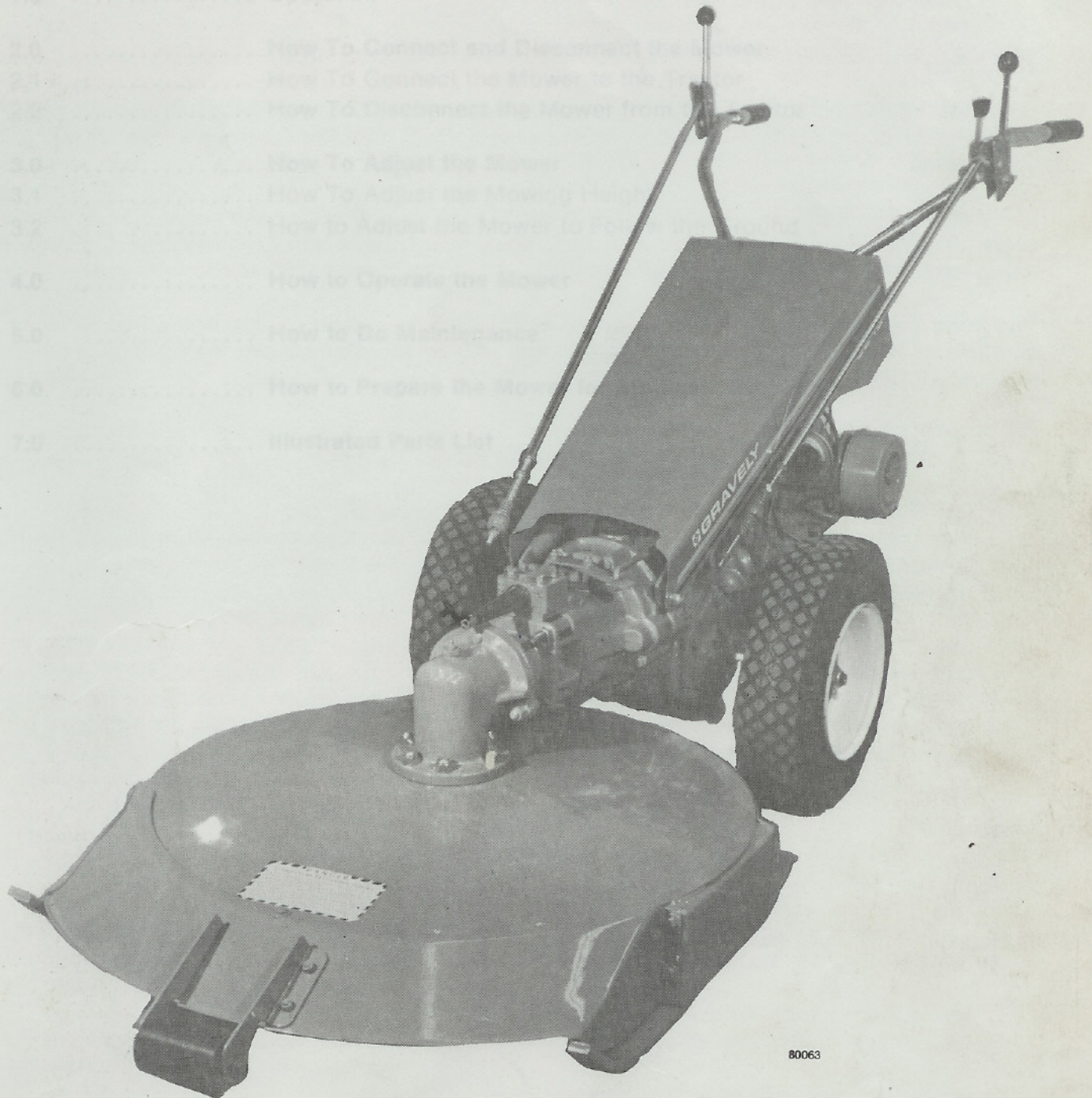


GRAVELLY OPERATOR'S MANUAL

NAME: 30 INCH ROTARY MOWER

**PART NUMBER(S): 32119 - Drive
32443 - Deck**



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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. 32121 (8-80)


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

This section gives warnings for you about operating and doing maintenance on this equipment.

Using this equipment the wrong way can cause injury to persons and damage to the equipment. Persons operating or doing maintenance on this equipment must read the 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 doing maintenance on the equipment.

The purchaser must give these instructions to the persons operating and doing maintenance on this equipment. The purchaser must get the operator and person doing maintenance on 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 controls on the tractor.
3. Know 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 fuel 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. Remove all material that will be thrown by the mower.
2. Wear strong shoes. Wear clothing that is not loose. Wear protection for your eyes.
3. Before starting the engine of the tractor, put the direction control lever in the "NEUTRAL" position and the PTO control lever in the "OFF" position.
4. Keep the tractor and the mower in good operating condition. Do the maintenance as shown in the Operator's Manual.
5. Do not operate the tractor where the area of operation is too dark for the operator to see.
6. 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 a slope, go up and down the slope.
6. Always look for and keep away from holes and other hazards.
7. Use caution when moving in the reverse direction. Look for persons and hazards.
8. After hitting an item, stop the tractor. Stop the engine on the tractor. Check for damage. If there is damage, make repairs before starting the engine.
9. Operate the equipment only when in the operator's position.
10. Before leaving the tractor, put the PTO control in the "OFF" position. Turn the key in the ignition switch to the "OFF" position and remove the key.
11. If there is a sudden change in the sound or vibration of the tractor or the mower, stop the tractor. Stop the engine on the tractor. 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 key in the ignition switch to the "OFF" position. Wait until the engine and moving parts have stopped.



2.0 HOW TO CONNECT AND DISCONNECT THE MOWER

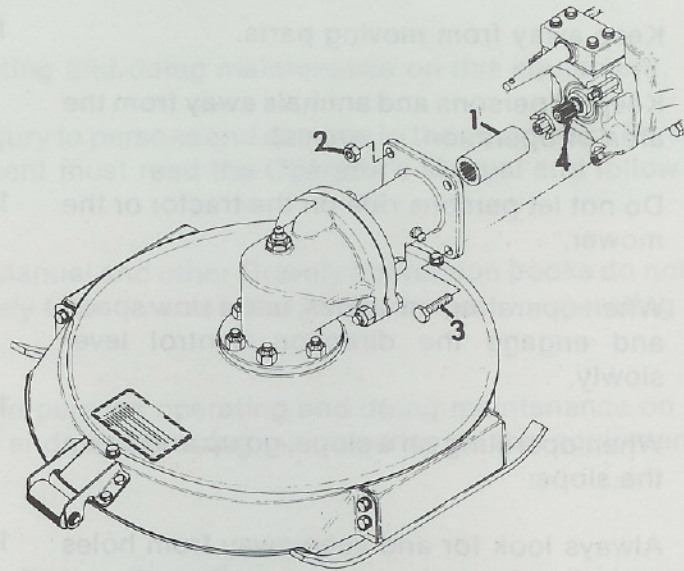


2.1 How To Connect The Mower To The Tractor

1. Stop the engine.
2. Put the coupling on the splined shaft of the mower. See figure 2.0-1.
3. Fasten the mower to the tractor with two 1/2" nuts and two 1/2" bolts while engaging the coupling on the PTO shaft of the tractor. See figure 2.0-1.

2.2 How To Disconnect The Mower From The Tractor

1. Stop the engine.
2. Lower the tractor stand and tighten the adjusting handle.
3. Remove the two 1/2" nuts and two 1/2" bolts that fasten the mower to the tractor. See figure 2.0-1.
4. Pull the mower from the tractor.
5. Put the coupling on the splined shaft of the mower.



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- 1 - Coupling
- 2 - Nut
- 3 - Bolt
- 4 - PTO Shaft

Figure 2.0-1



3.0 HOW TO ADJUST THE MOWER



3.1 How To Adjust The Mowing Height

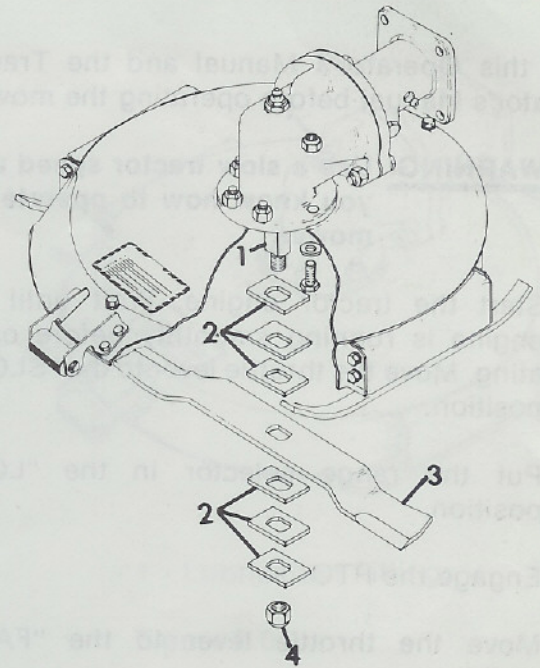
Moving a 1/4" spacer from one side of the blade(s) to the other will raise or lower the mowing height 1/4" (6.4 mm). There are six 1/4" spacers for the single blade installation. There are five 1/4" spacers and one 1/8" spacer for the twin blade installation. All the spacers must be used either below or above the blade(s).

WARNING: One 1/4" spacer must always be between the blades and the lock nut.

To adjust the mowing height, do as follows:

1. Turn the mower deck over. Turn the lock nut counterclockwise to remove it from the mower shaft. See figure 3.0-1.
2. To lower the mowing height, put the necessary number of 1/4" spacers above the blade(s).
3. To raise the mowing height, put the necessary number of 1/4" spacers below the blade(s).
4. Put the lock nut on the mower shaft and tighten it to a torque of 100 ft. lbs. (135 N.m).

⚠ WARNING: Make sure the lock nut that fastens the blade(s) to the mower shaft is tightened to a torque of 100 ft. lbs. (135 N.m).



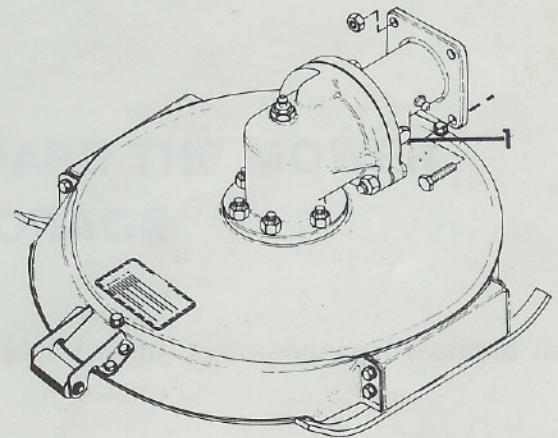
- 1 - Mower Shaft
- 2 - Spacers
- 3 - Blade
- 4 - 7/8"-9 Lock Nut

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Figure 3.0-1

3.2 How To Adjust The Mower To Follow The Ground

The swivel adjustment is correct when the mower deck will not swivel when raised by pushing down on the tractor handlebars, but will follow the ground during mowing. Turn the nut on the swivel adjustment clockwise to tighten, counterclockwise to loosen the swivel. See figure 3.0-2.



- 1 - Swivel Adjustment

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Figure 3.0-2



4.0 HOW TO OPERATE THE MOWER



Read this Operator's Manual and the Tractor Operator's Manual before operating the mower.

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

1. Start the tractor engine. Wait until the engine is running smoothly before operating. Move the throttle lever to the "SLOW" position.
2. Put the range selector in the "LOW" position.
3. Engage the PTO.
4. Move the throttle lever to the "FAST" position.
5. Put the gear selector in the "LOW" position.
6. Put the direction control lever in the forward position and mow a distance of ten feet (3m). Stop the tractor, put the PTO in the "OFF" position, and turn the ignition switch to the "OFF" position.
7. See if the mower is cutting at the correct height. If the mowing height needs adjusting, follow the procedures in section 3.1. If the mower does not follow the ground correctly, see section 3.2.
8. When you know how to operate the mower, select a speed that is best for your mowing conditions.



5.0 HOW TO DO MAINTENANCE



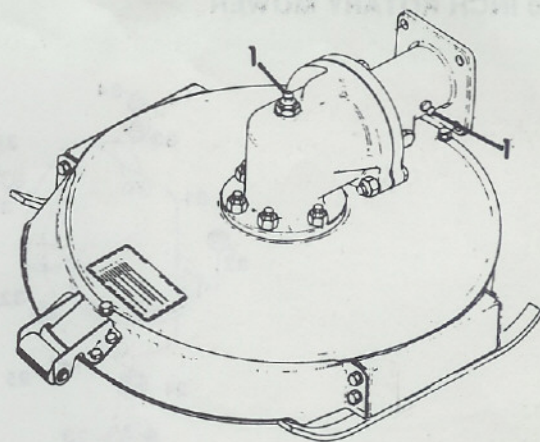
Stop the engine before doing any maintenance. Inspect all nuts, bolts, and other fasteners daily to make sure they are tight. Replace any that are damaged or missing. Inspect the blade(s) and replace a damaged blade. If the mower does not cut correctly, see if the blade(s) are sharp.

To sharpen the blade(s):

1. Stop the engine.
2. Remove and secure the spark plug wire.
3. Turn the mower on its side.
4. Remove the blade(s). (See section 3.1)
5. Grind the beveled edges of the blade(s) until sharp. Grind each edge the same amount. Make sure the blade(s) have balance.
6. Put the blade(s) back on the mower. (See section 3.1)

WARNING: Make sure the lock nut that fastens the blade(s) to the mower is tightened to a torque of 100 ft. lbs. (135 N.m).

After every forty hours of operation, clean the lubrication fittings shown in figure 5.0-1. Add multi-purpose grease until it shows at the mower shaft under the mower deck and at the swivel adjustment.



1 - Lubrication Fittings

Figure 5.0-1

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6.0 HOW TO PREPARE THE MOWER FOR STORAGE



When the mower will not be operated for three months or more, follow these procedures:

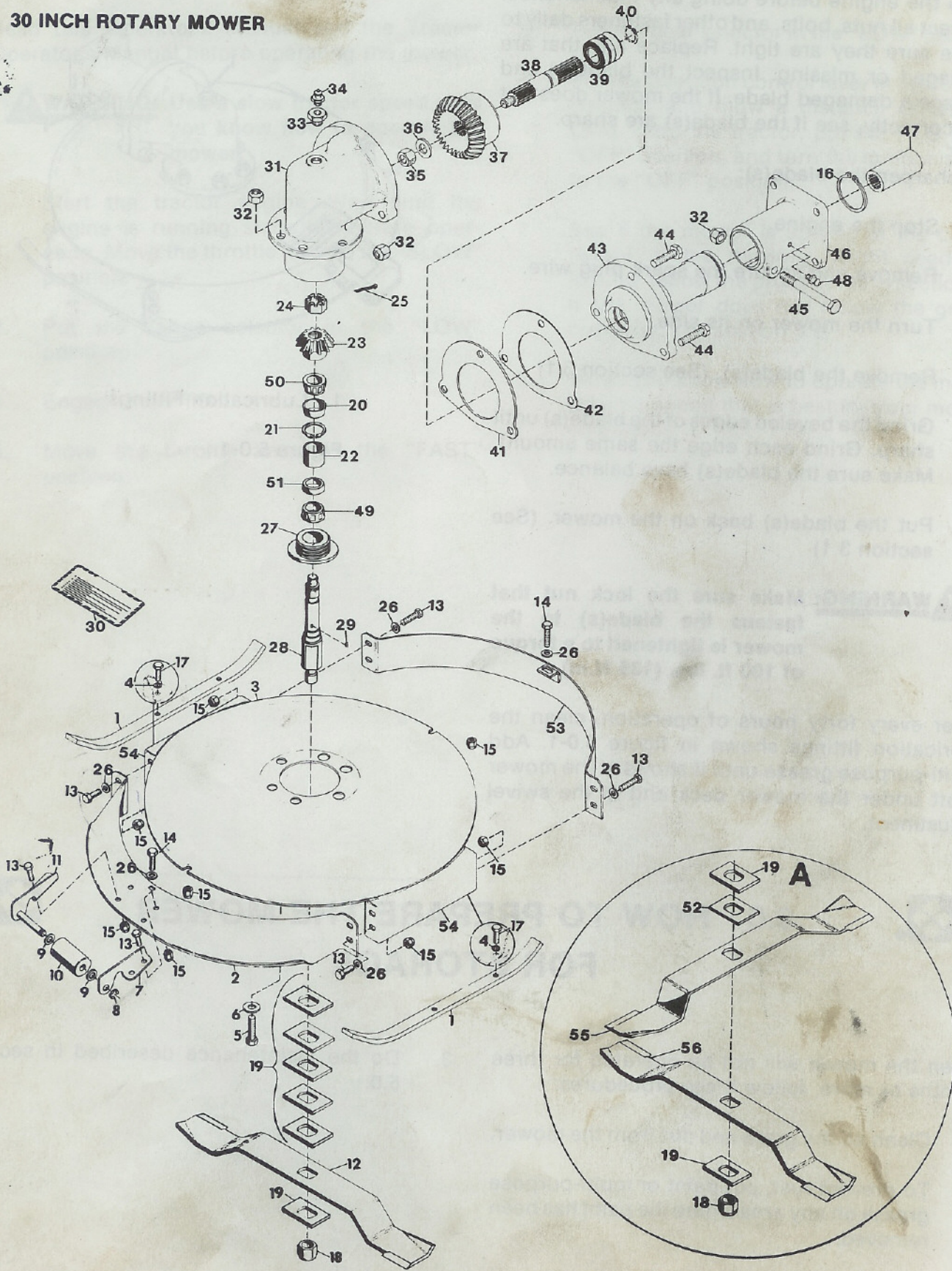
1. Clean all the grass and dirt from the mower.
2. To prevent rust, put paint or multi-purpose grease on any area where the paint has been removed.
3. Do the maintenance described in section 5.0.



7.0 ILLUSTRATED PARTS LIST



30 INCH ROTARY MOWER



30 INCH ROTARY MOWER

<u>Item No.</u>	<u>Part No.</u>	<u>Qty.</u>	<u>Description</u>
1	21492	2	Skid, Rotary Mower
2	21388	1	Fender, Front 30" Mower
3	10110	1	Deck, Weldment 30 In.
4	138538	4	Washer Lock 5/16 Int. Tooth
5	180177	6	Bolt, Hex 1/2-13 x 1.50
6	120390	6	Washer, Flat 9/16 x 1-3/8 x .109
7	21399	1	Bracket, Wheel L-H
8	21396	1	E-Ring
9	421879	2	Washer, Flat .656 x 1.250 x .100
10	15351	1	Roller, Gage
11	21400	1	Weldment, Bracket
12	22528	1	Rotary Mower Blade 3/8"
13	180077	12	Bolt, Hex 5/16-18 x .75
14	180078	2	Bolt, Hex 5/16-18 x .875
15	419455	12	Nut, Lock 5/16-18 Washer Insert
16	32120	1	Ring, Retaining
17	181593	4	Bolt Hex 5/16-24 x 5/8
18	17313	1	Nut Lock 7/8-9 Heavy Thin
19	22526	6	Spacer, Cutting Height 1/4"
20	9245	1	Cup, Roller Bearing
21	22525	1	Ring, Retaining
22	22521	1	Spacer; 1.75 x 1.936 x 1.967
23	22519	1	Pinion Bevel
24	125267	1	Nut, Hex 5/8-18 Slotted
25	119120	1	Pin Cotter 3/32 x 1-1/4
26	120386	10	Washer, Flat .312 x .734 x .065
27	22522	1	Seal
28	22520	1	Shaft, Rotor
29	271089	1	Key, Woodruff; .125 x .375
30	18549	1	Decal, Danger
31	32116	1	Housing, Gear
32	435507	9	Nut, Lock; 1/2-13 Washer Insert
33	144044	1	Bushing, 1/2 Reducing Pipe
34	271434	1	Fitting, Lube
35	416310	1	Nut, Lock; 5/8-18 Hex HD. Type-N
36	131016	1	Washer, Flat .656 x 1.312 x .095
37	22518	1	Gear, Bevel
38	32117	1	Shaft, Drive
39	14640	1	Assembly, Bearing; 1.000 x 1.980 x 1.243
40	22242	1	Ring, Retaining; .937 Shaft
41	32863	1	Shim, .020
42	32862	2	Shim, .005
43	32115	1	Housing, Shaft
44	180179	3	Bolt, Hex 1/2-13 x 1-3/4
45	180191	1	Bolt, Hex 1/2-13 x 3.25
46	32114	1	Casting, Swivel
47	32118	1	Coupling
48	411027	1	Fitting, Lube; 1/4-28
49	22523	1	Cone, Bearing
50	9246	1	Cone, Roller Bearing
51	22524	1	Cup, Bearing
52	22527	1	Spacer, Cutting Height 1/8"
53	32448	1	Weldment, Rear Fender
54	12855	2	Panel Skid
55	22530	1	Blade, 30" Mower; Thin Cross Shaft
56	22529	1	Blade, 30" Mower; Thin

NOTE: Circle "A" Pertains to Optional Blade Kit.

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 WARRANTIES. 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.

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