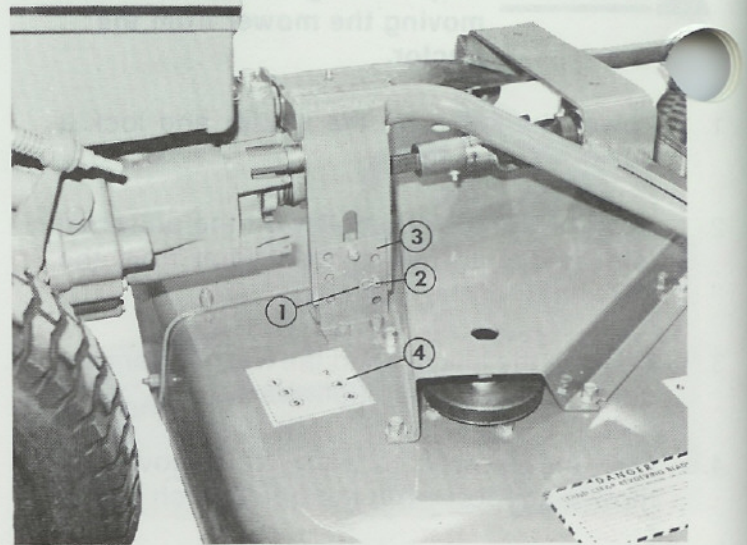
2. Move the adjusting rods to the adjustment hole needed. See figure 4.0-1.
3. Install the klik pins in the adjusting rods.
4. Remove the hair pin cotter and the clevis pin from the rear support bracket. See figure 4.0-2.
5. Align the hole in the flange with the correct adjustment hole in the rear support brackets as shown on the decal. Put the clevis pin in the hole and install the hair pin cotter in the clevis pin.



79035

- 1 - Adjusting Rod
- 2 - Support Bracket
- 3 - Adjustment Holes
- 4 - Decal

Figure 4.0-1



79034

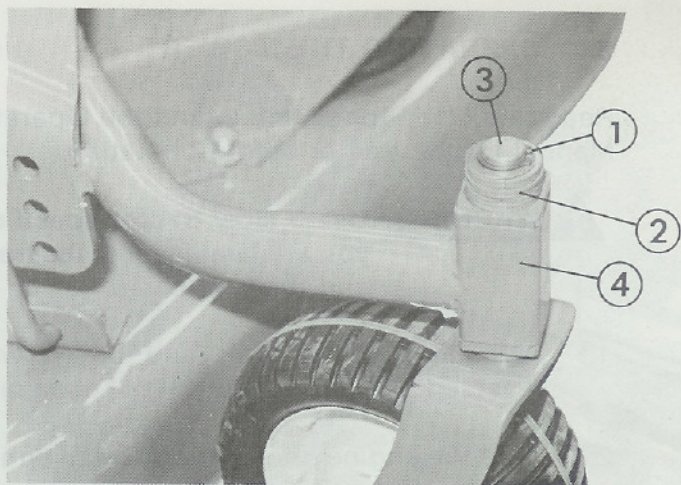
- 1 - Hair Pin Cotter
- 2 - Clevis Pin
- 3 - Rear Support Bracket
- 4 - Decal

Figure 4.0-2

## 5.0 ADJUSTING THE GAUGE WHEELS

The gauge wheels must be adjusted for the tire size on the tractor. Follow these procedures:

1. Remove the retaining rings from the caster forks. See figure 5.0-1.
2. Remove the caster forks from the support frame.
3. If the tractor has 18 x 6.50-8 or the 18 x 8.50-8 tires, put ten washers on each caster fork. Install the caster forks in the support frame. Put two washers on each caster fork; then install the retaining rings.
4. If the tractor has 4.80 x 4.00-8 tires, put two washers on each caster fork. Install the caster forks in the support frame. Put ten washers on each caster fork; then install the retaining rings.



79028

- 1 - Retaining Ring
- 2 - Washers
- 3 - Caster Fork
- 4 - Support Frame

Figure 5.0-1

## 6.0 OPERATING THE MOWER

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

**! WARNING:** Use a slow tractor speed until you are familiar with the tractor and the mower.

1. Put the gear selector and the forward-reverse lever in the neutral "N" position.
2. Start the engine on the tractor. Wait until the engine is running smoothly before operating.
3. Engage the PTO.
4. Put the range selector in the "HIGH" position and the gear selector in the "LOW" position.
5. Move the throttle lever to the "FAST" position.
6. Put the forward-reverse lever in the forward position and mow a short distance. Stop the tractor, put the PTO in the "OFF" position, and turn the ignition switch to the "OFF" position.
7. Check to see that the mower is cutting the grass to the needed height. If the cutting height needs adjusting, follow the procedures described in section 4.0.
8. After you know how to operate the mower, select the speed that is best for your mowing condition.

## 7.0 MAINTAINING THE MOWER

**! WARNING:** Stop the engine before maintaining the mower.

After Each Use:

1. Clean all the grass and dirt from the mower.
2. Inspect for loose or missing fasteners, excess wear and missing or broken parts. Tighten the bolts to the torque shown in figure 7.0-1.

BOLT TORQUE SPECIFICATIONS		
BOLT SIZE	FOOT POUNDS (ft. lbs.)	NEWTON METERS (N.m)
1/4"	7	9.5
5/16"	14	19
3/8"	25	34
7/16"	40	54
1/2"	60	82
9/16"	83	113
5/8"	120	163
3/4"	200	271

Figure 7.0-1



## 7.1 CHECKING THE BLADES

**WARNING:** Stop the engine before checking the blades.

1. Inspect the blades daily; replace damaged blades.
2. If the blades are not sharp, remove the blades and grind the beveled edges until they are sharp.
3. Do not change the angle of the bevel; grind each edge the same amount. Make sure the blades are balanced.
4. Install the blades on the mower. Tighten the spindle nuts to a torque of 120 ft. lbs. (163 N.m).

## 7.2 LUBRICATING THE MOWER

**WARNING:** Stop the engine before lubricating the mower.

For every eight hours of operation, add multipurpose grease to the grease fittings shown in figure 7.0-2 and figure 7.0-3.

## 7.3 LUBRICATING THE GEAR BOX

**WARNING:** Stop the engine before lubricating the gear box.

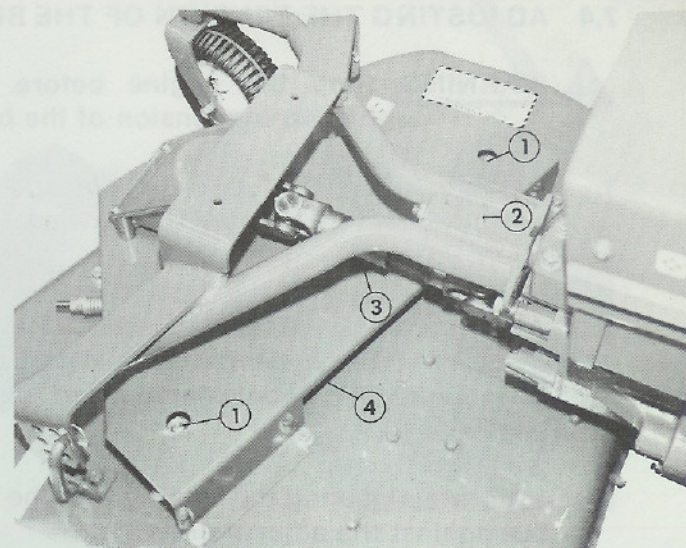
After every 100 hours of operation, lubricate the gear box.

1. Remove the four bolts that fasten the gear box cover to the gear box.

**NOTE:** Use caution when removing the gear box cover. Do not damage the gasket. The gasket must be replaced if it is damaged.

2. Remove the gear box cover. Remove the old grease from the gear box. Fill the gear box with new multipurpose grease.

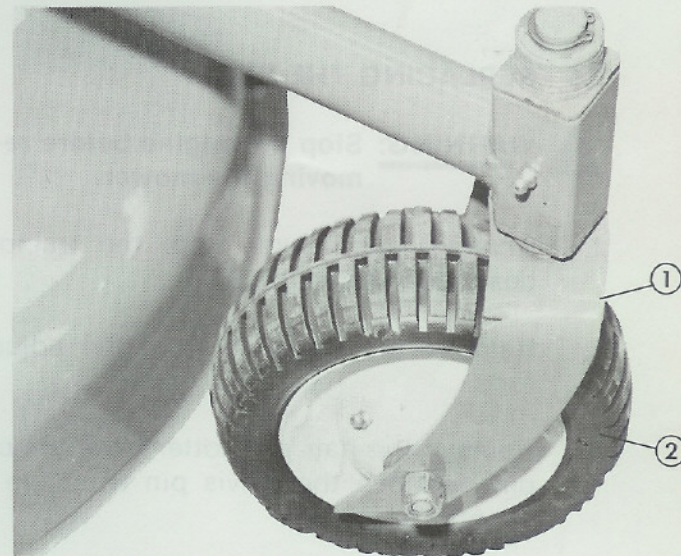
Install the gear box cover.



- 1 - Spindles  
2 - Mower Support  
3 - Universal Joint (not shown)  
4 - Idler Pivot (not shown)

79031

Figure 7.0-2



- 1 - Caster Fork  
2 - Gauge Wheel

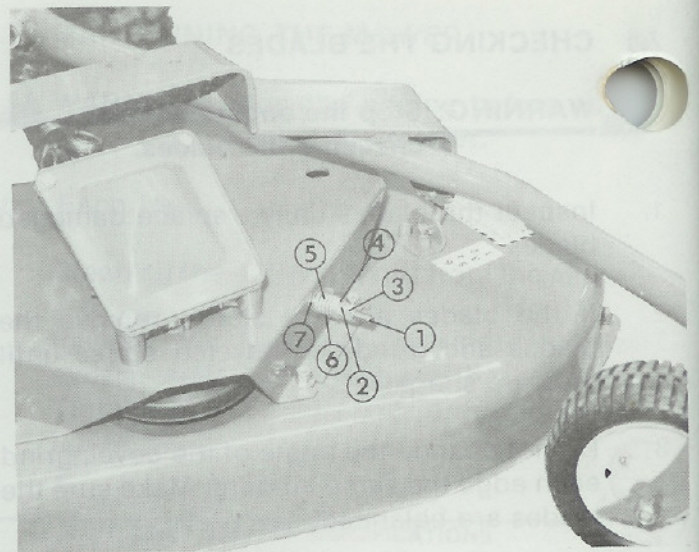
79037

Figure 7.0-3

## 7.4 ADJUSTING THE TENSION OF THE BELT

**⚠ WARNING:** Stop the engine before adjusting the tension of the belt.

1. Hold the adjusting nut on the idler rod and turn the jam nut counterclockwise. See figure 7.0-4.
2. Turn the adjusting nut clockwise until the belt is tight. The belt must not flex more than one inch (2.54 cm) between the two spindle sheaves.
3. Hold the adjusting nut and tighten the jam nut against the adjusting nut.



- 1 - Idler Rod
- 2 - Adjusting Nut
- 3 - Jam Nut
- 4 - Flat Washer
- 5 - Spring
- 6 - Sleeve (Inside Spring)
- 7 - Cup Washer

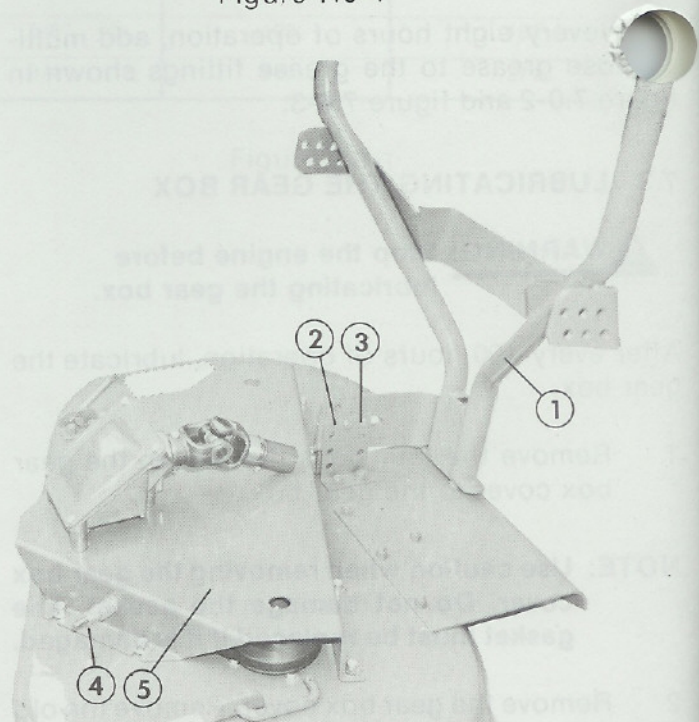
79021

Figure 7.0-4

## 7.5 REPLACING THE BELT

**⚠ WARNING:** Stop the engine before removing the mower.

1. Remove the mower from the tractor as described in section 3.0.
2. Remove the klik pins from the adjusting rods.
3. Remove the hair pin cotter from the clevis pin. Remove the clevis pin from the rear support bracket.
4. Raise the mower support frame to a vertical position and install the clevis pin in the adjusting hole in the rear support bracket. See figure 7.0-5.



- 1 - Mower Support Frame
- 2 - Rear Support Bracket
- 3 - Clevis Pin
- 4 - Idler Rod
- 5 - Belt Cover

79027

Figure 7.0-5

5. Remove the nuts, the washers, the spring, and the sleeve from the idler rod.
6. Remove the bolts that fasten the belt cover to the mower deck. Remove the belt cover.
7. Install the new belt as shown in figure 7.0-6 or in the belt diagram on the mower deck.

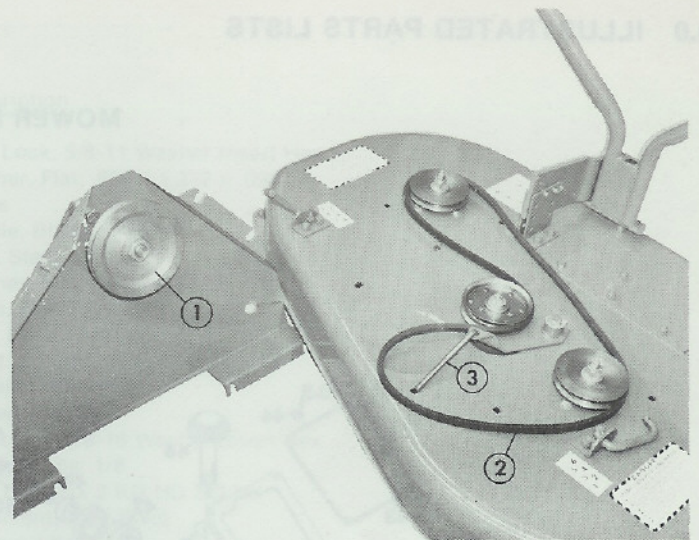
**NOTE: When installing the belt cover, make sure the belt is around the drive pulley. Make sure the idler rod is over the belt and in the correct hole in the belt cover.**

8. Install the belt cover.
9. Install the washers, the sleeve, the spring, and the nuts on the idler rod. Adjust the tension of the belt as described in section 7.1.
10. Remove the clevis pin from the rear support bracket. Lower the mower support frame into position over the mower deck.
11. Adjust the cutting height as described in section 4.0.
12. Connect the mower to the tractor as described in section 2.0.

## 8.0 PREPARING THE MOWER FOR STORAGE

If the mower will not be used for three months or more, do the following:

1. Remove the mower from the tractor.
2. Clean all the grass and dirt from the mower. Clean the grass from under the mower deck.
3. To prevent rust, put paint or lubricant on any area where the paint has been removed.
4. Do the maintenance described in section 7.0.

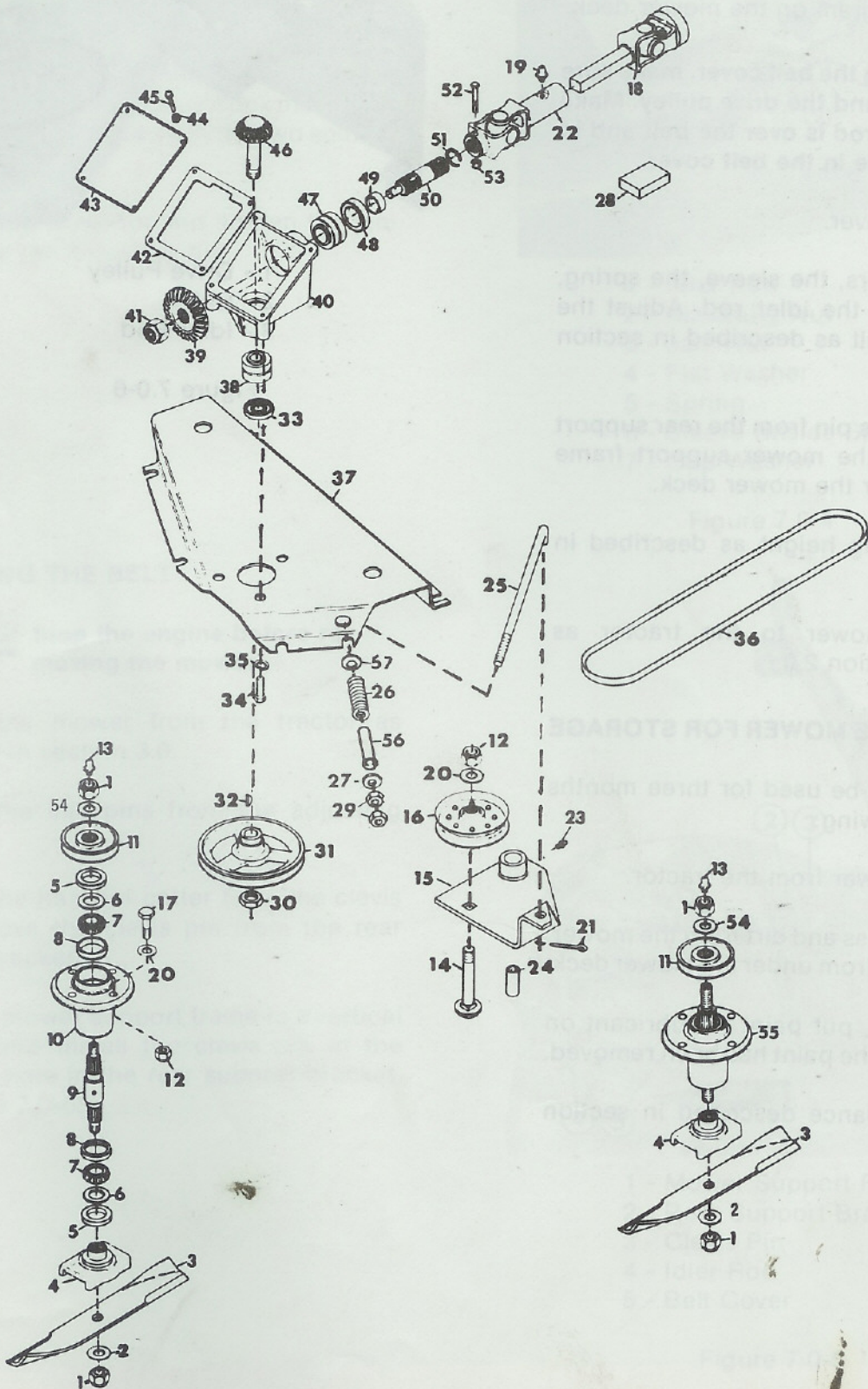


- 1 - Drive Pulley
- 2 - Belt
- 3 - Idler Rod

Figure 7.0-6

# 9.0 ILLUSTRATED PARTS LISTS

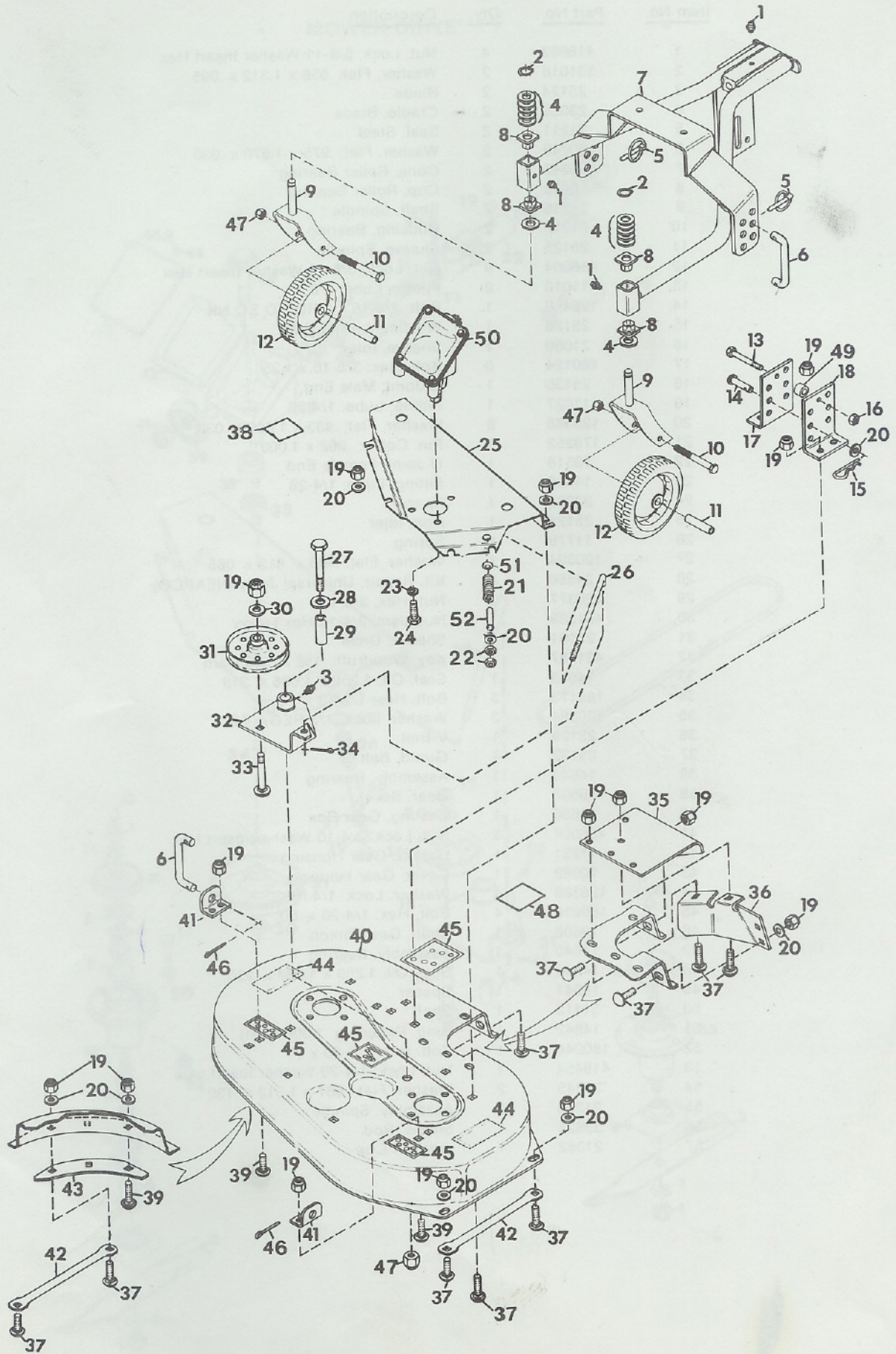
## MOWER DRIVE



## MOWER DRIVE

<u>Item No.</u>	<u>Part No.</u>	<u>Qty.</u>	<u>Description</u>
1	418692	4	Nut, Lock; 5/8-11 Washer Insert Hex
2	131016	2	Washer, Flat; .656 x 1.312 x .095
3	25124	2	Blade
4	23026	2	Cradle, Blade
5	21211	2	Seal, Steel
6	20743	2	Washer, Flat; .975 x 1.970 x .030
7	9246	2	Cone, Roller Bearing
8	9245	2	Cup, Roller Bearing
9	21216	2	Shaft, Spindle
10	21215	2	Housing, Bearing
11	25125	2	Sheave, Spindle
12	456004	9	Nut, Lock; 3/8-16 Washer Insert Hex
13	411010	2	Fitting, Lube; 1/8
14	126419	1	Bolt; 3/8-16 x 2 RD HD SQ NK
15	25126	1	Weldment, Idler Pivot
16	21060	1	Sheave, Idler
17	180124	8	Bolt, Hex; 3/8-16 x 1.25
18	25135	1	U-Joint, Male End
19	411027	1	Fitting, Lube; 1/4-28
20	120388	9	Washer, Flat; .433 x 1.000 x .038
21	179252	1	Pin, Cotter; .062 x 1.000
22	13518	1	U-Joint, Female End
23	14406	1	Fitting, Lube; 1/4-28
24	22062	1	Spacer
25	25128	1	Rod, Idler
26	11779	1	Spring
27	120394	1	Washer, Flat; .406 x .812 x .065
28	24560	1	Kit, Repair; Universal Joint (NEAPCO)
29	120377	2	Nut, Hex; 3/8-16
30	451539	1	Nut, Jam; 3/4-10 Hex Heavy
31	25131	1	Sheave, Drive
32	431787	1	Key, Woodruff; .188 x .625 Hard
33	14645	1	Seal, Oil; 1.250 x 1.686 x .313
34	180173	3	Bolt, Hex; 1/2-13 x 1
35	120384	3	Washer, Lock; 1/2 REG
36	25129	1	V-Belt
37	25132	1	Guard, Belt
38	14644	1	Assembly, Bearing
39	19607	1	Gear, Bevel
40	14636	1	Casting, Gear Box
41	456007	1	Nut, Lock; 3/4-10 Washer Insert Hex
42	11231	1	Gasket, Gear Housing
43	10982	1	Cover, Gear Housing
44	120380	4	Washer, Lock; 1/4 REG
45	180016	4	Bolt, Hex; 1/4-20 x .50
46	19608	1	Shaft, Gear Pinion
47	14640	1	Assembly, Bearing
48	14646	1	Seal, Oil; 1.250 x 1.987 x .250
49	14641	1	Spacer
50	31412	1	Shaft
51	14642	1	Ring, Retaining, 1.000 Shaft
52	180044	1	Bolt, Hex; 1/4-20 x 2
53	419454	1	Nut, Lock; 1/4-20 Washer Insert Hex
54	33845	2	Washer, Flat; .687 x 1.312 x .130
55	21306	2	Assembly, Spindle
56	33828	1	Sleeve, Rod
57	21382	1	Washer, Cup

# MOWER HOUSING AND FRAME



## MOWER HOUSING AND FRAME

<u>Item No.</u>	<u>Part No.</u>	<u>Qty.</u>	<u>Description</u>
1	411027	3	Fitting, Lube: 1/4-28
2	11135	2	Ring, Retaining: .750 Shaft
3	14406	1	Fitting, Lube: 1/4-28
4	423315	24	Washer, Flat: .812 x 1.375 x .100
5	23468	2	Klik Pin
6	25153	2	Rod, Adjusting
7	25137	1	Weldment, Support
8	25148	4	Bearing, Flanged
9	25146	2	Weldment, Caster
10	433163	2	Bolt, Hex: 1/2-13 x 5.0
11	11950	2	Bushing, Wheel: .520 x .750 x 3.312
12	23696	2	Wheel, Gauge
13	180024	1	Bolt Hex: 1/4-20 x 1.25
14	138078	1	Pin, Clevis
15	11860	1	Pin, Hair Cotter
16	419454	1	Nut, Lock; 1/4-20 Washer Insert Hex
17	25149	1	Bracket, Rear Support, R.H.
18	25150	1	Bracket, Rear Support, L.H.
19	456004	31	Nut, Lock; 3/8-16 Washer Insert Hex
20	120394	17	Washer, Flat: .406 x .812 x .065
21	11779	1	Spring
22	120377	2	Nut, Hex: 3/8-16
23	120384	3	Washer, Lock; 1/2 REG.
24	180173	3	Bolt, Hex: 1/2-13 x 1
25	25132	1	Guard, Belt
26	25128	1	Rod, Idler
27	180181	1	Bolt, Hex: 1/2-13 x 2
28	120396	1	Washer, Flat: .531 x 1.062 x .092
29	22062	1	Spacer
30	120388	1	Washer, Flat: .438 x 1.000 x .083
31	21060	1	Sheave, Idler
32	25126	1	Weldment, Idler Pivot
33	126419	1	Bolt; 3/8-16 x 2 RD HD SQ NK
34	179252	1	Pin, Cotter; 1/16 x 1.00
35	25123	1	Shield, Discharge
36	25122	1	Shroud, Blade
37	120915	25	Bolt; 3/8-16 x 1 RD HD SQ NK
38	33928	1	Decal, Warning, Eye
39	126227	5	Bolt, 3/8-16 x .75 RD HD SQ NK
40	25121	1	Deck, 40 Inch Mower
41	25152	2	Bracket, Mower Support
42	25134	2	Skid
43	25133	1	Plate
44	33927	2	Decal, Danger, Foot
45	31842	1	Decal Set, 40 Inch Mower
46	177923	2	Pin, Cotter; 1/8 x .75
47	435507	3	Nut, Lock; 1/2-13 Washer Insert Hex
48	33926	1	Decal, Danger, Hand
49	25151	1	Spacer
50	31410	1	Assembly, Gear Housing
51	21382	1	Washer, Cup
52	33828	1	Sleeve, Rod

## GRAVELY LIMITED WARRANTY

This Limited Warranty is issued by Gravelly International, Inc., and consists of the following terms:

1. Only the original purchaser of new Gravelly equipment is covered by this Warranty.
2. This Warranty covers repair or replacement of parts manufactured by Gravelly which are defective in material or workmanship. Gravelly will pay for parts and labor only.
3. The Warranty starts the date of purchase and lasts for TWELVE (12) MONTHS.
4. Some components of Gravelly equipment are not covered by the Gravelly Warranty. These components are covered by the original manufacturer's warranty, which is included with the product. They are:
  - a. Engines
  - b. Tires
5. To obtain warranty service on Gravelly equipment including components not manufactured by Gravelly, use this procedure:
  - a. Notify the Gravelly 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 Gravelly 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 Gravelly Limited Warranty, they should be referred to:

Gravelly International, Inc.  
One Gravelly Lane  
Clemmons, NC 27012

Attn: Manager of Customer Services
  - e. Warranty service on Gravelly equipment must be performed by an authorized Gravelly dealer or Gravelly factory branch.
6. This Warranty does not cover the following:
  - a. Transportation between owner's home or place of business and the dealership. If the dealer provides the transportation of the equipment, he will charge the owner his usual rate 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.
  - c. Alterations or Modifications - All obligations under this warranty shall be terminated if the equipment is altered or modified in any way.
  - d. Customer Neglect or Lack of Proper Maintenance - The purchaser is responsible for making sure that the tractor is operated and serviced as directed in the operator's manual. Incorrect use or maintenance will void the warranty.

7. GRAVELLY MAKES NO OTHER EXPRESS WARRANTY. IMPLIED WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE PERIOD SET OUT IN PARAGRAPH 3 ABOVE. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE STATEMENT MAY NOT APPLY TO YOU.
8. GRAVELLY SHALL HAVE NO RESPONSIBILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE BREACH OF ANY WARRANTY, INCLUDING, BUT NOT LIMITED TO, INCONVENIENCE, RENTAL OR PURCHASE OF REPLACEMENT EQUIPMENT, LOSS OF PROFITS OR COMMERCIAL LOSS. 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 Gravelly product registration card is supplied with each Gravelly product. Please complete the card and return it to Gravelly at the address listed on the card. The equipment registration card will be used by Gravelly 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 registration card is not required in order to take advantages of this Warranty.
11. This Warranty is not subject to change or modification by anyone, including Gravelly dealers and no Gravelly dealer is authorized to make any representations or promises on Gravelly's behalf.

 **GRAVELLY**