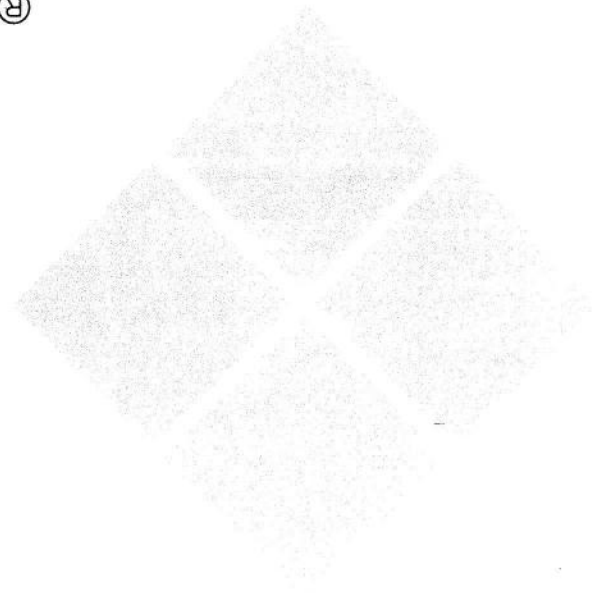


**CONVERTIBLE 7.6  
OWNERS  
MANUAL**

**GRAVELLY**

®



1980  
+ 10, 71293  
L- CAE 140 GENIC FIRE MOWER

1.015 P-215  
X-002-000000  
.002 71293

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CLAMPING H-8  
P106 TT 15 - P-01.78 .025  
X-002-000000 GENIC  
H-8 and Summer  
OIL FILTER AC-P-215 5573991  
L- 110, 71293



Figure 1

**THANK YOU** for your investment in Gravely equipment. It is an investment, for the Gravely will save you work and worry for many years.

You will gain still greater satisfaction from your powerful Gravely if you add the tools you need for your other jobs. From time to time we suggest you consult your dealer for the many Gravely attachments that will eliminate grounds upkeep and garden drudgery.

Numerous independent dealers and factory branches distribute Gravely equipment. All are ready to give prompt and efficient service, with parts in stock and personnel trained in factory-service methods.

Your Gravely Tractor is warranted under terms shown herein. To qualify for this Warranty, you must register your tractor by completing the attached Registration card and returning it. For your own protection, please do this right away.

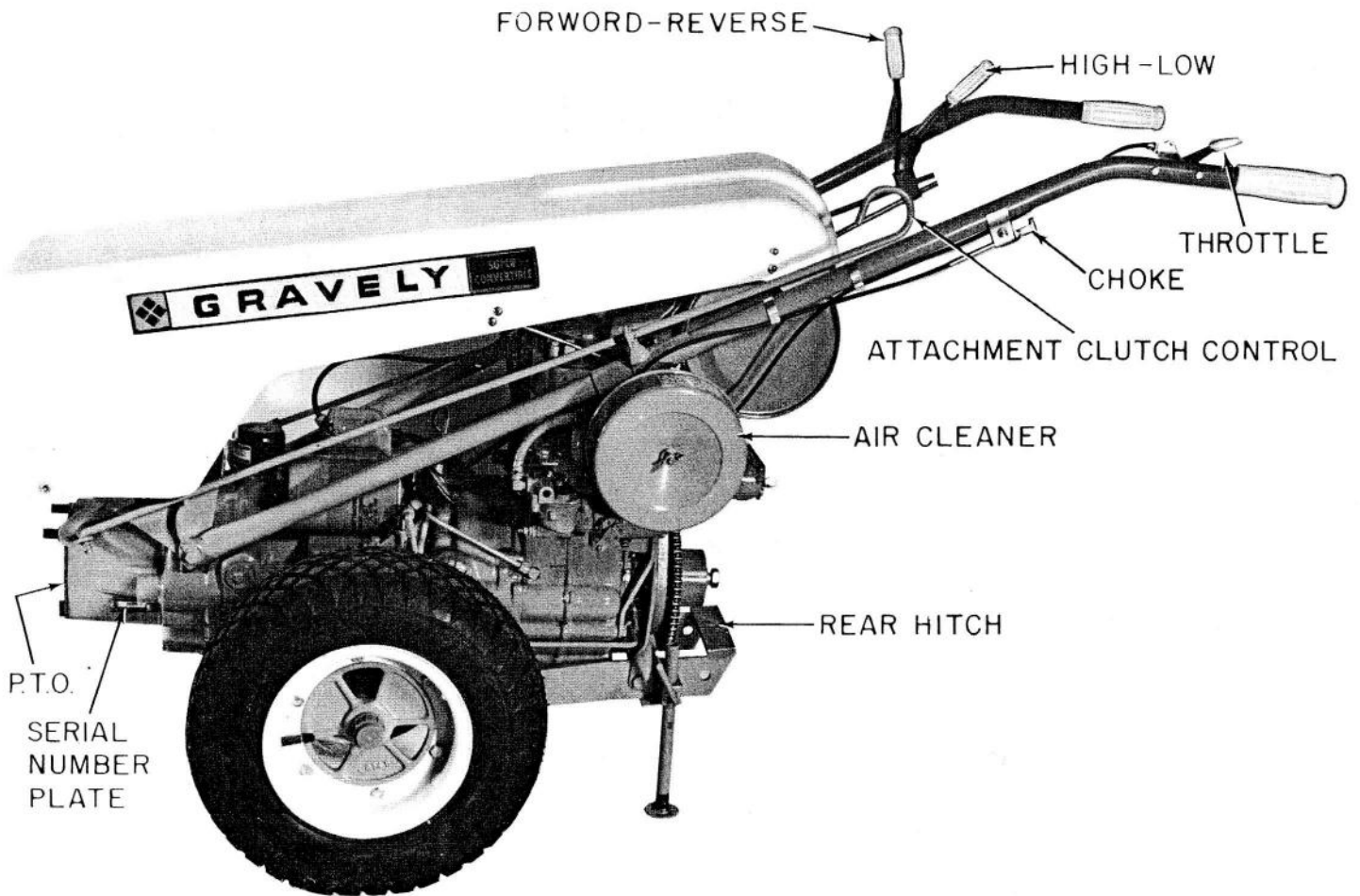


Figure 2

## INTRODUCTION

The Gravely Convertible 7.6 Tractor is available in two models—the Custom and the Super. The Super Tractor is shown in Figure 2. The Super has the added features of electric starter, governor and attachment clutch control.

The Convertible 7.6 Tractor is powered by a Gravely engine producing 7.6 horsepower at 3000 rpm. All gear drive allows power to be transmitted directly from the engine to the power attachment by steel shafts and gears.

The Convertible 7.6 offers year-round, all-season versatility with many different attachments available. Out-front mounting of most attachments gives you maximum visibility and safety.

Gravely's instant forward, neutral, or reverse—with one quick movement of one lever—gives you excellent maneuverability and precise control.

This tractor will give you highly satisfactory service if maintained and operated as outlined in this manual.

It is important that you know the Serial Number of your tractor. The Serial Number is located on the left side of the advance casting. The Serial Number

of your tractor is: \_\_\_\_\_

For your future reference, please fill in your Serial Number as soon as possible.

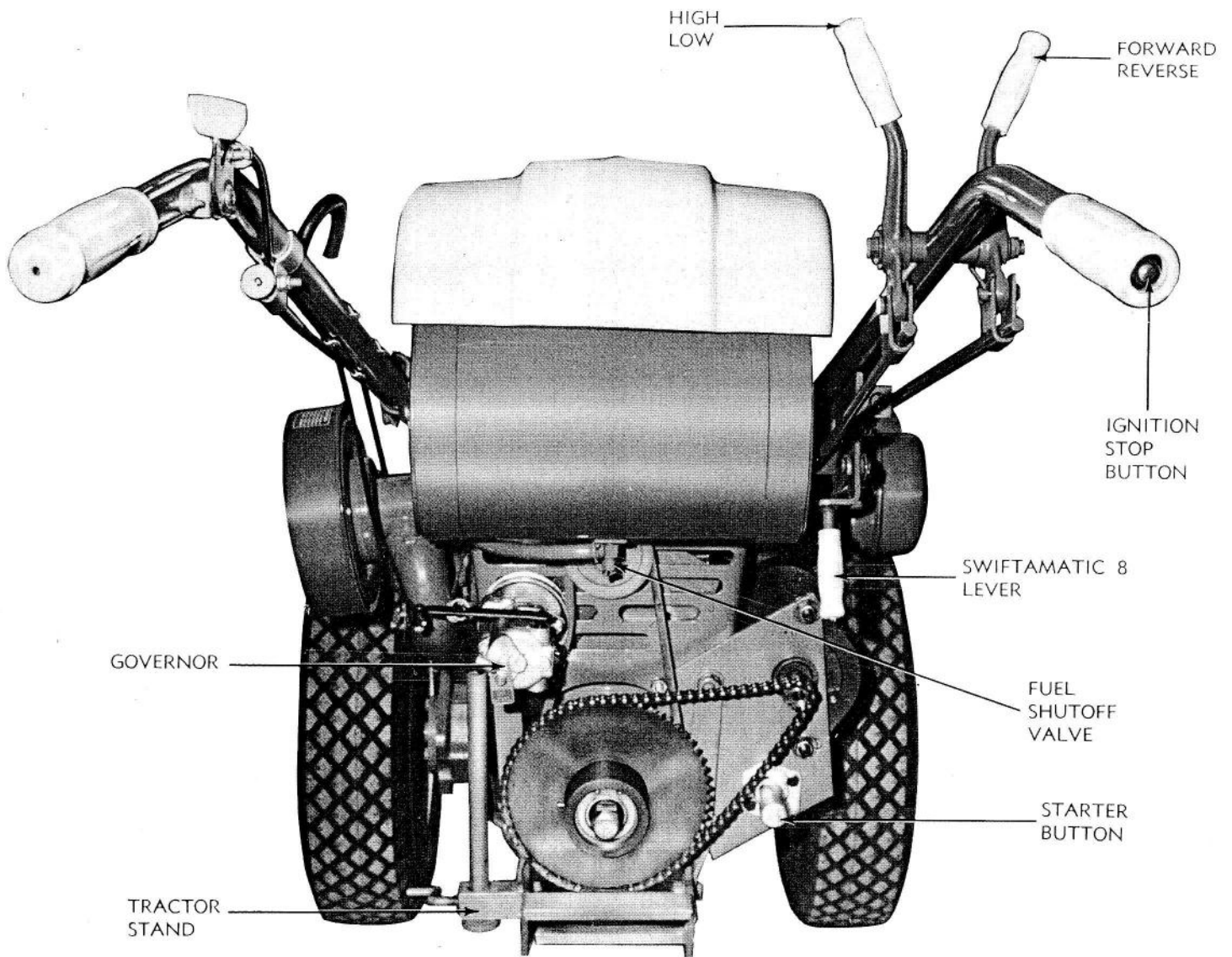


Figure 3

## OPERATION

**Throttle**—On governor-equipped tractors, depress the throttle to accelerate engine, raise to decelerate engine. On tractors not equipped with a governor, raise to accelerate engine, depress to decelerate engine.

**Choke**—Pull to choke; push forward fully for normal operation.

**Operating Levers**—The operating levers, one for high and low speeds and one for forward and reverse, are located on the right tractor handle.

**Swiftamatic Control**—On tractors with the optional 8 speed transmission; the range selection lever is on the right by the fuel tank. Push forward fully for low range; pull rearward fully for high range. There is no neutral position.

**Attachment Clutch Lever**—The attachment clutch control located on the top of the advance casting en-

gages or disengages the power attachment. Lever positions are shown by the embossed IN and OUT.

**Attachment Clutch Control**—The attachment clutch control is an extension of the attachment clutch lever that enables you to engage or disengage the power attachment from your position at the tractor handles. Pull to engage the attachment; push to disengage.

**Ignition Stop Button**—To stop engine, depress the ignition stop button. Keep depressed until the engine stops completely.

## LUBRICATION

Filling the chassis to its 5 pint capacity with motor oil lubricates both the engine and transmission. Do not use transmission oil or grease. The following is recommended:

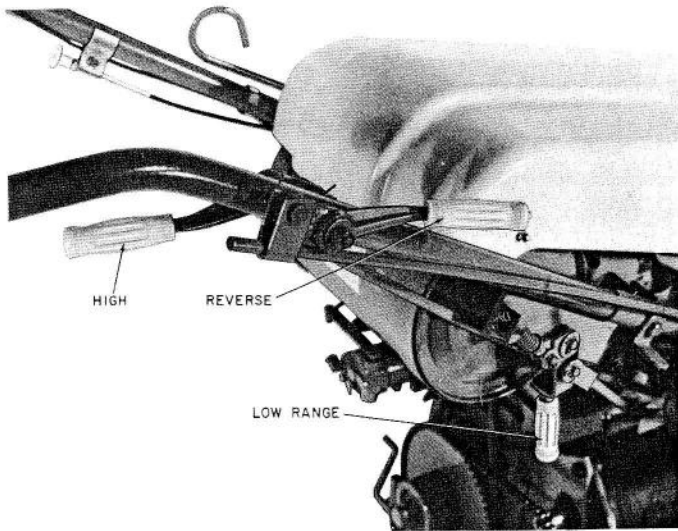


Figure 4

**Summer**—SAE 30 or SAE 10W-30. A.P.I. Classification—M.S.

**Winter**—(32 F. or below) SAE 10W or SAE 10W-30. A.P.I. Classification—M.S.

**Oil level**—Regularly check the oil level with the Dipstick (fig. 6) before starting. Be sure the tractor is level.

**Adding oil**—Add oil by removing the Oil Filler Cap (fig. 6). Stop when the oil reaches the FULL mark on the dipstick. (Allow time for the oil to drain down prior to checking. This prevents overfilling.)

### STARTING

Whether you have a manual starter or an electric starter, before starting check to see if:

- . . . Operating levers are in neutral.
- . . . Attachment clutch lever (or attachment clutch control) is in the OUT position.
- . . . Valve on fuel tank is open and fuel in tank.
- . . . Oil level is on full mark.
- . . . Throttle is open approximately half-way.
- . . . An attachment or attachment boss cover is secured to the front of the tractor.

**Normal Starting**—On tractors with the manual starter attach the strap to the pulley (place the hole in the strap over the pin in the pulley groove) and wind the strap onto the pulley in the direction of the arrow. Pull the strap hard and fast. Choke as required. With the electric starter, simply press the starter button with your toe. Choke as required.

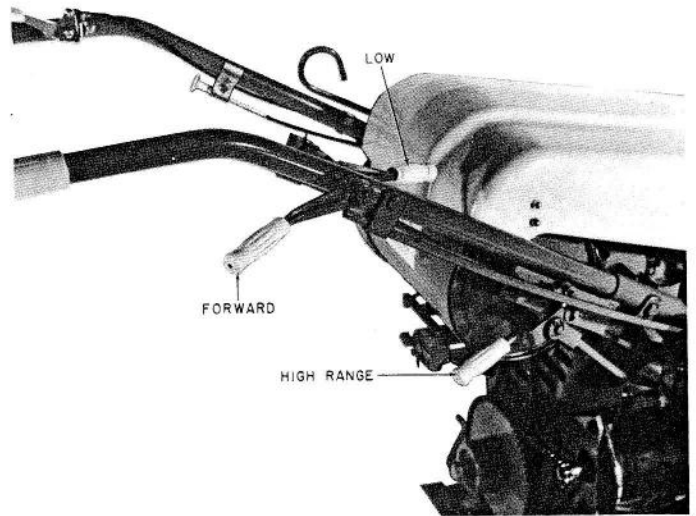


Figure 5

**Note:** In proper working order, the engine should start with one or two attempts (a few more may be necessary in cold weather). If it doesn't, check the Trouble Shooting section to find and correct the trouble. Do not tamper with the carburetor—this will serve only to complicate things, for even with the carburetor out of adjustment, the engine will start.

**Cold Weather Starting**—Cold weather starting troubles usually can be avoided if you:

- . . . Make sure the proper weight oil is used. Oils heavier than those recommended will stiffen at low temperature, thus making starting more difficult.
- . . . Use fresh gasoline and those recommended for proper climatic conditions.
- . . . Store the tractor in a heated building if possible.

### OPERATING THE TRACTOR

When starting the tractor, have both operating levers in neutral and the attachment clutch lever in the OUT position (or the attachment clutch control pushed forward fully.)

If the tractor is equipped with the optional 8 speed transmission, the Range Selection lever should be in the position for the range in which the tractor will be operated initially.

After starting, decrease engine speed to a  $\frac{1}{4}$  throttle.

**Engaging wheels**—To put tractor in motion, first move the inside operating lever to either the high or low position (Figure 5). Then move the outside operating lever into forward or reverse. Use a smooth, even motion in shifting the operating levers. Depress the throttle to the desired speed.

**Note:** With the inside operating lever in high or low, the tractor will not move. Both levers must be engaged before the tractor will move.

**Engaging Power Attachment**—Before attempting to put a power attachment in gear, be sure that the tractor is stopped, with both operating levers in neutral and the engine running at idle speed.

After the attachment is engaged, increase the engine speed to about half-throttle. Move the inside operating lever to high or low.

**Braking**—The forward-reverse lever is used as a brake when you must stop. Move the lever out of forward, pass through neutral, and apply pressure at reverse position—enough pressure to stop the forward motion of the tractor but not enough to lock the lever fully in reverse.

**STANDARD TRANSMISSION**—The standard transmission has four speeds—high and low in forward, and high and low in reverse. These speeds control both ground speeds and attachment RPM, with low gear having about 75% of the speed obtainable in high gear.

Choice between high and low gear will be governed mainly by actual operating conditions. Generally, difficult jobs such as snow blowing, plowing, cultivating, and heavy mowing should be done in low gear, while easier jobs such as lawn mowing can be done in high gear.

**EIGHT-SPEED TRANSMISSION**—The 8-speed transmission features a two-speed axle giving the

tractor four speeds forward and four speeds in reverse.

Shifting the axle between high and low ranges controls only the tractor's ground speed. Shifting the inside operating lever between high and low provides a further control over ground speeds as well as attachment speed. With the axle in low range, tractor speed is 50% slower than with the axle in high range. To change axle ranges: stop the tractor and cut engine speed to an idle. Keep the inside operating lever in high or low, but move the outside operating lever to neutral. Move the range selection lever to high or low range. Move the outside operating lever back and forth slightly.

Individual jobs will dictate the combination of axle range and gear to be used. In general, low axle range should be used for plowing, cultivating, snow blowing, heavy mowing, and other jobs where a slower ground speed is needed to give the attachment longer to do its job. High axle range generally is satisfactory for mowing and other lawn jobs.

**Other points**—Don't slip the clutch. If you find the ground speed of the tractor too fast for the job, shift to a lower gear. If you can't shift any lower, take a smaller cut—one in which the attachment can do the job with the tractor fully in gear. Repeated clutch slipping causes undue wear and should be avoided.

### STOPPING

To shut off the engine, depress ignition stop button (Figure 3) after disengaging attachment and moving both operating levers to neutral.

## MAINTENANCE

### LUBRICATION

Filling the chassis to its 5 pint capacity with motor oil lubricates both the engine and transmission. Do not use transmission oil or grease. The following is recommended:

**Summer**—SAE 30 or SAE 10W-30. A.P.I. Classification—M.S.

**Winter**—(32° F. or below) SAE 10W or SAE 10W-30. A.P.I. Classification—M.S.

**Oil level**—Regularly check the oil level with the Dipstick (Figure 6) before starting. Be sure the tractor is level.

**Adding oil**—Add oil by removing the Oil Filler Cap (Figure 6). Stop when the oil reaches the FULL mark on the dipstick. (Allow time for the oil to drain down prior to checking. This prevents overfilling.)

**Oil filter cap**—Periodically check the breather-type oil filler cap. Wash it in solvent at least every oil change.

**Oil Changes**—During the break-in period, the first 40 hours of operation, change oil every 20 hours. Then change oil every 40 hours under normal conditions, oftener under dusty conditions and during periods of extended operation. Drain oil by removing the oil drain plug, the bottom bolt of the left tractor axle housing (Figure 6). Be sure the special sealing washer is in place when replacing the bolt.

**Oil Filter**—Change the oil filter every 80 hours or once a season whichever is sooner. The oil filter (Figure 6) is to be installed by hand. Be careful when installing a new filter not to overtighten the filter.

**Oil Pressure**—Check the oil pressure gauge when starting. If the oil pressure is not correct, stop the engine and call your Gravelly dealer.

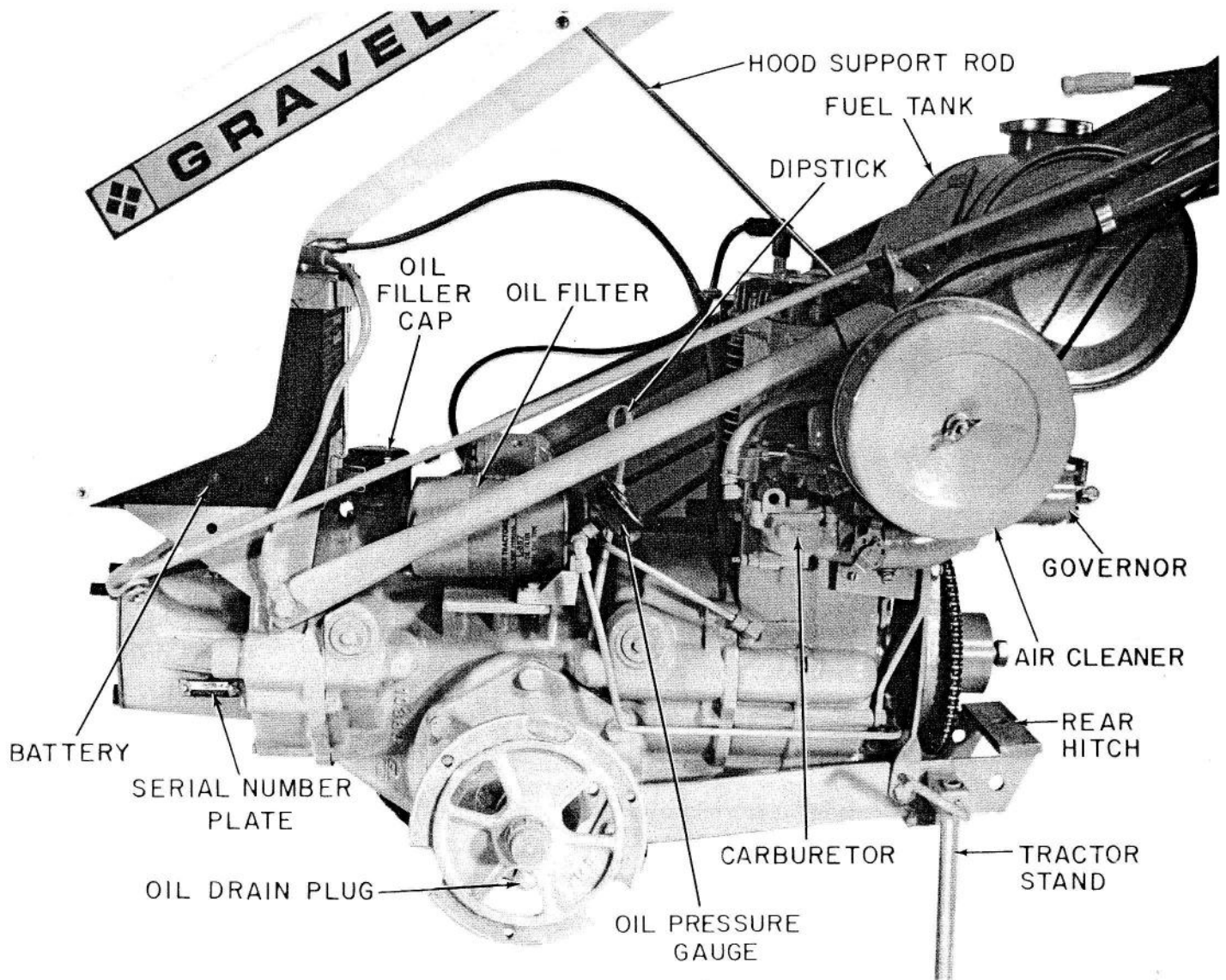


Figure 6

**Fuel Filter**—Once a season or oftener remove the filter fitting from the bottom of the fuel tank and clean. Remove by unscrewing fitting from bottom of tank.

**Battery**—Every 40 hours check the water level of the battery. Maintain at proper level.

**Starter Clutch**—Lubrication is not necessary.

**Air Cleaner**—The air cleaner cartridge should be cleaned by gently tapping on a flat surface. Be sure the cartridge fits the bottom adapter plate and the wing nut on the top adapter is finger tight. Replace the cartridge if bent, crushed, or damaged in any way. Clean or replace cartridge when loss of power is noticeable.

**Fuel**—Use a good grade of regular gas. Premium grade should not be used. Fuel tank capacity is approximately  $1\frac{3}{4}$  gallons.

It is good practice to periodically clean the tractor with water, which is usually sufficient. Dirt accumulation on tractor allows heat buildup.

### TROUBLESHOOTING

**Fuel Troubles**—Check to see if:

- ... Fuel tank contains fuel.
- ... Vent hole in fuel tank cap is open.
- ... Fuel shut off valve is open. (Turn counter-clockwise to open.)
- ... Fuel line is clear. Close shutoff valve. Remove fuel line from carburetor, and reopen valve. If fuel flows, the line is clear; if not, check the fuel hose and fittings.
- ... Check strainer in fuel tank.



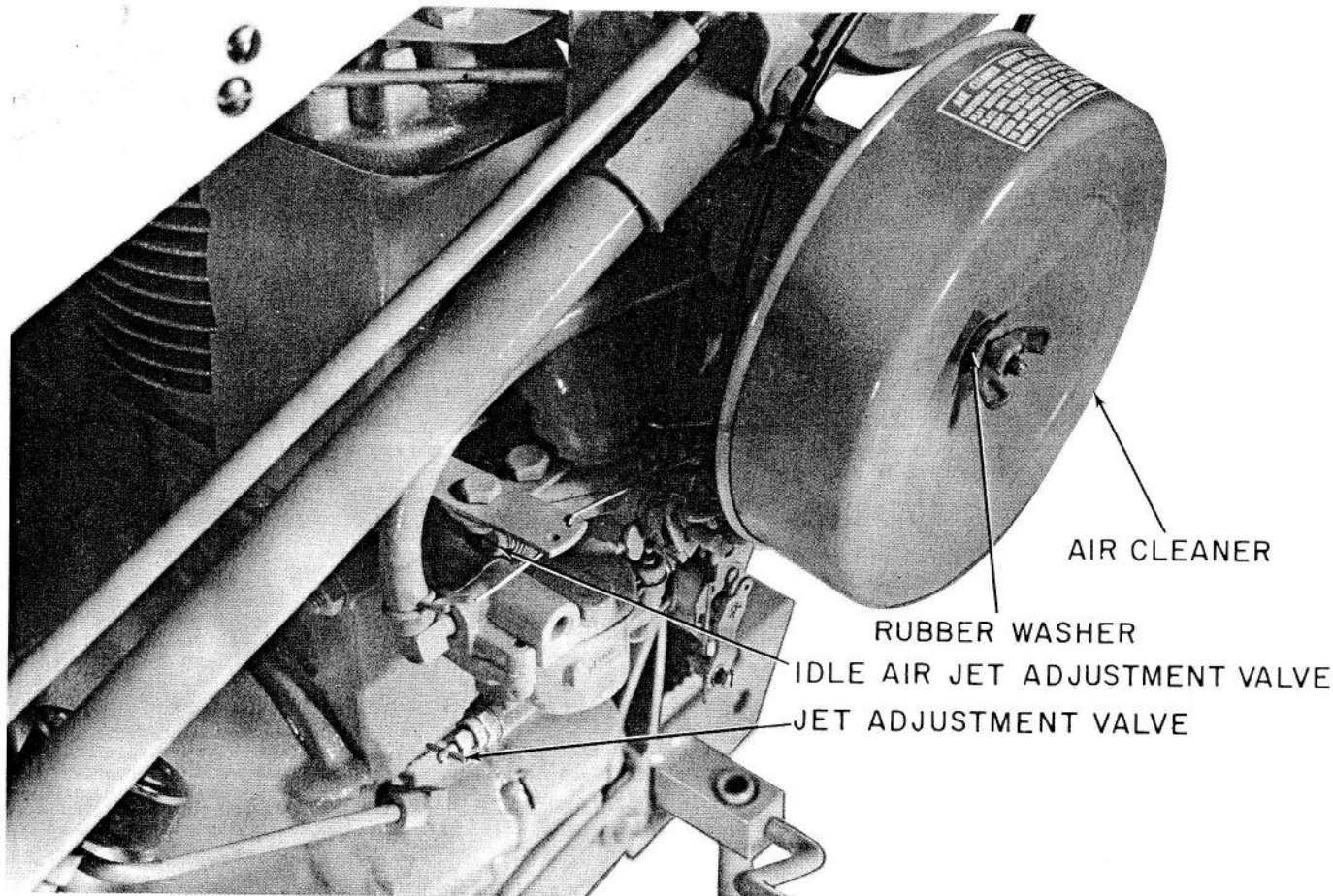


Figure 7

. . . Carburetor is getting fuel. With the fuel line intact, close the shut-off valve. Drain any fuel remaining in the carburetor by removing the plug from the bottom of the carburetor. Open the shut-off valve. If fuel does not flow out of the carburetor there is a restriction in the carburetor. Call your Gravelly dealer.

**Ignition Troubles**—Check to see if:

- . . . Hood is touching the plug. Raise the hood and attempt to start the engine.
- . . . Spark plug is fouled or wet. Remove the plug and clean, dry, or replace it. Correct gap to .025 inch.
- . . . Engine is getting a spark from the magneto. Remove the magneto cable from the spark plug and crank the engine by hand, holding the cable end so that the spark can jump to the cylinder head. If there is no spark when the magneto is heard to click, or a weak spark (less than 3/16-inch) check the connections. If these are all right,

the magneto is defective. Call your Gravelly dealer for service.

- . . . Ignition stop button is shorted out. To test, remove the ground wire from the magneto stop button and attempt to start the engine (See 5, Figure 8).

**Carburetor and Air Cleaner Trouble**—A flooded carburetor or a clogged air cleaner may keep the engine from starting.

If gas is dripping from the carburetor, it is flooded. Wait 10 to 15 minutes before further attempting to start the engine.

Check air cleaner element; if dirty, clean or replace.

**Other Troubles**—Call your dealer. The above procedures will get your tractor started in most cases. However, if these fail, call your Gravelly dealer. He is trained in factory-approved service procedures and has the parts, if required, to get your Gravelly working for you again.

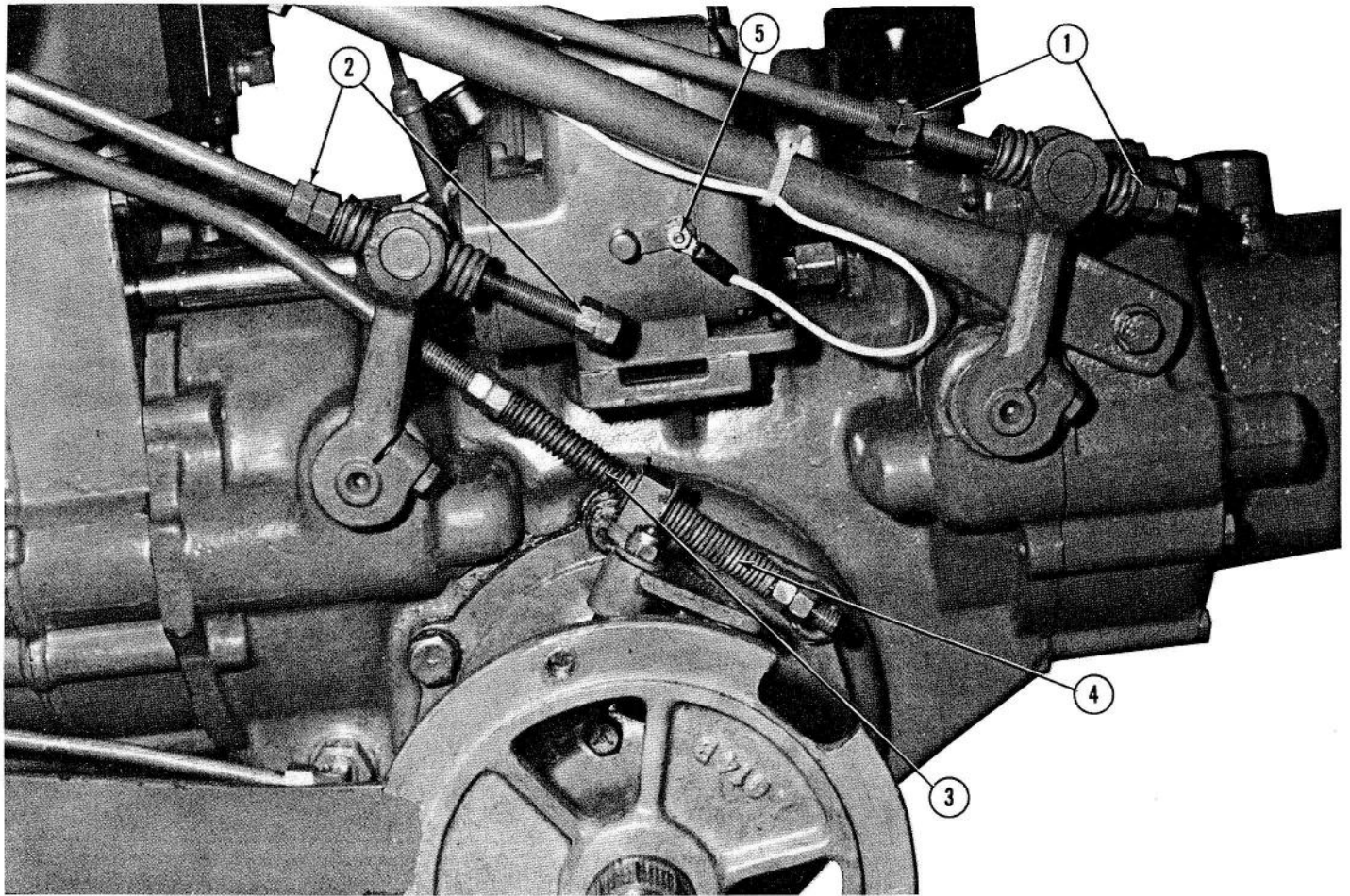


Figure 8

### ADJUSTMENTS

Following are common adjustments which most users can readily perform:

**Spark Plug**—The Champion H-8 spark plug should have its gap set at .025 inch.

**Clutch Rods**—To adjust clutches, tighten the lock-nuts, 1 and 2 in Figure 8, until the clutch rod springs are compressed fully as each lever is locked in position.

**Eight-speed Transmission Linkage**—The toggle spring (located by the swiftomatic lever) occasionally may require adjustment by tightening the hex nuts on the toggle rod until the spring is compressed to 15/16-inch. To adjust springs, (3 and 4 in Figure 8), have the range selection lever engaged fully in high or low range, move the hex nuts (1 and 2 in figure 8) on the spring rod until each spring is compressed to 2-1/2 inches.

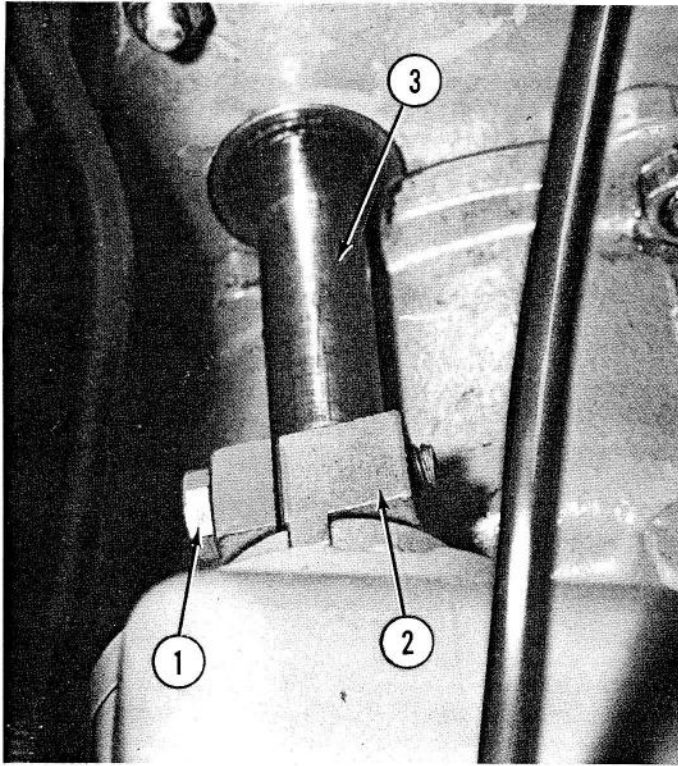
**Carburetor**—If absolutely necessary to adjust the carburetor, follow these instructions:

1. Screw the jet adjustment valve (a brass T-valve) in until it is snug. Do not force or screw it tightly.
2. Back off the jet adjustment valve 2-3/4 turns.
3. Start the engine and open the throttle halfway.

After the engine warms up, begin screwing the jet adjustment valve in slowly. As soon as the engine slows down, stop and back the valve off 1/2 turn.

4. Screw the idle air jet adjustment valve (a slotted-head screw with a wire wrapped around it) all the way in; then back off 1 1/2 turns. Start the engine and allow it to idle. Screw the idle air jet adjustment valve in until the engine begins to run rough. Then back the valve off 1/8 turn.

**Valves**—Adjust the valves only when the engine is cold. Remove the valve cover cap, adjust tappet to .012 inch.



**Figure 9**

**Fan Belt**—Fan belt tension is adjusted by moving the fan belt pulley (the pulley at the fan) upwards, to increase tension. To adjust; loosen the large thin nut between the fan belt pulley and fan housing. Tighten after proper tension is reached.

**Timing**—The magneto should be set to fire approximately 20° before top dead center. To adjust:

1. Loosen magneto coupling nut (1, Figure 9) until the coupling slips on the camshaft. It may be necessary to tap the coupling gently.
2. Remove the cylinder head and magneto cover.
3. Bring the piston to top dead center on the compression stroke (both valves closed). Measure accurately the distance from the top of the piston to the cylinder top of the wall. Record this distance and add 5/16-inch.
4. Turn the starter pulley counterclockwise until the piston goes down the cylinder approximately one inch. Then bring the piston back up the cylinder to the distance calculated in step 3. (5/16-inch plus the distance from the top of the piston to the cylinder wall at top dead center.) This procedure takes up any backlash in the gears.

5. Hold the magneto shaft extension (3, Figure 9) so that it does not move. Rotate the magneto impulse (inoperative) until the points just open.

6. Be sure that there is at least .015-inch end play in the magneto coupling so it will not cramp the impulse. Use feeler gauge between the fiber block (2, Figure 9) before tightening nut. Tighten nut, being sure that the points are open.

7. Check your settings by backing the piston not more than two inches down the cylinder barrel (to avoid picking up the magneto impulse) and review the procedure.

8. When timing is correct, lock the magneto coupling nut, install cylinder head and the magneto cover.

### STORAGE

Although Gravelly has attachments for year-round use, perhaps you do not plan to use it for a period of time. If so, it is important that you store your tractor according to the following directions:

1. Clean the tractor thoroughly.
2. Drain the fuel tank.
3. Drain the chassis, flush and refill with the proper weight oil. Run the engine until the engine stops because the fuel in the carburetor is exhausted.
4. Remove the spark plug and pour into the cylinder 1/4 pint of the same oil used in the chassis. Turn the engine over several times by hand to distribute the oil. Leave the piston on top dead center and replace the spark plug.
5. Store the tractor inside in a dry place, with the wheels raised off the floor.

**Removing from Storage**—Turn the engine over several times by hand.

1. Fill the fuel tank.
2. Inflate the tires to 18 psi.
3. Check the oil level.
4. Start the tractor in the usual way. Do not be alarmed if there is heavy exhaust when first started. This is the excess oil being burned off that was added to cylinder prior to storage.

# SPECIFICATIONS

Model	Custom	Super
<b>Engine</b> .....	Gravely .....	Gravely .....
Type .....	4-cycle air cooled .....	4-cycle air cooled .....
Horsepower .....	7.6 .....	7.6 .....
Bore & Stroke .....	3.25 x 3.50 .....	3.25 x 3.50 .....
Displacement .....	29.0 cu. in. ....	29.0 cu. in. ....
R.P.M. ....	3000 .....	3000 .....
Air Cleaner .....	Dry Type .....	Dry Type .....
Starter .....	Manual .....	Electric .....
Governor .....	Optional .....	Standard .....
Ignition .....	Magneto .....	Magneto .....
Battery .....	12 volt .....	12 volt .....
Spark Plug .....	Champion H-8 (gap-.025) .....	Champion H-8 (gap-.025) .....
Valve Setting .....	.012 in. ....	.012 in. ....
Fuel .....	Regular .....	Regular .....

**Transmission—All Gear**

**Differential—Automotive type**

**Dimensions**

Height (Exclusive of handles) .....	28 in. ....	28 in. ....
Width .....	24 in. ....	24 in. ....
Length .....	55 in. ....	55 in. ....
Tire Pressure .....	18 psi. ....	18 psi. ....
Weight .....	330 lbs. ....	330 lbs. ....

**Capacity**

Fuel Tank .....	1.75 U. S. gal. ....	1.75 U. S. gal. ....
Chassis .....	5 pts. ....	5 pts. ....

## Warranty

Products manufactured by Gravely Corporation are warranted to be free from defective material and workmanship for a period of one year from date of purchase, under normal use by a homeowner, and for a period of ninety (90) days from date of purchase, when used for commercial purposes.

Any defective part manufactured by Gravely Corporation will be replaced without charge provided such part is certified as defective by the manufacturer or by the manufacturer's expressly authorized representative.

### IMPORTANT PROVISIONS

This warranty is not subject to change or modification by field representatives or Gravely dealers. Any warranty other than the warranty expressly stated above will not be binding upon the manufacturer.

Certain components carry separate warranties by the manufacturer of such components. Defective components are subject to their manufacturer's warranties, and any claims, work, or return of parts must be through an authorized Gravely dealer. Service costs for the transporting of a unit to and from the dealer are the responsibilities of the customer, and when such service is performed by the dealer, the dealer will charge the customer the usual rate for such service.

It is the customer's responsibility to mail the 'Warranty Card' to the manufacturer within fourteen (14) days after date of purchase to ensure prompt handling of any warranty claim by the dealer or the manufacturer.



ONE GRAVELLY LANE  
Clemmons, North Carolina 27012

# ATTACHMENT OPERATING INSTRUCTIONS



Figure 10

## 30" ROTARY MOWER

This is the mower that taught the others how to handle the tough jobs. There is not one single belt or chain . . . All Gear-and-Steel-Shaft Drive, powered directly from the Tractor engine.

Tackles the toughest mowing jobs — and gets them done. Designed for rough work, a heavy steel-plate Deck, rugged Skids, a Blade that is designed to slice, not beat the grass, that wades through anything up to small trees.

Follows ground contour with swivel action, does a good job on the lawn as well as in the weeds.

### LUBRICATION

Use SAE 140 in the Gear Housing. Use General Purpose Grease occasionally in the Grease Fitting of the Swivel Casting.

Check the Gear Housing oil level every four hours

of operation by removing the Oil Level Plug, (1 in Figure 11). If oil runs out, the oil level is all right, if not, oil must be added.

To add oil, remove the Oil Filler Plug, (2 in Figure 11), and pour through the Oil Filter Hole until oil begins to run out the Oil Level Hole. Replace both Plugs before operating.

### ATTACHING:

The 30" Rotary Mower is attached to the Tractor using two Nuts and two Bolts.

### SAFETY PRECAUTIONS

1. Do not let anyone operate the machine until he has had proper instructions.
2. Be sure the work area is clear of objects which might be picked up and thrown.

3. Do not direct the discharge of material toward bystanders.
4. Keep all shields in place.
5. Disengage power to attachment and stop motor before making adjustments.
6. Do not wear loose fitting clothing that might get caught in moving parts and keep your hands and feet away from moving parts.
7. Never operate the Mower unless the Front Fender or optional Chain Guard is on the front of the Mower, and the Rear Fender is on the rear.
8. When using the 30-inch Rotary Mower, never shift the Inside Operating Lever directly from high to low. Always pause momentarily in neutral, giving the Blade a chance to slow down naturally, thus avoiding the severe braking action from a sudden shift into low gear.

#### ADJUSTMENTS:

##### Swivel Action Adjustment

Swivel action of the Drive Assembly is regulated by the Swivel Adjustment Bolt and Nut, (3 in Figure 11). Loosening the Adjustment Nut increases swivel action; tightening it decreases swivel action.

##### Cutting Height Adjustment

Cutting height is adjusted by the Collars on the Rotor Shaft. The closer the Blade is to the Gear Housing, the higher the cut, and vice versa. Vary the combination of Collars as you desire, always making sure the counter-bored sides of the Collars face the Blades.

##### Blade Sharpening

Use a file or grindstone to sharpen the Blade. Try to follow the same bevel as the originally-sharpened cutting edge, although the precise degree of bevel is not critical.

##### Fender Adjustment

When mowing short weeds and lawns, the Front Fender (the smaller Fender) should be on the front of the Mower Hood, and the Rear Fender (the larger Fender) on the rear.

However, when mowing high, heavy brush, or thick, tough grass of considerable height, better mowing results will be obtained by removing the Front Fender, and replacing it with the optional Chain Guard.

### 30" ROTARY MOWER ATTACHMENTS

#### CHAIN GUARD (Figure 12)

When the Front Fender is removed, it must always be replaced with the optional Chain Guard. It is attached to the Mower by Bolts in place of the Front

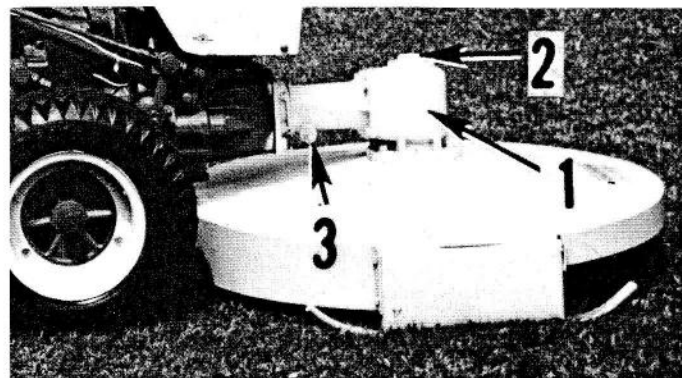


Figure 11

Fender. The Chains reduce the velocity of materials that may be thrown out. It is available from your Gravely dealer.

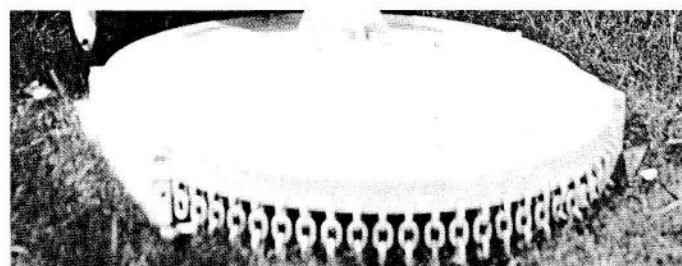


Figure 12

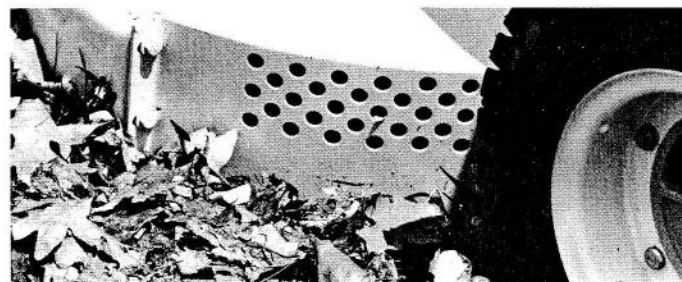


Figure 13

#### LEAF MULCHER

Attach the Leaf Mulcher to the 30-inch Rotary Mower as follows:

1. Remove both the Front and Rear Fenders. Bolt the Rear Fender to the front of the Mower Hood.
2. Attach the Leaf Mulcher to the rear of the Mower Hood, in the position normally occupied by the Rear Fender.

To operate the Leaf Mulcher, proceed the same as you would in mowing. Normal walking speed is usually adequate to do a good job, although when leaves are wet or packed down, you may have to go over the area twice.

#### LEAF-AWAY

Instructions for assembling and attaching are packed with the Leaf-Away.

## EMPTYING POUCH

To empty the Pouch, simply unsnap the Pouch from the Chute, unhook it from the Pouch Support, and unzip. Contents are easily shaken out.

## OPERATING HINTS

Operate the Leaf-Away with the Tractor in high gear at all times. Stoppage caused by leaves and debris blocking the Chute is detected by collapse of the Pouch. To correct, keep the Blowers operating at high speed and work the Chute Cleaner Poker with a vertical motion into the Chute.

Although the Leaf-Away will function effectively in most cases with only one Mower Blade Blower, we recommend use of the two blades packed with the Leaf-Away, especially where leaves and debris have a high moisture content. Also, we recommend you clean your lawn often enough to prevent leaves from becoming packed down by heavy rain or snow, as leaves in this condition increase the chance of Chute clogging.

## CIRCULAR SAW AND GUARD KIT

Attach the 18-inch Circular Saw to the Drive Assembly as follows:

1. Remove the Collars and Nut from the Rotor Shaft.
2. Place all collars but two onto the Shaft with the counter-bored sides facing the end of the Shaft. Put the Circular Saw on the Shaft, and then the

remaining collars with the counter-bored side facing the Saw. Tighten the Nut securely. Note: Cutting edges of the Saw teeth must face in the direction of Shaft rotation.

## OPERATING HINTS

Feed the Circular Saw by exerting slight pressure on the Tractor Handles. Do not force the Saw.

. . . The Circular Saw is most effective for clearing land of saplings, sprouts, and other small growth. We do not recommend the Circular Saw for felling large trees.

. . . Be careful not to run the Saw into the ground or against rocks.

## SAW GUARD

The Circular Saw Guard is attached to the Gear Housing by a Split Ring. We strongly urge the use of this Guard for safety's sake.

## SHARPENING THE SAW

We do not recommend field sharpening. Have this done by someone specializing in circular saw sharpening, or by your Gravely dealer.

## STORAGE

When the Circular Saw is to be stored for several days or longer, we recommend you coat it heavily with general purpose grease.

## SICKLE MOWER

The Sickle Mower is a rugged, dependable Mower that makes the toughest weed and brush cutting easy. Swivel action allows the Blade to follow the ground contour to insure a clean cut.

## LUBRICATION

Check the Drive Assembly oil level every four hours of operation by removing the Oil Level Plug, (8 in Figure 14). If oil runs out, the oil level is all right; if not, oil must be added.

To add oil, remove the Oil Filler Plug, (2 in Figure 14), and pour through the Oil Filter Hole until oil begins to run out the Oil Level Hole. Replace both Plugs before mowing.

Use SAE 140 in the Drive Assembly.

To lubricate the Universal Joint, remove the Grease Plug, (3 in Figure 14), and fill about half-full with general purpose grease.

Because the Universal Joint needs lubrication only occasionally, you may prefer this method: with the Mower detached from the Tractor, remove the Safety Clutch and four Bolts, (4 in Figure 14), which hold the lower column to the Universal Housing and slip

the Housing partly off. Then apply general purpose grease generously to the Universal Joint (coat it all over with one to 1-1/2 inches of general purpose grease).

Reassemble all parts, making sure you tighten firmly the large Nut which holds the Safety Clutch.

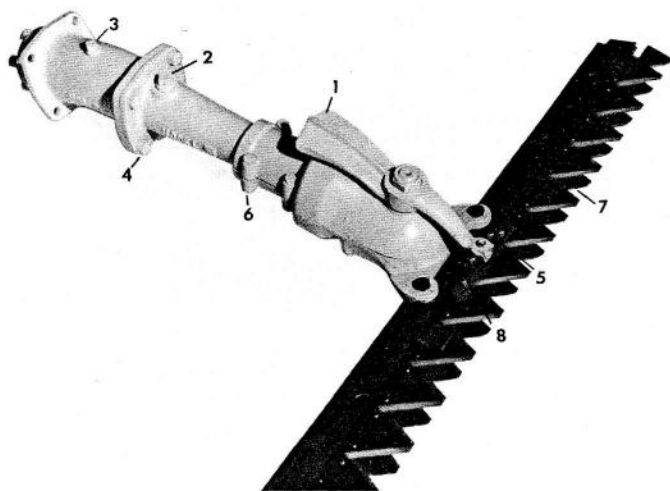


Figure 14

## **ATTACHING:**

The Sickle Mower attaches to the Tractor using 2 Nuts and 2 Bolts.

## **SAFETY PRECAUTIONS**

Never attempt to clear the Mower, or make any adjustment whatsoever, unless the attachment is out of gear and stopped, and the Tractor Engine is stopped.

Never handle the attachment by any cutting surface. Keep hands away from Knife Sections. Grasp the Mower by its Drive Column and other non-cutting surfaces to carry it.

Try to keep clear of rocks and debris, as these will damage the cutting surfaces.

## **ADJUSTMENTS**

To insure satisfactory performance, perform the following adjustments as required:

### **Bolts**

Although the Sickle Mower is built and balanced carefully, it is still subject to vibration. Periodically tighten all Nuts and Bolts, doing this at more frequent intervals when doing heavy cutting. Note: The Gravely Triple-Purpose Wrench, available from your Gravely dealer, is required for the Actuating Lever Nut.

### **Clips**

The Clips which hold the Knife to the Guide Bar should be adjusted frequently to prevent cut matter from "bunching" and causing improper feed-off. When in proper adjustment, the Clips should allow the Knife to slide back and forth easily (with the pressure of a finger and thumb). The Clips should hold the Knife in firm contact with the Shear Plates, but should not cause binding. To adjust, knock the Clips down gradually with gentle taps from a light hammer.

### **Swivel Action**

To increase swivel action (allowing the Mower to follow the contour of the ground), loosen the Bolts, (6 in Figure 14).

When these Bolts are tightened firmly, the Mower is held in a rigid position. The Bolts should be tight enough so the Guide Bar will hold its position until lowered, but loose enough for the Guide Bar to follow the contour of the ground.

### **Guards**

Always keep the Guards, (7 in Figure 14), in alignment. Tap with a light hammer until the Knife Sections lie flat on the Shear Plates of the Guards. Keep the Guard Bolts tightened securely.

## **CARE OF THE KNIFE**

For best performance, keep the Knife Sections sharp. To remove the Knife for sharpening, remove the Knife Brackets Screws, (5 in Figure 14), and slip the Knife out either side. Grind the Knife Sections along the same bevel as ground originally. When replacing the Knife, make sure the Knife Bracket Screws are tightened firmly.

Note: It is good practice always to have an extra Knife, already sharpened, which you can put on the Mower when needed. This way you can always have a sharpened Knife in reserve.

No lubrication is required for the Knife while in operation, as juices from weeds and grass will furnish sufficient lubrication. However, to prevent rust, oil the Knife and Guide Bar with a thin coat of light oil after operating. Use a paint brush or similar type of applicator. When the Mower is to be stored for any period of time, clean it thoroughly and apply general purpose grease to all unpainted parts.

## **OPERATING HINTS**

Always mow at a normal walking speed with the Tractor in *low gear*. Excessive speed will exaggerate the Mower vibration, causing Nuts and Bolts to become loose.

If excessive vibration is encountered, check to see if the Wearing Tip (on the end of the Actuating Lever) is worn or missing, or if the Bracket is worn badly; if so, your Gravely dealer can replace these parts for you.

If cut grass or weeds begin collecting on the Mower instead of feeding-off properly, check the alignment of the Guards and Knife Sections, as well as sharpness of the Knife Sections.

If this does not correct the improper feed-off, make sure one end of the Mower is not dragging up already cut material. This is the result of taking too small a "bite." Another cause of improper feed-off is a rusty or gummy Mower. Always keep it clean.

Finally, the improper feed-off may be caused by improper adjustment of the Safety Clutch. If this is the case, tighten Slip Clutch Bolts to proper tightness.

## **SKIDS**

Skids which fit under the Guard Bar are available from your Gravely dealer. For most mowing, these Skids are not necessary; however, you may want these for certain jobs, such as mowing pastures in which you wish the grass to grow and only the tall weeds to be cut.

Your Gravely dealer will provide you with instructions for installing the Skids on your Sickle Mower.



# LAWN CARE

Lawn Roller (Figure 17)

Roll out lawn problems with Gravely's Lawn Roller attachment.

Water-filled Lawn Roller follows ground contour to level your lawn, take out unsightly humps.

Compacting the soil gives you a more closeknit, firmly rooted lawn, more resistant to weeds, disease, and drought.

Particularly useful for rolling down frost and freeze damage.

Cart (Figure 15)

All-Steel Cart has about a 1/2 ton capacity. Sturdy, reinforced, with a latch-release.

Seeder-Spreader (Figure 16)

Ride in comfort as you seed or fertilize your lawn. Easy controls for even, accurate coverage of seed, lime or fertilizer . . . spreader is five feet wide for fast coverage. Hopper has 300 lb. capacity.

## LUBRICATION

**Steel Cart and Seeder Spreader**—use General Purpose Grease occasionally in the grease fitting on each wheel.

**LAWN ROLLER**—An occasional greasing of the Axles with General Purpose Grease is the only lubrication required. To lubricate, remove the Cotter Pin and slip off the large Washer and pack grease around bearings. Make sure both are replaced.



Figure 16

## SAFETY PRECAUTIONS

1. Do not let anyone operate this machine without proper instructions.
2. Do not drive too close to a creek or ditch.
3. Watch out for traffic when near roadway.
4. Stay alert for holes and other hidden hazards.
5. Watch where you are driving. Pay attention.



Figure 15



Figure 17

6. Beware of steep slopes.
7. Reduce speed on all side slopes and sharp turns to prevent tipping or losing control.
8. Do not attempt to operate the machine when not in the operator's position.
9. Don't carry passengers.

#### OPERATING HINTS

Filling the Roller: move the Roller until the Filler Plug (a large plug on the right side of the Roller) is at its highest point. Simply remove the Plug to fill the Roller; be sure it is replaced after filling. Water generally is used.

Dumping Cart. The Cart is dumped by releasing the Lever which holds the Frame to the Cart and tilting the Cart to the rear.

#### Seeder-Spreader

Distribution Controls: to determine the proper distribution of seed or fertilizer, refer to the self-explanatory plate attached to the Hopper. Simply set the Port Lever to the indicated opening to distribute seed or fertilizer properly.

Care of Hopper Assembly: Many materials used in the Seeder-Spreader, especially certain fertilizers, are corrosive. Abrasives also are present. This means the protective paint soon will wear off the Port Assembly and Agitator. To protect these surfaces, wash the Seeder-Spreader thoroughly with water after using and let it dry, preferably in the sun. If you do not intend to use it again within a few days, pour a small quantity of oil along the Port Openings and work the Port Lever back and forth to distribute the oil.

## TWIN-TOOL GARDENING ROTARY PLOW AND ROTARY CULTIVATOR

#### Twin Tool Gardening

Only Gravely offers you unique twin-tool power-gardening . . . the Rotary Plow that prepares a seed-bed ready for immediate planting, and the Rotary Cultivator that keeps your garden weed-free and thoroughly aerated all season long.

#### Rotary Cultivator — Tiller for a Productive Garden

Gravely's Rotary Cultivator takes the drudgery out of garden care . . . gives you a productive garden

that's free of weeds and properly aerated all season long.

Durable, high-carbon steel tines cut to recommended 3" depth, stirring and aerating the soil completely. The Cultivator tills 26" wide.

Detachable sides permit the Cultivator to be used for every type of garden crop. When used with bushy row crops, the sides are left on to protect the plants.

With the sides removed, the Cultivator moves a



Figure 18

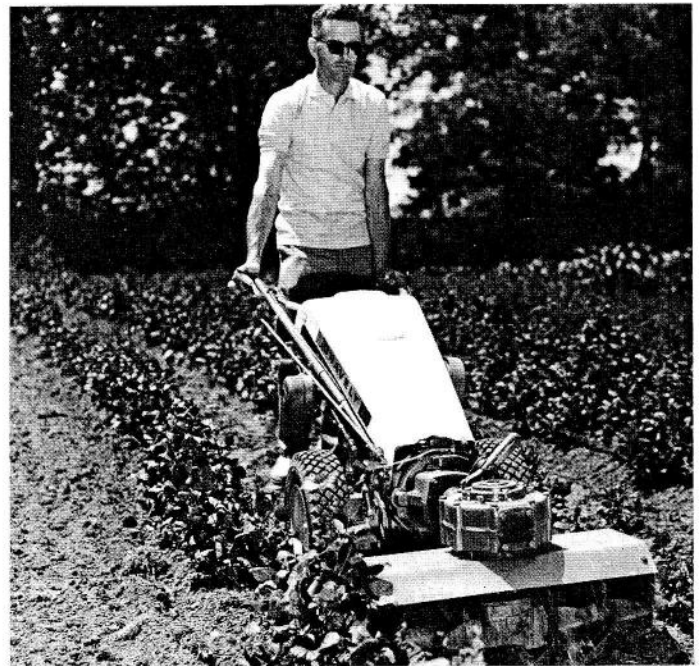


Figure 19

ridge of soil into the plant row — the same effect, but without the drudgery, that you would get from tedious hard-hoeing.

### Rotary Plow — Perfect Seedbed — one easy operation

Gravely's exclusive Rotary Plow prepares a seedbed that's ready for planting when you finish plowing. Just one easy operation does it . . . without raking, discing, or other preparation.

The Rotary Plow employs a totally different — and unique — principle to give you a deep, mellow, even seedbed. The plow's four high-carbon steel blades cut into the sides and bottom of the furrow 800 times a minute at normal working speed . . . actually turns the soil as it plows, with one of the four blades biting into the soil every half-inch.

The Rotary Plow is attached to the Tractor by two Nuts and two Bolts. One Bolt and one Nut must be used to attach the Angle Adjusting Bracket, upper left in Figure 20.

## ROTARY PLOW

### LUBRICATION

Check the Gear Housing oil level every eight hours of operation. Gear Housing oil capacity is 1-1/2 pints. Use SAE 140.

Add oil by removing the Oil Filler Plug, (1 in Figure 20).

Use an occasional shot of General Purpose Grease in the swivel casting grease fitting, (2 in Figure 20).

### SAFETY PRECAUTIONS:

1. Do not let anyone operate the unit without proper instructions.
2. Keep all shields and safety devices in place.

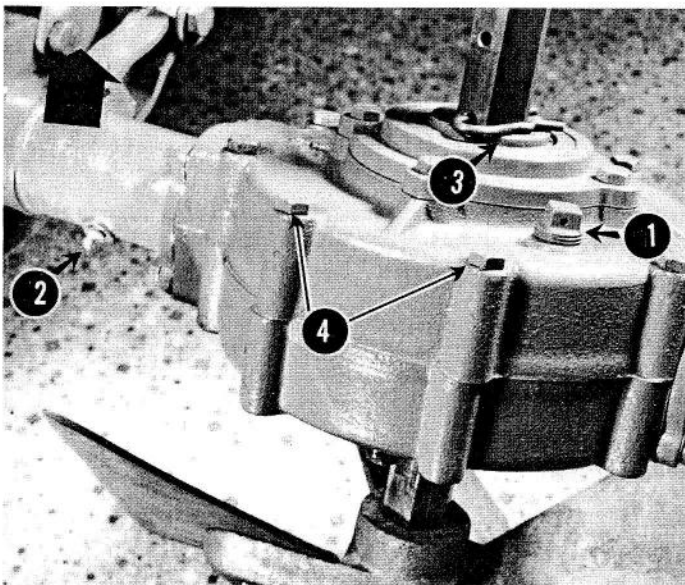


Figure 20

3. Disengage power to any attachment and stop engine prior to making adjustments.
4. Pay attention to what you are doing.
5. Don't wear loose fitting clothing that might get caught in moving parts. Keep hands and feet away from moving parts.

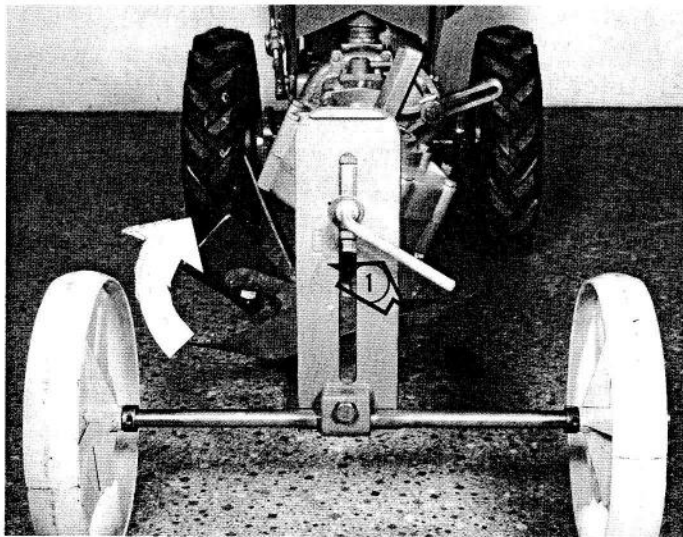


Figure 21

### ADJUSTMENTS

#### Depth of Cut Adjustment

Use the pin or clip, (3 in Figure 20), in the Hex Shaft for initial Cutting depth adjustment. The higher on the Shaft the Pin is inserted, the lower the depth of cut and vice versa. Ordinarily, the Pin is inserted in one of the top holes for plowing and in the bottom hole for transporting.

A final cutting depth adjustment, if required, is made by sliding the Wheel Bracket Clamp, (1 in Figure 22), up or down in the slotted Wheel Bracket. The lower the Clamp is set, the lower depth of cut.

#### Plowing Angle Adjustment

When plowing for the first time, set the Plow at the approximate angle to the ground as shown in Figure 23. The Nut which secures the Angle Adjustment Lever must be loosened to do this; be sure it is tightened firmly after the proper angle is set.

If there is excessive drag to the left (left, as you stand at the Handles) move the Plow in the direction of the arrow in Figure 21. If there is excessive drag to the right, move the Plow opposite the direction of the arrow.

A few trials may be required before the Plow is adjusted properly to soil conditions.

#### Width of Cut Adjustment

The width of cut is governed by the position of the Wheel Bracket in relation to the Depth Wheel in the

furrow. The closer the Wheel Bracket is to the Depth Wheel in the furrow, the narrower the cut, and vice versa.

### DIRT SHIELD

The Dirt Shield is attached to the top of the Gear Housing by removing the bolts, (4 in Figure 20), inserting them through the Shield, and replacing in the Gear Housing. You can use the Dirt Shield to direct the throw of the dirt, by bending it up or down.

### OPERATING INSTRUCTIONS

To plow your land, first run a furrow down the center of the land to be plowed. Then pivot the Tractor at the end of the furrow so the Right Depth Wheel is in the furrow just made. Continue this way so the dirt is always thrown toward the center (see Figure 22).

If you are plowing a large area, you will be able to "pull" the Tractor around corners without pivoting. However, in small areas it is necessary to pivot the Tractor each time.

When you are ready to pivot, bear down on the Handles until the Tractor is balanced. "Slip" the Clutch gently, holding back on the Right Handle, allowing the Engine to pivot the Tractor with little effort on your part.

Plowing is much easier if the Gear Housing is kept level with the ground when the Plow is in the furrow and plowing. To do this, try to obtain all depth adjustment by the holes in the Hex Shaft, and the horizontal adjustment by moving the Wheel Bracket laterally.

If you have the eight-speed Transmission, we recommend plowing with the Tractor in low range, which slows ground speed to a virtual crawl without affecting attachment RPM. In effect, this lets the

Rotary Plow strike the soil twice as often per foot traveled by the Tractor.

### OTHER ROTARY PLOW USES

In addition to routine plowing, the Rotary Plow can be used for:

#### DITCHING

Best results are obtained by using a special long Hex Shaft, which is available from your Gravely dealer. Use the Adjusting Handle to turn the Plow at a fairly large angle from the vertical, so the dirt will be thrown from the ditch. Straddle the cut you are making with the Wheels. Make the first pass fairly shallow; on succeeding passes, drop the depth of cut lower each time, until the desired depth is reached.

#### PLANTING TREES AND SHRUBS

Remove the Depth Wheels and Wheel Bracket from the front of the Rotary Plow. Take the Adjusting Handle loose from the Angle Adjustment Bracket until Hex Shaft is vertical. Spot the Plow where you want the hole, engage the Plow, and let it eat its way down. It prepares a hole suitable for evergreens and other small trees and shrubs.

#### MAKING HILLS

Use the Rotary Plow as follows to make hills for sweet potatoes and other crops: With the Dirt Shield bent downward so the dirt cannot be thrown farther than a foot, make a furrow at the exact location where you want the center of the hill. At the end of this furrow, pivot the Tractor and make a second furrow (the Plow will throw the dirt to the right, forming one side of the hill). At the end of the second furrow, again pivot the Tractor and make an-

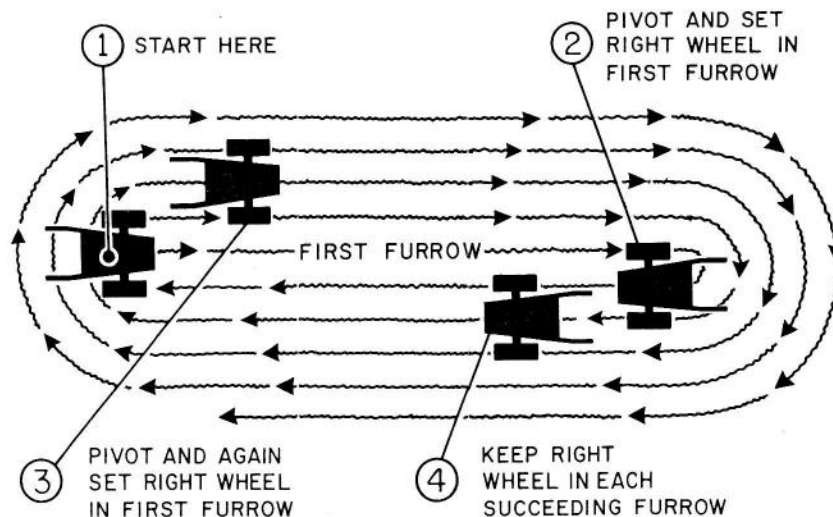


Figure 22

other furrow to the right of the first furrow (the Plow will throw the dirt to the right, forming the other side of the hill).

## ROTARY CULTIVATOR

The Rotary Cultivator is attached to the Rotary Plow Drive Assembly as follows:

1. Leave the Plow Angle Adjusting Assembly (upper left in Figure 20) attached.
2. Remove the Hex Shaft (and Plow Blades) from the Gear Housing.

The Depth Wheels, Wheel Bracket, and Column Assembly (which connects the Wheel Bracket to the Gear Housing) may be removed, as these serve no useful purpose unless you wish to operate the Cultivator with the Tines cutting against the motion of the Tractor (see "Operating Hints").

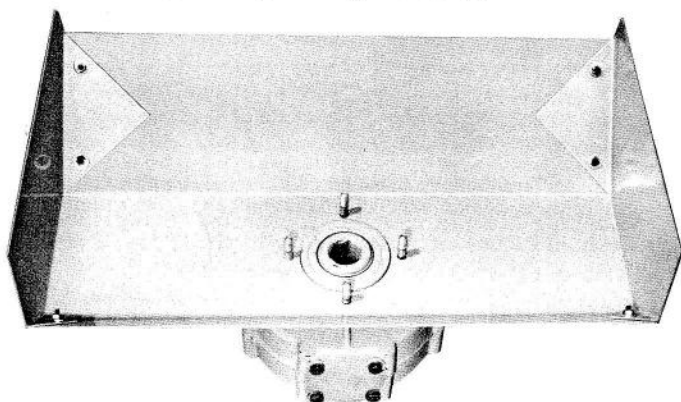


Figure 23

Note: After the Column Assembly has been removed, Bolts must be inserted into the Gear Housing to prevent oil leakage. We recommend short Bolts for this purpose; if the original Bolts are tightened, the Gears inside the Gear Housing will be fouled. If, however, you use the original Bolts, place sufficient Washers on them to prevent Gear fouling.

3. Rotate the Gear Housing 180° so the Oil Filler Plug is on the bottom. Remove the four Bolts from the bottom of the Gear Housing and insert the Studs furnished (If you do not have a Stud Driver, two Nuts may be locked together on the threads and used to seat the Studs; remove the Nuts after seating the Studs).

4. Fit the Hood as shown in Figure 23. Insert the Cultivator Drive Shaft into the Gear Housing.

5. Use the Elastic Stop Nuts to fasten the Cultivator Drive securely to the Gear Housing.

6. Rotate the Cultivator to the position shown in Figure 26. In this position the Tines will cut in the same direction (clockwise) as the forward movement of the Tractor.

7. Install the Dust Shield and Fastener on the top of the Hex Shaft.

8. Use the Adjusting Bracket to lock the Cultivator in place with the long axis of the Cultivator parallel to the Tractor Axles.

Note: The Gravely Triple-Purpose Wrench, available from your Gravely dealer, is required for the Cultivator Tine Shaft Nut.

## LUBRICATION

Check the Cultivator Drive Assembly oil level every eight hours of operation by removing the Oil Level Plug, (1 in Figure 26). If oil runs out of the Oil Level Hole, the oil level is all right; if not, oil must be added.

To add oil, remove the Oil Filler Plug, (2 in Figure 26), and pour through the Oil Filler Hole until oil be-

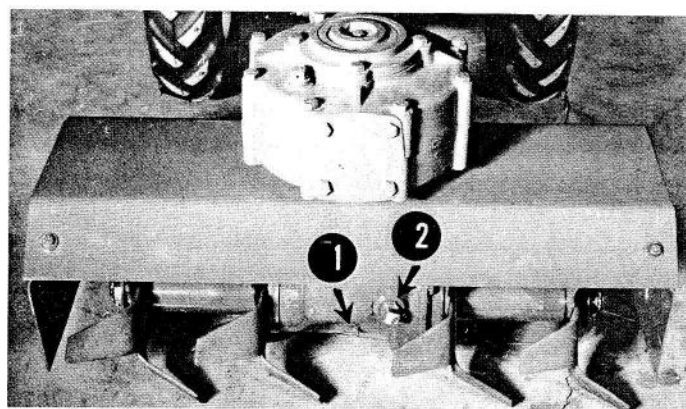


Figure 24

gins to run out of the Oil Level Hole. Replace both Plugs when proper oil level is reached.

Use SAE 140. Be sure the Cultivator is level when checking or adding oil.

## STORAGE

When the Cultivator is detached from the Drive Assembly, place the small Spacers (cylinders) over the Studs and secure in place with the Stud Nuts.

## OPERATING HINTS

The Rotary Cultivator is designed for cultivating soil which has been broken previously. It is not recommended for use as a Plow. Use the Gravely Rotary Plow to prepare a perfect seedbed in one operation and the Rotary Cultivator for perfect cultivation throughout the season.

... Cultivating depth is controlled by light pressure on the Handles. When the Tines are set to move clockwise — as they usually are — depth is controlled generally by the design of the Cultivator itself, about three inches.

. . . To cultivate slightly deeper than this, raise the Handles; conversely, to cultivate shallower than three inches, place slight pressure on the Handles.  
. . . When cultivating crops such as corn, which

usually require some dirt thrown around the plants remove the End Plates. In other instances, such as cultivation of bushy crops, keep the End Plates attached to the Hood.

## CULTIVATOR TOOLHOLDER

### CULTIVATOR TOOLHOLDER

The Cultivator Toolholder, shown in Figure 25, can be used to hold a variety of cultivating tools. The most common set-up of cultivating tools in the Toolholder is shown.

In addition, the Cultivator Toolholder is used to hold the 36-inch Scraper Blade.

### LUBRICATION

No lubrication is required.

### ATTACHING:

**Attaching to Tractor:** the Toolholder is attached to the front of the Tractor the same as power attachments. The Attachment Clutch Lever (or Attachment Clutch Control) should be at the OUT position.

**Attaching Tools to Toolholder:** the individual cultivating tool (1 in Figure 25), is attached to a Shank, (2 in Figure 25), which in turn is attached to the Toolholder by a Shank Holder (3 in Figure 25).

The Toolholder is equipped with five Shank Holders. These may be moved to different positions on the Toolholder, if desired, although this is seldom necessary. Additional Shank Holders may be purchased from your Gravely dealer.

Cultivating tools are divided into two classes — those requiring the one-hole Shank and those requiring the two-hole Shank. With the exception of the Furrowers, Hillers, Shovel Steel, and Turning Shovel, cultivating tools require the one-hole Shank.

To attach a tool to its Shank, simply bolt it in place with the Nuts and Bolts provided.

To attach the Shank to the Shank Holder, loosen the Hexagon-Head Cap Screw in the side of the Shank Holder, slip the Shank into the Shank Holder from the bottom, and lock the Shank in place at the desired position by tightening the Cap Screw.

**Changing Tools:** after the Shanks have been attached to the Toolholder, changing cultivating tools requires only the unbolting of the old tool from its Shank and bolting the new tool on. However, if the new tool requires a two-hole Shank in place of a one-hole Shank, the Shank also must be changed.

**Parallel Bars:** the Parallel Bars, (4 in Figure 25), can be adjusted in several ways, depending on the task. Usually it is necessary to detach the Bars from the Depth Wheels to make these different set-ups.

Usually the Depth Wheels provide all the adjust-

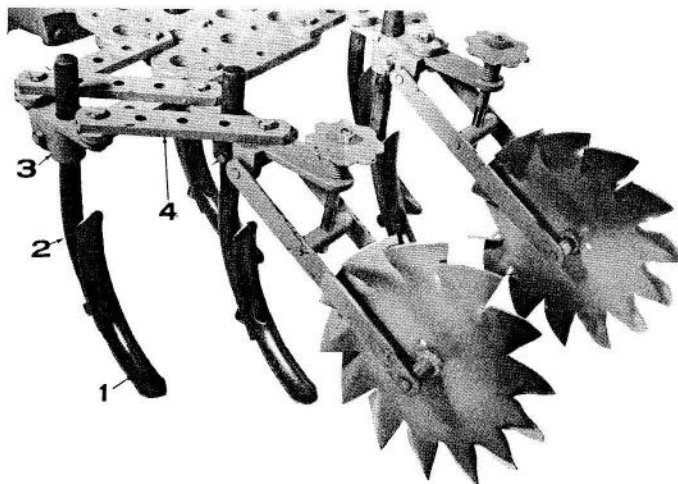


Figure 25

ments required. However, if required, the Shanks can be moved up or down in the Shank Holders for additional adjustment.

Five-Steel Set-Up is the standard arrangement; 1-1/4-inch wide Steels are used. (Figure 25).

Steels are available in 1-1/4, 1-3/4, and 2-1/4 inch widths; standard length of the Steels is eight inches.

Six-inch Hiller Set-Up uses right and left Hillers; these can be used for closing rows as well as for the hilling. Hillers can be used to throw dirt away from or around the plants as desired. A furrower, available in 10 or 12-inch depths, can be used with the Hillers to bring dirt from the center of the row to the Hillers, which in turn throw dirt around the plants. (Figure 26).

Sweep and Hoe Set-Up uses an improved Sweep in the center and a right and left Hoe on the sides. The Sweep comes in 8, 10, 12, and 18-inch sizes. The Sweep clears the center of weeds and trash, while the Hoes eliminate the majority of hand work close to the plants. (Figure 28).

Furrowers can be used to lay off rows for planting. Also, many users find the Furrowers good tools for digging potatoes. For smaller furrows, seven-inch Shovel Steels are available; these can be used to lay off small seed crops and for center row cultivation. (Figure 27).

**Adjustments:** the Depth Wheels are used to set the depth the cultivating tools penetrate the ground. Facing the Depth Wheels, turn the Handwheels clockwise

for deeper cultivation and counterclockwise for shallower cultivation.

#### OPERATING HINT

. . . Rows should be planted enough apart to accom-

modate the Tractor and Tool Holder. Normal distance between rows is 32 to 36 inches. Rows should be planted farther apart for plants which spread widely, unless you intend to shield the Tool Holder so plants will not be damaged.

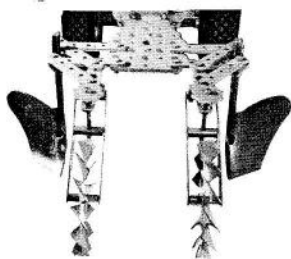


Figure 26

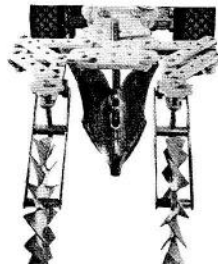


Figure 27

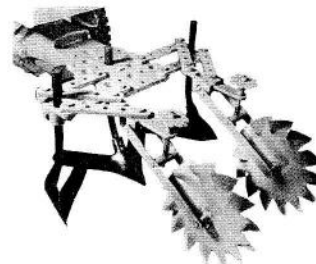


Figure 28

## SNOW BLOWER



Figure 29

The Gravely Snowblower will have you out and gone while your neighbor is still snowbound!

**BLOWS** the snow clear away. Most snow-throwers are simply mechanical shovels. But the Gravely Snowblower literally uses safety-controlled hurricane-force winds to blow the snow clear away.

**PERFECT CONTROL** . . . with its convenient Directional control and Deflection Hood, you put the snow exactly where you want it—from one foot away to 50 feet away! Controlled from operator's position.

**MOST EFFICIENT** because it is a two-stage Snowblower. Heavy-duty, Safety Clutch-protected Reels bring the snow into the Hurricane-blower fan.

**NO CLOG** open throat design, plus special, time-tested reel-to-fan speed ratio moves deep or successive snows fast!

**RUGGED — ALMOST INDESTRUCTIBLE** . . . the heavy-duty all-welded steel construction, plus the All-Gear-and-Steel-Shaft Drive means year after year of dependable service. Protected by double-Safety Clutches . . . one at the Reels, one at the Attachment Power Control.

**SAFETY** — Designed in, both for the unit and the operator. Protective Rod in front of Reel, Deflector Safety Shield, ends and top fully enclosed . . . operator is a tractor length away!

#### LUBRICATION

All major Bearings of the 15582E1 Snowblower that require lubricant are permanently lubricated, or are lubricated from the Tractor Transmission. However, the operator should check the oil level in the Gear Box by removing the upper Plug. Oil should come up to the bottom of this hole. If the oil level should ever be low, add worm type lubricant as recommended for truck Worm-Gear Axles in your area.

#### ATTACHING:

The Snowblower Drive Housing mounts to the front of the Tractor, the same as other Gravely power Attachments. When attaching to the Tractor, the Chute Control Crank should be attached to the top Sprocket Housing Shaft of the Snowblower with the Rubber Connector and two (2) Clamps which are provided. See Figure 31.

The Crank should then be mounted to the Tractor

left Driving Handle with the Crank Support and Crank Support Clamp.

Note: If the Snowblower is uneven with the ground after mounting on the Tractor, adjust the air pressure in the Tractor Tires.

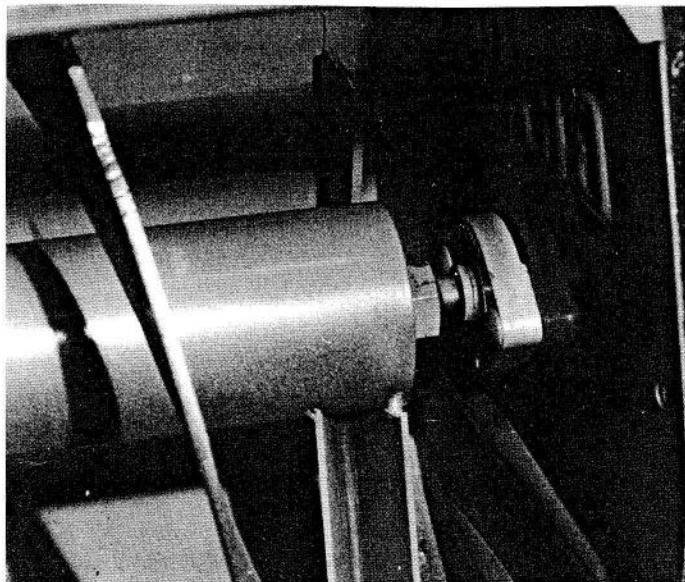


Figure 30

#### Safe Snow Removal Is No Accident

Improper use of snow removal equipment on the part of the operator can result in injury. To reduce this possibility, give complete and undivided attention to the job at hand.

Protect yourself and others by following these safety tips:

1. Stop Engine before removing obstacles, making adjustments (except with the Control Crank), or when leaving the operating position.
2. Disengage the Power Take-Off and wait until the Fan stops before adjusting the Deflector. Never direct discharge at bystanders, or allow anyone in front of machine — debris may be hidden in the snow.
3. Keep children and pets a safe distance away.
4. Do not allow children to operate machine, nor allow adults to operate it without proper instruction.
5. Adjust height to clear gravel or crushed rock surface.
6. Exercise caution to avoid slipping or falling, especially when operating in reverse.
7. Know the controls and how to stop quickly.

#### ADJUSTMENTS

Discharge Chute: to position the Discharge Chute, turn the Control Crank. The Discharge Chute will rotate approximately 165 degrees from extreme left,

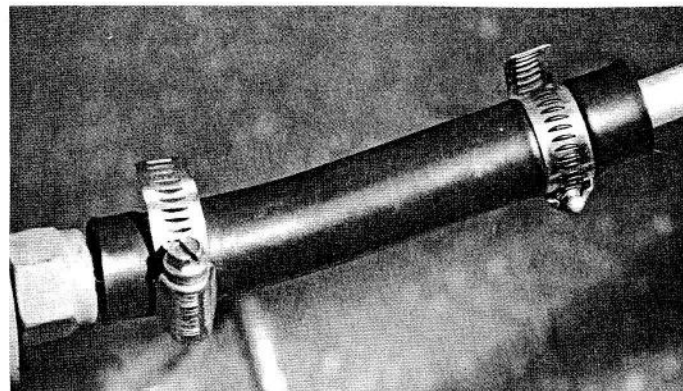


Figure 31

through the vertical position, to the extreme right. As the Crank is turned, the Deflector opening is also rotated from the extreme left position through a forward position approximately 180 degrees to the extreme right position.

Deflector: to provide accurate placement of the blown snow near the Blower on either side or forward throw, loosen the large Wing Nut on the Deflector and adjust the Deflector position.

**CAUTION:** be sure Engine is stopped and Attachment out of gear and stopped.

Skids. To raise or lower the Snowblower cutting edge, first disengage the Power Take-Off and stop the Tractor Engine. Then loosen the Skid Mounting Bolts and slide the Skids up or down as desired, and retighten the Skid Mounting Bolts securely. This adjustment can be made more accurately if the cutting edge is placed on blocks while the adjustment is made.

Reel Clutch: the Reel Clutch is properly adjusted at the factory. If it should become necessary to tighten the protective Friction Clutch in the Reels, turn off the Tractor Engine, disengage the Power Take-Off, and after all movement has stopped, block

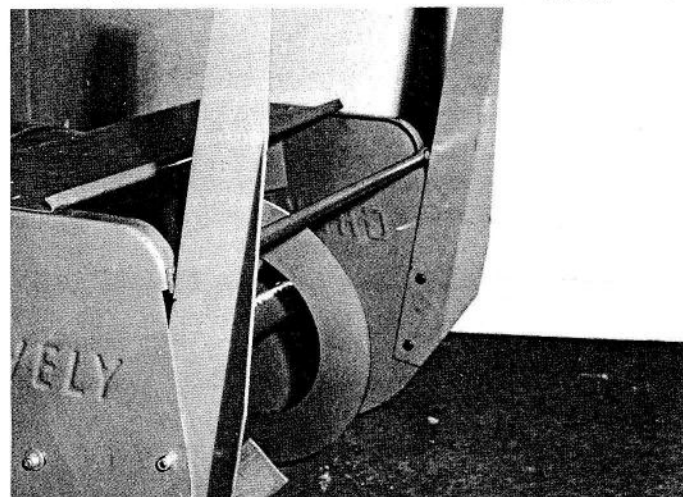


Figure 32



the rotation of the Fan. Now tighten the large Nut on the left end of the Reel Shaft (as viewed from the rear of the Snowblower). (See Figure 30).

The Nut should be tightened to 85 to 95 lb. feet of torque. Over-tightening can cause damage to the Snowblower.

**Control Shaft Clutch.** The Fan Housing is prevented from rotating by a small Friction Clutch on the Top Sprocket Housing Shaft, except when the Control Crank is turned by the operator. The resistance of the Clutch may be varied by adjusting the Nut on the top Sprocket Housing Shaft. Adjust the Nut so that it is just tight enough to prevent the Fan Housing from rotating during operation of the Snowblower except when the Fan Housing is rotated by the Control Crank.

#### ACCESSORIES

A special Accessory Kit is available which includes:

Drift Cutters. Two Drift Cutters are provided.

These mount inside the Reel Housing ends and extend upward to slice through snow up to 30-inches deep. The Drift Cutters are flared to assist turning in deep snows. No adjustment is necessary.

**Casters.** Two Caster Weldments and Mounting Brackets are included. These bolt to the inner sides of the Frame and may be used in place of the Skids.

The Caster Bracket Holes are slotted, and three (3) pairs of holes are provided in the Frame for height adjustment.

#### OPERATING HINTS

Keep the Engine at full throttle when using the Snowblower. With the Swiftmatic Transmission, use low axle range.

If you have Standard Transmission, shift between high and low in keeping with snow depth and density.

If the Tractor stops suddenly while operating the Snowblower, check the vent in the Fuel Tank Cap for clogging. We recommend use of anti-ice fuel additives, and keeping the Fuel Tank as full as possible.

## POWER BRUSH

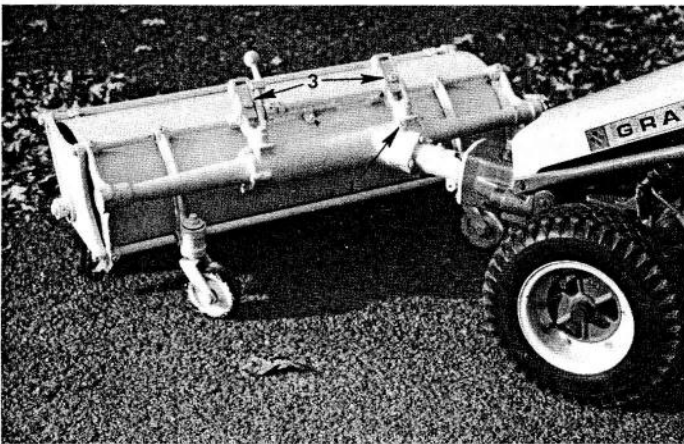


Figure 33

The Power Brush is a useful tool for cleaning parking lots, drives, sidewalks, and other areas where power sweeping is necessary. The Brush can be used for sweeping light snows — up to six inches in depth — clean to the pavement unless there is an ice skim under the snow.

#### LUBRICATION

Check the Drive Assembly oil level every eight hours of operation by removing the Oil Filler Plug, (1 in Figure 33), and observing whether the Gears dip halfway in the oil.

Add oil, if necessary, through the Oil Filler Hole. Use SAE 140.

Be sure the Tractor and Brush are level when checking or adding oil.

Use General Purpose Grease in the grease fitting on the Drive Assembly.

#### ATTACHING:

The Power Brush is attached to the Tractor using 2 Bolts and 2 Nuts.

#### SAFETY PRECAUTIONS:

1. Do not let anyone operate the machine without proper instructions.
2. Watch where you are going.
3. Keep all shields in place.
4. Do not wear loose fitting clothing that might get caught in moving parts; keep hands and feet away.

#### ADJUSTMENTS

To adjust the Chain, simply remove a half link when the Chain has been driving long enough to "stretch." This usually occurs after several months of use.

To adjust Brush contact, put the Brush in contact with the ground by lifting up on the Brush Contact Lever, (2 in Figure 33). Then turn the Brush Tension Adjusting Bolts, (3 in Figure 33) until proper tension is reached.

Proper Brush tension must be learned by experience. The Brush, of course, must be placed under sufficient pressure to enable it to sweep clean. Always

adjust Brush tension downward until correct tension is obtained. Note: Too much pressure will cause the Brush Strips to wear out prematurely.

#### OPERATING HINTS

##### Reversing or Changing Brush Strips

When it appears the Brush Strips have worn more on one side than on the other, it is time to reverse the Strips in the Brush Spiders. To do this, loosen the bolts which hold the Strips in the Spiders and remove the Strips. Then reverse the Strips (or replace,

when necessary, with new Strips obtained from your Gravely dealer) and tighten the Bolts. Adjust the proper tension following procedures outlined above.

#### TRANSPORTING THE BRUSH

To save unnecessary wear on the Brush Strips when going to or from a job, push down on the Brush Contact Lever to raise the Brush off the ground.

Brush life will be increased greatly by wetting the Brush Strips before use, and keeping them wet during prolonged use.

## 48" SNOWDOZER

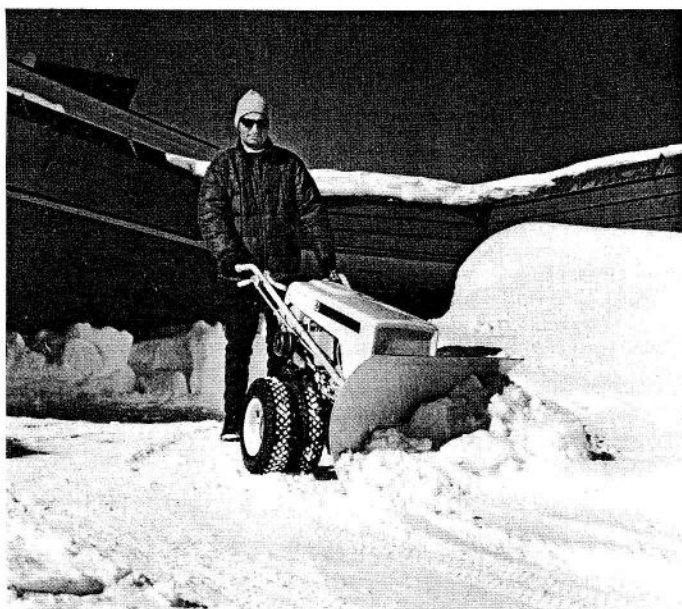


Figure 34

The 48-inch SnowDozer clears the average walk in one pass and the average driveway in two. It moves snow as deep as 18 inches. Key to its efficiency is its unique design—instead of pushing the snow, the SnowDozer rolls it out of the way. The SnowDozer has many uses in addition to removing snow.

#### ATTACHING:

The SnowDozer mounts to the Tractor using the two Bolts and two Nuts.

#### SAFETY PRECAUTIONS:

1. Do not let anyone who is not familiar with the unit operate it before receiving proper instructions.
2. Do not operate too close to ditch or creek.
3. Watch for traffic when near a roadway.

4. Stay alert for holes and other hidden hazards.
5. Watch where you are driving. Pay attention.

#### ADJUSTMENTS

The SnowDozer has a Casting (the Casting is the part which is attached to the front of the Tractor) which has three holes in it.

To set the SnowDozer to roll snow straight ahead, line up the center hole in the Bracket with the center hole in the Casting and insert the T-shaped Adjusting Pin.

To roll snow to the left, line up the right (right, as you stand at the Handles) hole in the Bracket with the center hole in the Casting and insert the Pin.

To roll snow to the right, line up the left (left, as you stand at the Handles) hole in the Bracket with the center hole in the Casting and insert the Pin.

Wearing Strip. The Wearing Strip on the bottom of the Blade eventually may have to be replaced. To replace, simply remove the Screws, take off the old Strip, put the new Strip on, and tighten the Screws firmly.

#### SKIDS

Skids, available from your Gravely dealer, are useful when working on concrete drives where one side is higher than the other (thus forming an edge which would catch the Blade) and on gravel drives to keep the Blade high enough to remove the snow without removing the gravel.

To attach the Skids, remove the End Screws from the Wearing Strip and insert the long Bolts provided with the Skids. Slip the Skids onto the Bolts from the rear of the Blade, with the long sides down and parallel to the ground. Fasten the Nuts securely on the Bolts.

# SAFETY PRECAUTIONS

## READ THE OWNER MANUAL

**IT IS TOO LATE TO REMEMBER WHAT SHOULD HAVE BEEN DONE AFTER THE ACCIDENT HAS HAPPENED.**

*Many hours of lost time and much suffering can be caused by the failure to practice simple safety rules.*

1. Do not allow children to operate machine or adults to operate it without proper instructions.
2. Clear work area of objects which might be picked up and thrown.
3. Know the controls and how to stop quickly — **READ THE OWNER'S MANUAL.**
4. Disengage all Clutches before starting the engine.
5. Don't direct the discharge of material toward bystanders.
6. Always stop the engine when you leave your machine.
7. Handle gasoline with care! It is highly inflammable! Use approved gasoline container.
8. Do not add fuel when the engine is running, while the engine is hot or while you're smoking.
9. Never run the engine in a closed garage or shed. Exhaust gases are dangerous.
10. Watch out for traffic when near roadways.
11. Stay alert for holes and other hidden hazards.
12. Keep all shields and safety devices in place, as instructed in Owner's Manual.
13. Watch where you're driving! Pay attention!
14. Disengage power to any attachment and stop engine before leaving operator's position or making repairs or adjustments.
15. Beware of steep slopes.
16. Reduce speed on all side slopes and sharp turns to prevent tipping or losing control.
17. Do not attempt to operate machine when not in normal operator's position.
18. Don't wear loose fitting clothing that might get caught in moving parts. Keep your hands and feet away from moving parts.
19. Do not carry passengers! Keep children and pets at a safe distance.
20. Disengage power to attachments when transporting or not in use.
21. Never shift the Swiftamatic Control while the tractor is moving. Always come to a complete stop prior to shifting.
22. Never shift the Swiftamatic Control while stopped on a hill. If you must shift on an incline, before shifting stop the tractor so it points across rather than up or down it.

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