

®

**GRAVELLY**

**424**

**430**

**432**

**450**

**OWNER'S  
MANUAL**

**GRAVELLY**

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**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 our four-color catalog or this manual 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 and attachments are warranted under terms shown herein. To qualify for this Warranty, you must register your equipment by completing the attached Registration Card and returning it. For your own protection, please do this right away.

# **SAFETY PRECAUTIONS**

**READ THE OWNER'S 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 and remove key 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.

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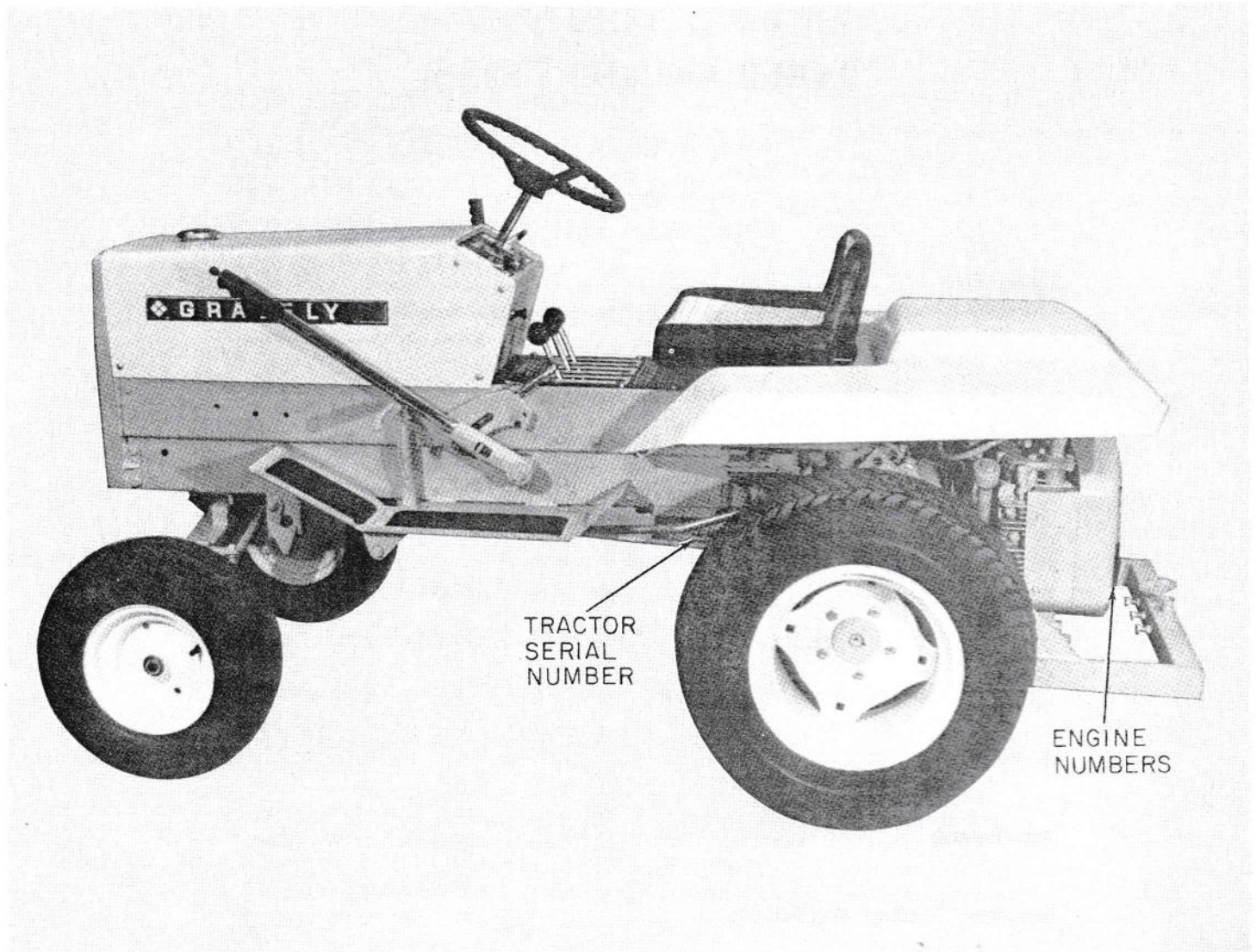


FIGURE 1

## INTRODUCTION

The Gravelly 424, 430, 432 and 450 are the most revolutionary tractors on the market today. They are designed with tractionized power. Rear-mounted engine and transmission concentrate the tractor weight over the rear tires giving maximum traction plus a low center of gravity.

Gravelly compact riding tractors are available in four models:

424	10 hp
430	12 hp
432	14 hp
450	16.5 hp

Enjoy solid comfort while you steer your sturdy de-framed Gravelly through a four season series of tasks. You will be amazed at the maneuverability, the instant control.

Instant control because one lever gives you forward, neutral or reverse. Flip another lever—cut ground speed in half, while attachment speed stays the same. Great for heavy mowing, snowblowing, the jobs that take geared-down power.

Tackle the tough ones with real confidence because your Gravelly has true all-gear-drive, all the way from the engine crankshaft to and through the transmission.

Gravelly designed your tractor to mount and drive im-

plements where the implement does the job best: in front, underneath, or trailing. Implements lift with one common lever. Can be held in any position by a position lock.

Attachments are easily changed. Steel shafts and universals drive Gravelly power attachments. Connect and disconnect with a twist of the wrist. Mounting is done by simple rugged latches and lockpins.

Your Gravelly tractor will give long years of highly satisfactory performance if maintained and operated as outlined in this manual.

It is important that you know the serial number of your tractor.

It is also important that you know the model number, serial number and specification number of the engine.

For your future reference we suggest you record these numbers below. Any correspondence concerning your tractor should contain these numbers to expedite prompt response to your needs.

Tractor Model Number  
 Tractor Serial Number  
 Engine Model Number  
 Engine Specification Number  
 Engine Serial Number

450  
9886  
CCKA-MS  
2043-G  
057305849

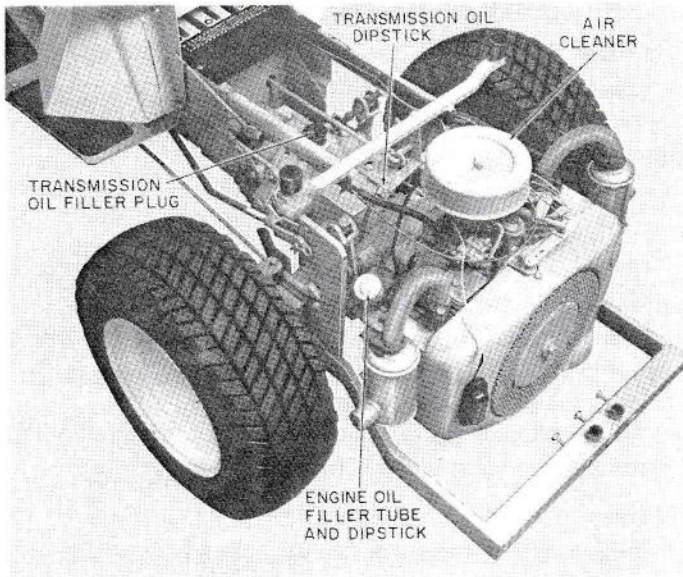


FIGURE 2  
GRAVELY 450

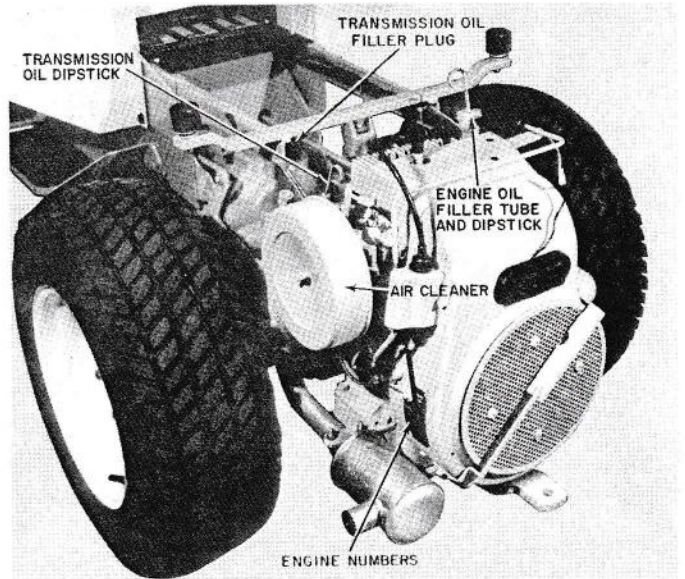


FIGURE 3  
GRAVELY 432

## MAINTENANCE

### LUBRICATION

#### Transmission (All Models)

Capacity — 5 U.S. Quarts. Use SAE 90W-EP all-purpose gear lubricant for year round use.

Check oil level daily. Maintain at full mark. Do not overfill. Drain plug is lowest Bolt on Left Hand axle Housing.

#### Engine 424, 430

Capacity: 4 US. PINTS. Use API classification MS, MS/DG oils: summer, SAE 30; winter, SAE 5W20. Check oil level daily. Maintain at full mark. Do not overfill. Change engine oil every 40 operating hours or oftener under dusty conditions. Drain plug is on the engine base at the rear left hand corner.

#### Engine 432

Capacity: 5 U.S. PINTS. Use API classification MS oils: summer, SAE 30; winter, SAE 5W20.

Check oil level daily. Maintain at full mark. Do not overfill. Change engine oil after initial 5 hours of operation and then every 25 hours or oftener under dusty conditions. Drain plug is on right hand side of engine base.

#### Engine 450

Capacity: 4 U.S. PINTS. Use API classification MS, MS/DG oils: summer, SAE 30; winter SAE 5W20.

Check oil level daily. Maintain at full mark. Do not overfill. Change engine oil after initial 5 hours of operation and then every 40 hours or oftener under dusty conditions. Change oil filter every 200 hours or oftener under dusty conditions. Drain plug is on the engine base at the rear left hand corner.

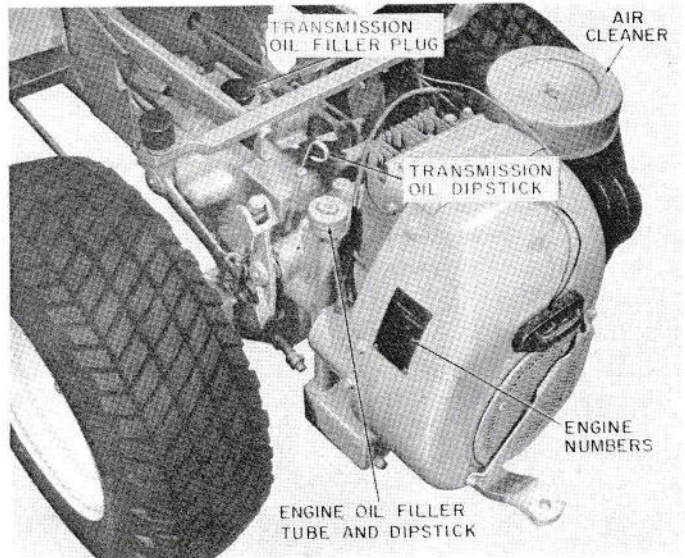


FIGURE 4  
GRAVELY 424, 430

#### Greasing (All Models)

There are six (6) grease fittings on a tractor. Grease with general purpose grease every oil change.

Front wheel hubs.....	2
King Pin weldments.....	2
Axle Pivot pin.....	1
Forward driveshaft bushing.....	1

## ROUTINE MAINTENANCE

### Linkage

The linkage of forward-reverse lever and the 1-2 gear lever can be adjusted to compensate for wear, however, be sure it does latch over-center. Adjustment is done by moving the jam nuts on the control rods.

### Air Cleaner

Clean or replace when necessary. A loss of power is an indication that air cleaner service is required.

The air cleaner element should be cleaned by gently tapping on a flat surface. Replace the element if it is bent, crushed or damaged in any way.

When reinstalling, be sure the element fits the adapter plate and the wing nut on the cover is finger tight.

### Tires

Proper tire pressure is 12 psi. Check regularly and maintain at proper pressure.

### Battery

Regularly check the electrolyte level. Maintain at proper level.

### Spark Plug (All Models)

Gap — .025 inch.

### Valves — clearance (Cold)

	intake	exhaust
424, 430 —	.011	.010
432 —	.008/.010	.017/.019
450 —	.010/.012	.010/.012

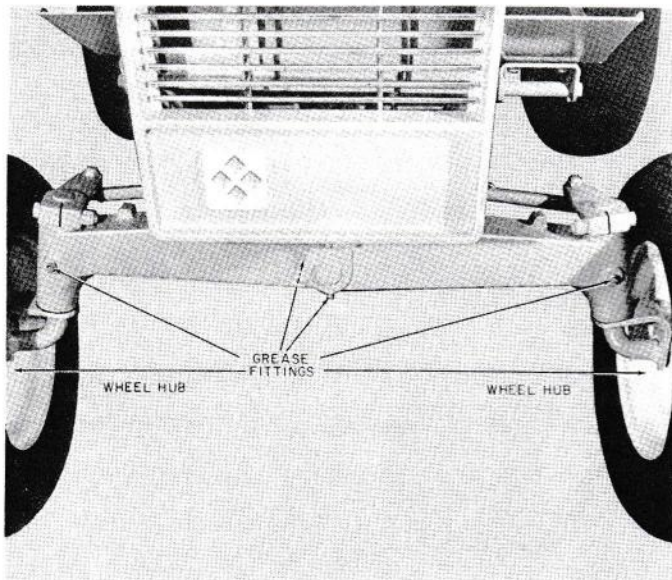


FIGURE 5  
ALL MODELS

NOTE: Anytime the tractor is washed or "hosed off" it should be greased to force moisture out of the bearings and bushings.

Lightly oiling all pivot points of the linkage periodically aids operation.

## CONTROLS

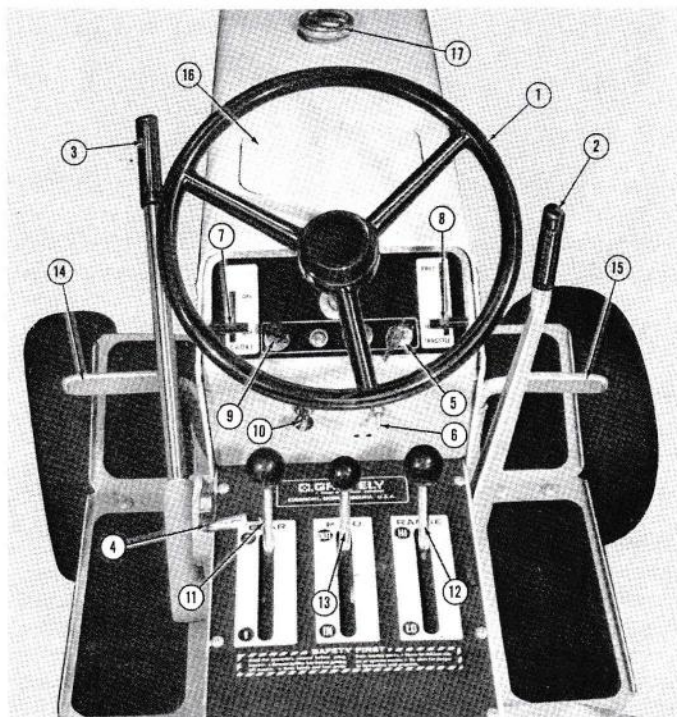


FIGURE 6  
ALL MODELS

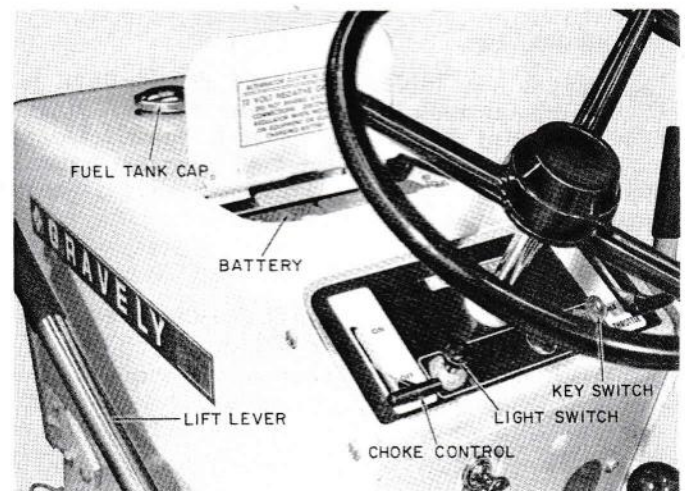


FIGURE 7

1. Steering Wheel
2. Forward-Reverse Lever — Push away from you for forward, pull toward you for reverse.
3. Attachment Lift Lever — Pull toward you to raise the attachment, push away from you to lower the attachment.

4. Attachment Position Lock — use to lock the attachment left in any position.
5. Key Ignition — ON and START — clockwise; OFF counterclockwise.
6. Electric Lift (Std. 450, optional 424, 430, 432) — UP to raise attachment; DOWN to lower attachment.
7. Choke — Move lever to “ON” position when starting move toward “OFF” position as engine warms up.
8. Throttle.
9. Light Switch. (Optional, 424)
10. Cigar Lighter. (Optional, 424)
11. Gear Selector Lever — Controls ground speed and attachment speed. It can be moved while tractor is in motion.
12. Swiftamatic 8 Range Selector Lever Controls ground speed only, Low Range is 50% of high range. It does not affect attachment R.P.M.  
CAUTION: Do not move this lever while the tractor is in motion.
13. PTO Lever — engages or disengages the attachment drive.
14. LH Brake — when applied, brakes the left rear wheel.
15. RH Brake — when applied, brakes the right rear wheel.
16. Door — open to check battery electrolyte level. Note decal.
17. Fuel tank cap — open to add fuel. Tank capacity, 5.3 gallons.

## OPERATION

### Before Starting:

1. Check gasoline level. Use any high quality, regular grade gasoline. The gas tank holds 5.3 U.S. gallons.
2. Check oil levels. See “Maintenance” section.
3. PTO Control is in the Out position and Forward-Reverse Control is in neutral, (vertical to ground.)

### Starting:

CAUTION: Be sure Forward-Reverse Control is in neutral.

1. If engine is cold, move Choke lever from Off to On position.
2. Move throttle Control to approximately halfway between “Idle” and “Fast” position.
3. Turn Ignition Key to start (Clockwise). Do not hold engaged more than 15 seconds without allowing a cooling period for starter motor.
4. As soon as the engine starts, release the key.
5. After the engine starts, and as it warms up, move the choke control towards the Off position.

### Starting Tractor Movement:

Move 1-2 gear selector to desired gear.

To go forward, push the Forward-Reverse Control forward, (away from you) gradually until it locks in place.

To reverse, pull the Forward-Reverse Control back until it locks in place. To stop tractor motion, move Forward-Reverse Control to neutral (vertical) position and apply both brakes.

This lever gives you instant control of the motion of the tractor. It can also be used as a brake — for example, if you are going forward and need to make an instant stop, simply pull lever through neutral and exert necessary pressure in Reverse (do not lock in gear) and tractor will stop instantly. The same method may be used in Reverse, by moving the lever through neutral and exerting pressure in the forward direction.

### Engaging Power Attachments:

1. Stop tractor motion, slow engine to idle.
2. Shift 1-2 gear selector to neutral.
3. Pull Forward-Reverse Control back towards reverse until engine starts to pull down or lug slightly.
4. Move PTO Control from “OUT” to “IN”.
5. Move gear selector to 1 or 2 gear.
6. Accelerate engine, start tractor motion.

### Disengaging Power Attachment Drive:

1. Stop tractor motion.
2. Shift 1-2 gear selector to neutral.



3. Move PTO lever from "IN" to "OUT". CAUTION: Be sure attachment motion has stopped before attempting any work or adjustment.

#### Stopping Tractor:

1. Move Forward-Reverse Lever to Neutral (vertical), apply brakes. For parking, engage brake stops in

- slots in frame.
2. Be sure PTO Lever is in the "OUT" position.
  3. Move throttle to idle.
  4. Turn ignition key counter-clockwise to shut off engine. Remove key. Tractor cannot be started without key.

## ACCESSORIES

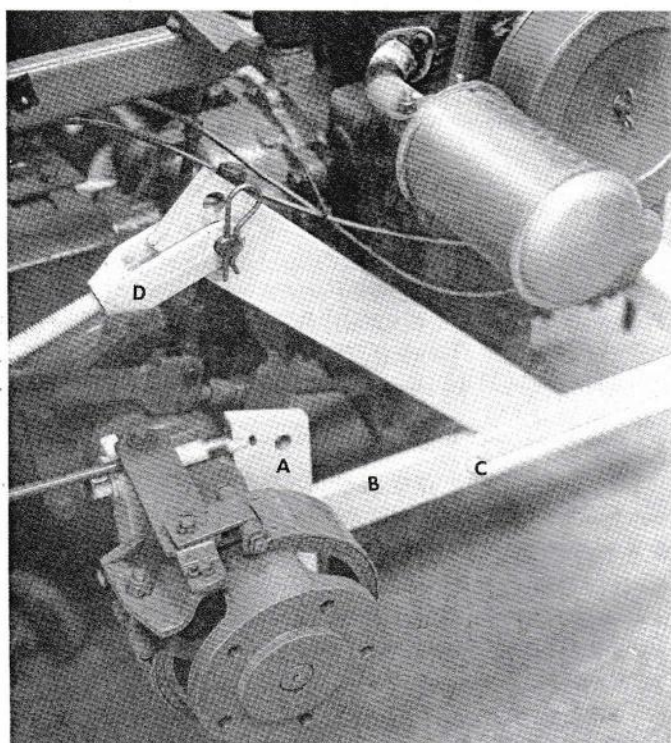


FIGURE 8, REAR HITCH

### 14712E1 REAR HITCH

1. Remove the Drawbar Support Weldment (Part No. 12015A1 Standard Rear Hitch).
2. Mount the Rear Hitch Weldment (B), on the Pins of the Retaining Assemblies (A), with the Retaining Assemblies on the outside of the weldment. Secure in place with Flatwashers and Cotter Pins.
3. Loosely attach the Left-Hand and Right-Hand Retaining Assemblies (A) around the Left-Hand and Right-Hand Axle Housings, pins on the inside using tie straps, washers, and nuts.

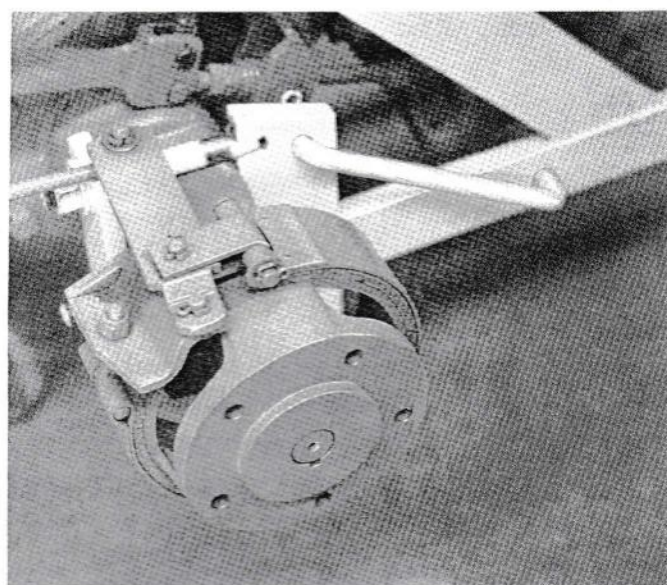


FIGURE 9, REAR HITCH

NOTE: If you have the 42" SnowDozer or the 48" SnowDozer, attach the Retaining Assemblies using the Frame Assembly Axle Connector of the SnowDozer. (See Figure 24).

4. Securely tighten the Bolts on the Retaining Assemblies. Be sure Rear Hitch is equally spaced on each side of engine.
5. Attach the Clevis Rod (D) to the Rear Hitch Weldment and the bottom hole of the Lift Lever Shaft Weldment. Secure in place with Flatwashers and Cotter Pins.
6. The implements are attached to the hitch by a pin. The Rear Hitch need not be removed to use center-mount or front-mount attachments such as Rotary Mower, Snowblower, SnowDozer. Install the Retaining Braces (C, Figures 8 and 9) from the retaining assemblies (A, Figure 9) to the Rear Hitch Weldment (B) as shown in Figure 9. Remove the

Clevis Rod. This makes the Rear Hitch rigid and permits the lift system to be used for other attachments.

Gravely Trailing attachments, such as Cart, Seeder-Spreader, Roller, etc., also may be used with the 14712E1 Rear Hitch. Trailing Hitch Kit 11627E1 is required for these implements. (See Figure 12).

## ELECTRIC LIFT KIT

The Electric Lift is standard on the 450, optional on the 424, 430 and 432. It is actuated by a toggle switch on the dash. Push the toggle up to raise the attachment. Pull it down to lower the attachment. The Attachment Position lock may be used to enable you to raise and relower the attachment to the same position.

## ATTACHMENTS

### CENTER-MOUNTED ATTACHMENTS

#### 40-Inch and 50-Inch Rotary Mower

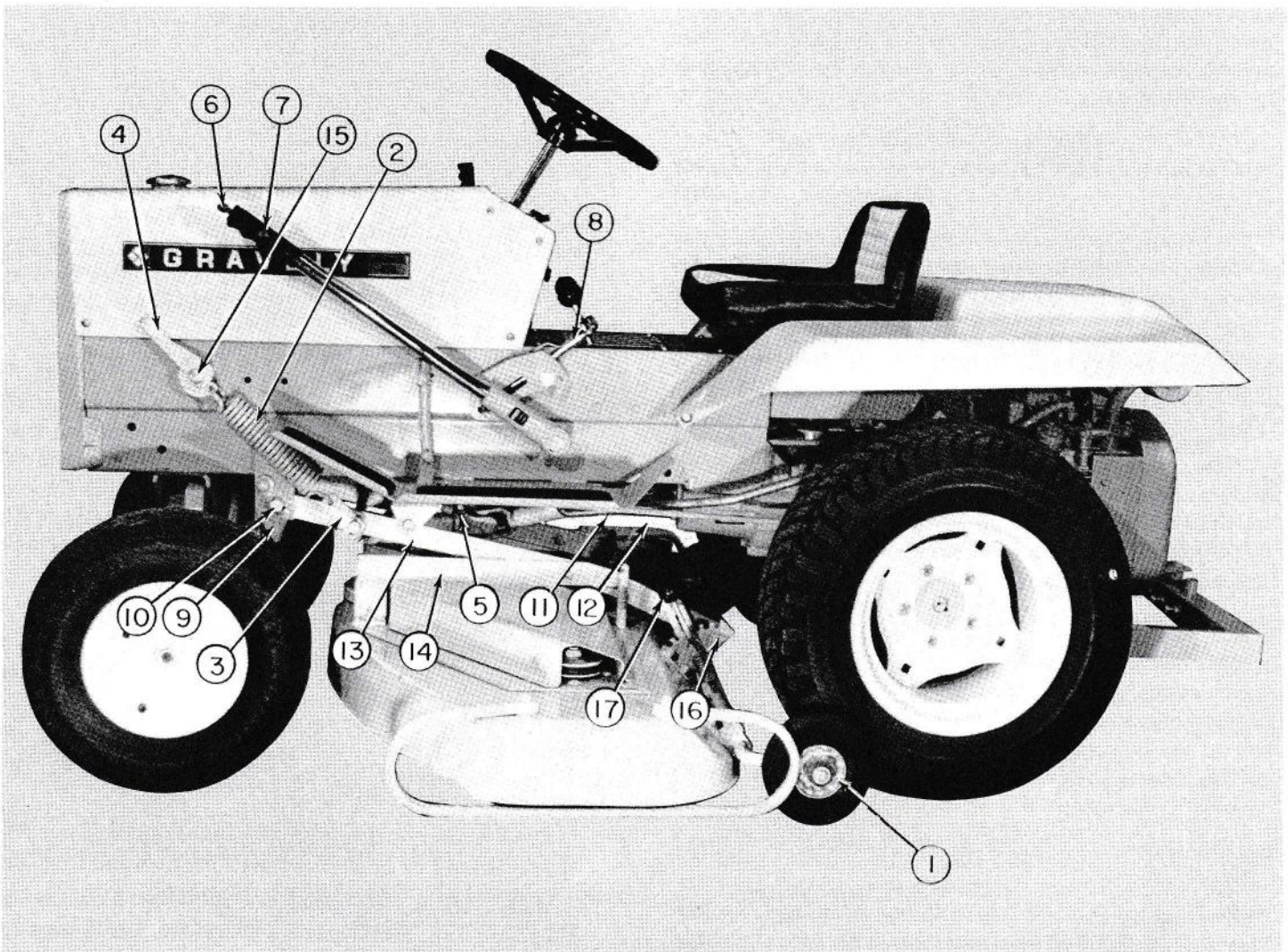


FIGURE 10

Recommended: Lift Assist Kit (11271E1) for tractors without the optional Electric Lift Kit.

Place mower centered in front of the Tractor, with Gauge Wheels towards the tractor.

Be sure the Gauge Wheels (1, Figure 10) are set in

their lowest position. See Figure 10, the illustration shows proper setting.

The Drive Shaft must be lined up straight with Drive Housing. If Lift Assist Kit is used, attach the Springs (2, Figure 10) to the Spring Brackets (3, Figure 10), so the

Latches (4, Figure 10) are to the outside. Lay them to the front and slightly in towards each other, so they will not interfere when the Tractor Wheels run over the mower.

The Pivot Lift Rod with its attached Pivot and Ball Joint Assembly (5, Figure 10) is assembled to the Tractor next.

There is one adjustment on the Lift Rod which is made only once, at the initial installation.

Loosen the two jam nuts and run them to within approximately two inches of the end of the Pivot Rod. Do not lock.

Be sure the Attachment Lift Lever (7, Figure 10) is all the way down, and the Attachment Position Lock (8, Figure 10) is in its lowest position. The Attachment Lift Lever is operated by depressing the button (6, Figure 10) on the top of the Handle Grip, and moving it all the way forward. The Position Lock is operated by lifting it up against the Spring, and sliding it down and forward to its lowest position.

**NOTE:** On tractors equipped with the electric lift, actuating the toggle switch raises or lowers the attachment lift.

Grasp the Pivot Rod and turn it so the Ball Joint Assembly (Locking Ring and Spring) is UP. Beneath the tractor there is a metal strap with five tear-drop holes.

Insert the protruding end of the Pivot into the **SECOND HOLE FROM THE BOTTOM**. When in place, rotate the Pivot Rod until the Ball Joint is down.

Next, start the tractor, and drive directly over the mower, positioning the Tractor so the lead forward edge of the rear tire is approximately lined up with the forward edge of the steel rim of the Gauge Wheels, and tractor is centered over the Mower.

**STOP THE TRACTOR**, turn the Ignition Key OFF.

It is helpful to have the forward edge of Mower raised when attaching. Grasp the deck at the Chute and lift, and insert a block approximately four inches high at the center of the leading edge of the mower (toward the front of the Tractor.) (You may place the block before driving over the attachment, if desired.)

Slip mower attaching shaft into brackets, close brackets, and secure.

Now, grasp the Lift Rod with one hand, and the locking ring on the Ball Joint assembly with the other hand. Lift locking ring up, and push the opening so exposed over the Ball parallel to the Mower Deck. Release locking ring.

Be sure the Attachment Latches (9, Figure 10) are open. Then begin raising the Mower by the Attachment Lift Handle until the Attaching Shaft (10, Figure 10) is almost ready to slip into the Brackets. Use the Attachment Position Lock to hold the Mower in this position.

(Raise Position Lock (8, Figure 10) against the spring, and pull up and towards the rear until it is seated against the Attachment Lift Lever.)

Grasp the Attachment Lift Handle and release the Position Lock, then let the Mower go all the way back to the ground.

Normally, the entire drive shaft will be assembled . . . that is the shaft permanently attached to the Mower Drive Housing, and the square tube shaft with the universal joint and locking ring on the other end. If not assembled, slide the Square Tube into the shaft.

Grasp the Universal Joint (11, Figure 10) with one hand, the Locking Ring (12, Figure 10), with the other. Turn the Locking Ring, insert over the spline, and release. Check to be sure it is in place.

To complete the one and only adjustment of the Lift Rod, attempt to raise the Mower until the Attachment Lift Lever locks in place at the highest position. If it **DOES NOT** lock, run the jam nuts upward until the mower will lock in the high position. To do this, it is necessary to drop the mower again to change the nut positions. When properly adjusted, the mower locks in the high lift position, the deck is parallel, the Pivot Arm (13, Figure 10) is flush with the Gear Housing Support Weldment (14, Figure 10), and the Mower is within about  $\frac{1}{4}$  inch of the frame. After adjustment is reached, lock jam nuts on the Pivot Lift Rod.

Raise the Mower to its highest position, and with Attachment Lift Assist Springs\* attached to their Brackets (See Figure 10). Turn latch until half-moon cutout is exposed, and bring half-moon cutout to the latch pin (15, Figure 10), and snap the latch in place. Do the same on the other side. Latches are always to the outside. **CAUTION:** To be effective, Springs must be in strong tension. Use care in latching and unlatching.

\*Not necessary with Electric Lift.

## REMOVAL

To remove, unsnap and remove Lift Assist Kit, with mower in raised position. Remove Hairpin Cotter Keys and unsnap attaching latches.

Drop mower to the ground. Unlock Ring from PTO spline. Raise Lift Lever Locking Ring and pull from Ball.

With PTO in OUT position, drive tractor over mower **IN REVERSE**. Stop tractor and remove Attachment Lift Rod.

## LUBRICATION

There are four Alemite Fittings on the Rotary Mower: Three on the spindles *under* the deck, and one on the Drive Shaft. These should be greased every eight use-hours.

The Gear Housing is filled with a good grade of general purpose grease. The housing cover should be removed periodically to check for adequate lubricant. We suggest this check for Commercial Users every 160 hours, and Homeowners annually.

## HEIGHT ADJUSTMENT

There are five notches in the height adjustment Bracket (16, Figure 10). To adjust height, raise mower. Pull Height Adjustment Control (17, Figure 10) up and move to the notch desired. Drop Mower again.

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## MOUNTING TRAILING ATTACHMENTS

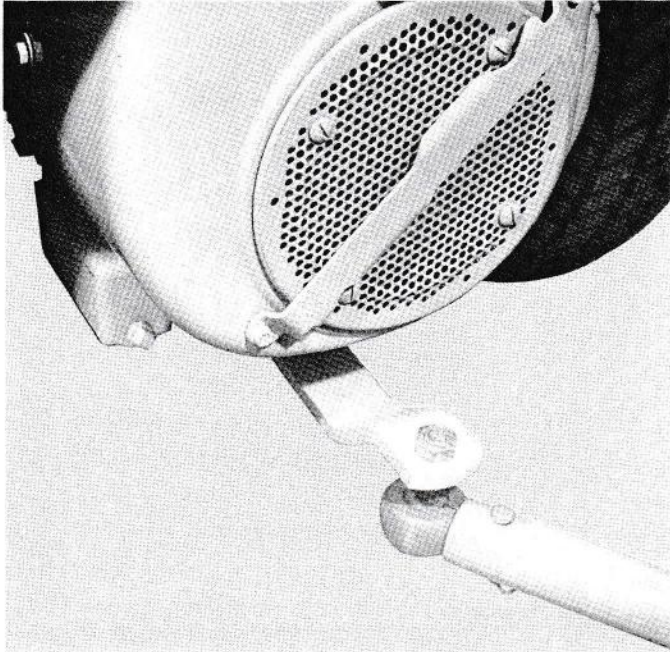


FIGURE 11

### 11627E1 TRAILING HITCH KIT.

1. Thread one nut on ball stud approximately 1¼ inches. Insert ball stud and nut up through tractor hitch. Thread other nut on end of ball stud. Jam nuts against tractor hitch. Ball must be pointing down.

2. Place split sockets around ball stud. Insert extensions of split sockets into tongue of attachment. Line up holes, secure in place with pin and clip pin (See Figure 11).

### 14712E1 Rear Hitch

This Rear Hitch allows the use of rear mounted tillage

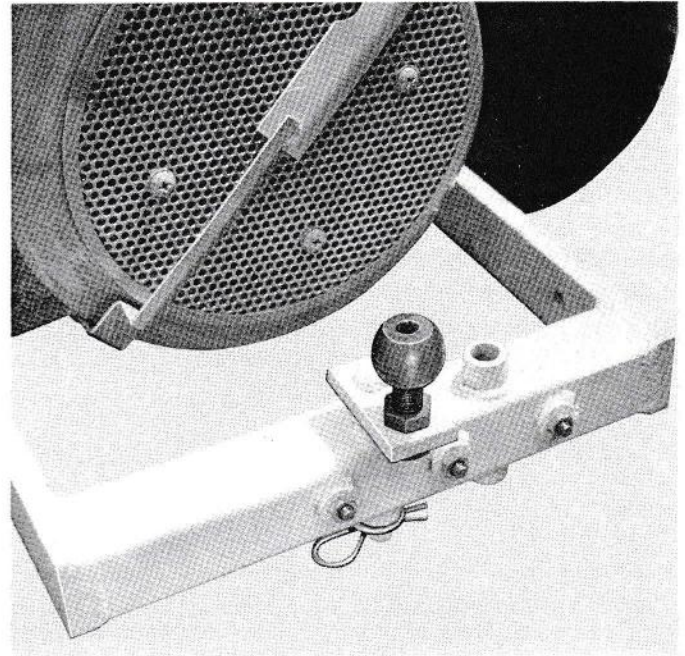


FIGURE 12

and other tools. The attachments are attached to the hitch by a pin. Attachments available: Moldboard Plow, Tool Bar, Cultivator Disc, Grader Blade.

The Rear Hitch need not be removed to use other attachments, such as snowblower and mower. Install the retaining braces from the retaining assembly to the rear hitch weldment. This makes the rear hitch rigid and the clevis rod can be removed. (See Figure 9).

Gravely trailing attachments such as cart, seeder-spreader, and roller may also be used with the Rear Hitch. Mount ball stud in the hitch pin and attach attachment. (See Figure 12).

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## INSTALLATION INSTRUCTIONS — 38" SNOWBLOWER

The 15840E1 Front Drive Kit is required. The 11271E1 Lift Assist Kit is recommended for Gravely Compact Tractors not equipped with Electric Lift.

NOTE: All directions are given with reference to the normal operator's position, i.e., as you sit on the tractor.

1. Mount the Front Attachment Bracket Assemblies on tractor. NOTE: There is a Right Hand and Left Hand Assembly. Mount so that latches are inside. When the Lift Assist Kit is being used, install latch pin from the Lift Assist Kit in the rearmost hole instead of the bolt.

## INSTALLATION INSTRUCTIONS — 38" SNOWBLOWER (Continued)

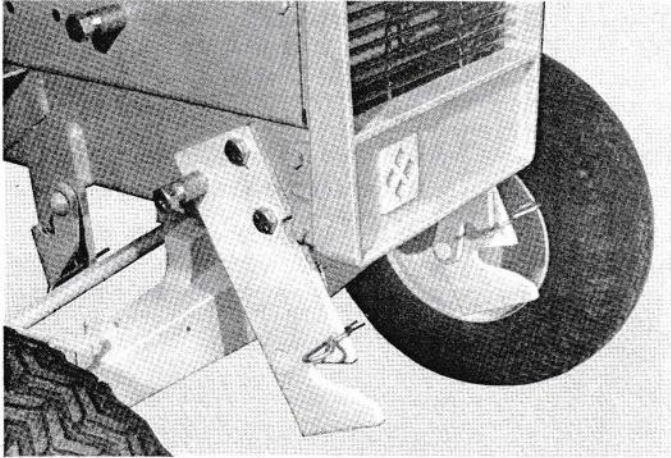


FIGURE 13

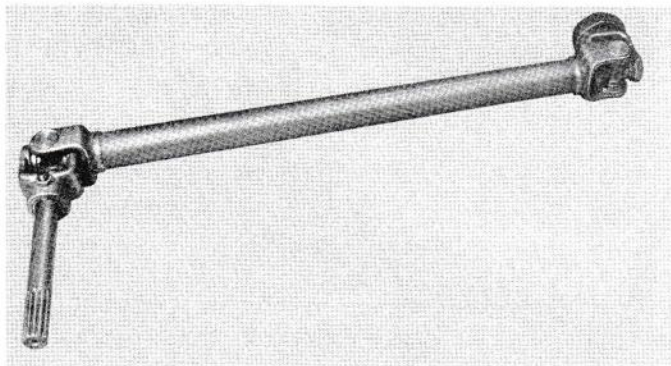


FIGURE 14

2. Mount the Forward Drive shaft in the Drive Shaft Assembly. Secure in place with set screw and jam nut.

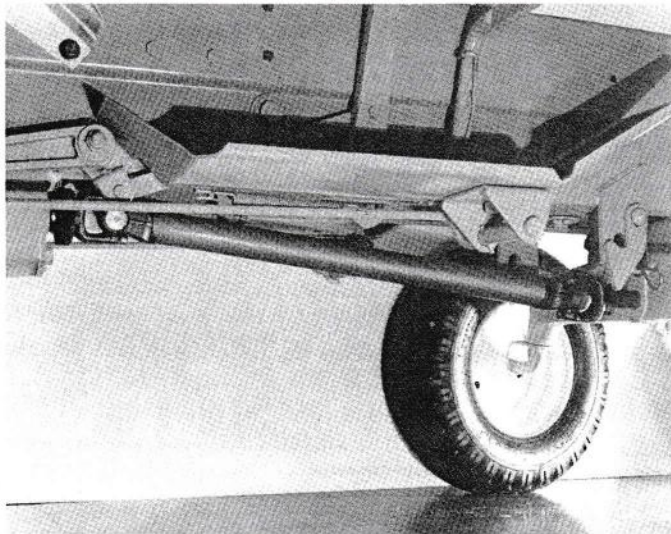


FIGURE 15

3. Remove the dust caps from the front axle and insert forward drive shaft and attach drive shaft to PTO on transmission by turning locking collar universal joint and sliding on PTO shaft. Release locking collar. Pull on drive

shaft to be sure it is locked on PTO shaft. Be sure to lubricate bushings in front axle.

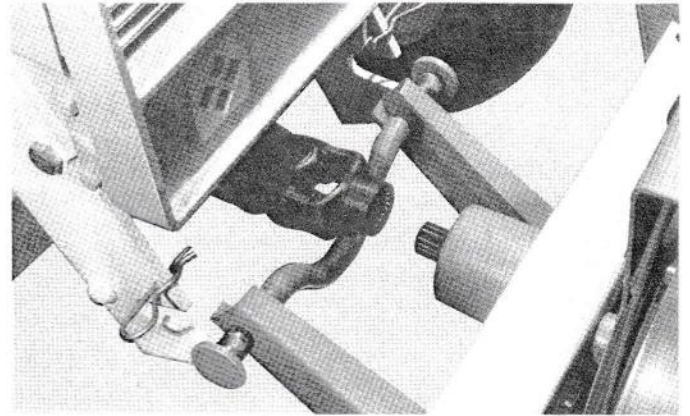


FIGURE 16

4. If Lift Assist Kit is being used, attach spring bracket to Snowblower. Raise rear of Snowblower to attachment bracket latch level. Hold in place with stand.

5. Slide Double Joint Assembly on forward drive shaft. Position tractor with latches approximately 2 inches from front of Snowblower.

6. Start Double Joint Assembly on shaft of Snowblower. Roll tractor forward until frame of Snowblower fits in latches on front brackets on tractor. Secure latches in place with hairpin cotters. Raise stand and secure in raised position.



FIGURE 17

7. Insert Push Rod Guide Weldment into the Push Rod of the Snowblower. Attach the Rod Guide Weldment to the top hole of the lever shaft assembly of the tractor. Attach the Push Rod to the frame of the Snowblower.

8. If the Lift Assist Kit is being used, raise the Snowblower until it is latched in the up position. Attach the springs and the spring latch assemblies. NOTE: There is a Left Hand and Right Hand Latch Assembly. The half-moon part is nearest the tractor.

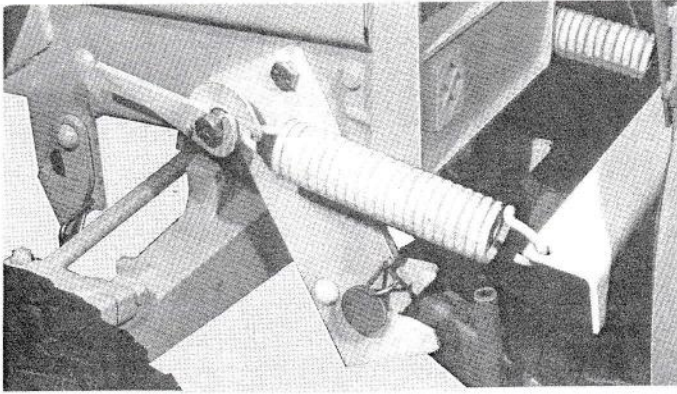


FIGURE 18

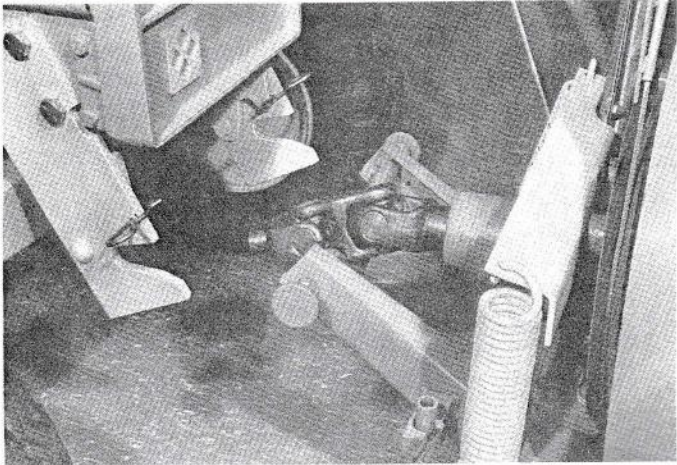


FIGURE 19

## Removal

**CAUTION:** Be sure PTO is disengaged and engine stopped.

1. Being sure PTO is disengaged, raise Snowblower to its topmost position. Unlatch and remove the lift assist springs from the tractor if used. (Caution: Use care when releasing any spring that is under tension.) Lower Snowblower to floor. Lower stand to floor and secure. Remove hairpin cotters and raise latches. Secure latches in the raised position. Remove push rod from Snowblower and push Rod Guide Weldment from tractor.

2. Carefully roll tractor away from Snowblower. Double Joint Assembly will slide off Snowblower or forward drive shaft. Remove Double Joint Assembly from forward drive shaft or Snowblower. Remove drive shaft assembly by turning lock collar on universal joint at PTO and slide drive shaft assembly off PTO shaft. Lower drive shaft assembly and slide toward rear of tractor to remove forward drive shaft from front axle. Reinstall caps in front axle. It is not necessary to remove the Front Bracket Assemblies.

*Caution: Use extreme care when operating Snowblower. Keep hands and feet away when auger and fan are turning.*

## FRONT ADAPTER KIT

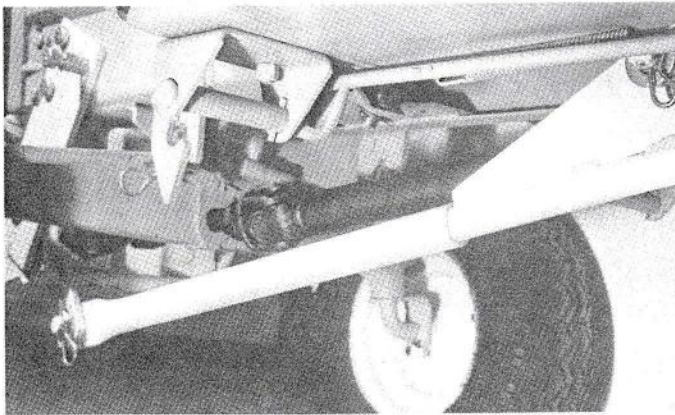


FIGURE 20

Most Gravely front-mounted attachments can be used on the tractor by using the Front Drive Kit and the Front Adapter Kit.

Use of the Lift Assist Kit or Electric Lift is recommended with the heavier attachments.

1. Mount the Front Drive Kit on the tractor. (See Snowblower instructions steps 1, 2, 3; page 12).

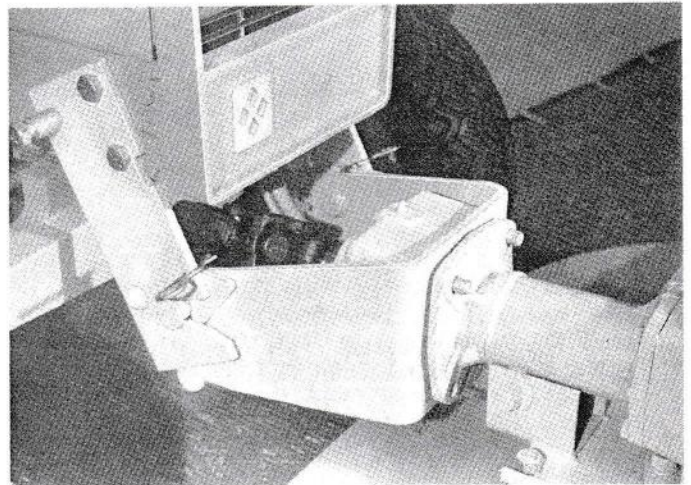


FIGURE 21

2. Place the Double Joint Assembly on the Forward Drive Shaft. Start the Double Joint Assembly on the Adapter Dog of the Adapter Assembly. Slide assembly in place and secure latches.

3. Insert the Push Rod Guide Weldment into the Push

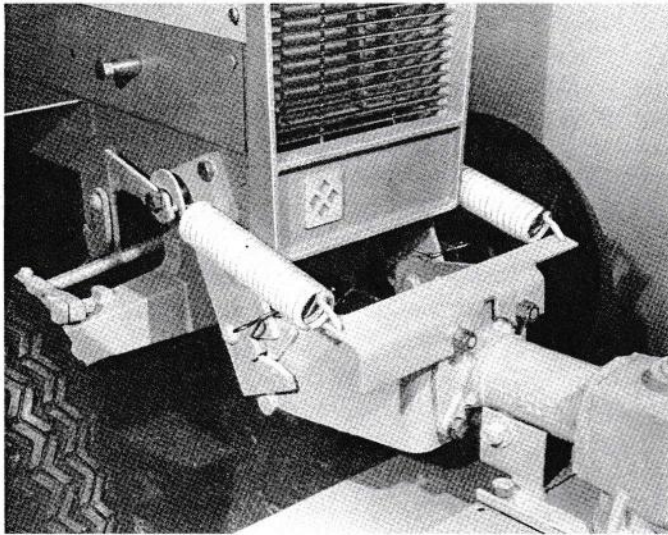


FIGURE 22

Rod of the Front Adapter Kit. (Do not use the Push Tube of the Snowblower.) Attach the Push Rod Guide Weldment to the Left Lever Shaft Assembly of the tractor. Attach the Push Rod to the Adapter Weldment.

4. Mount attachment to Front Adapter Kit as shown. (Figure 21).
5. Place Spring Bracket in place on studs if Lift Assist Kit is to be used. Secure attachment in place with 2 bolts and 2 nuts. (Figure 22).
6. Raise attachment with Lift Lever until it is latched in the raised position. Attach Springs and Spring Latch Assemblies. NOTE: There is a left hand and right hand assembly. The Spring Latch Assembly is to be installed so the half-moon part is closest the tractor.

## AXLE-MOUNT ATTACHMENTS

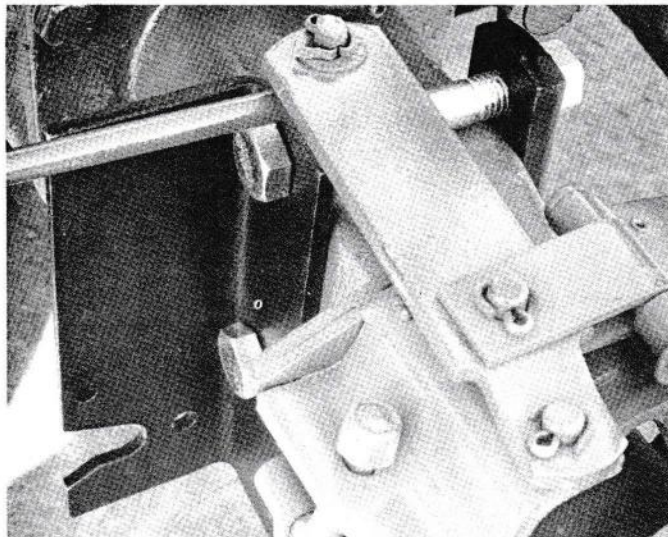


FIGURE 23

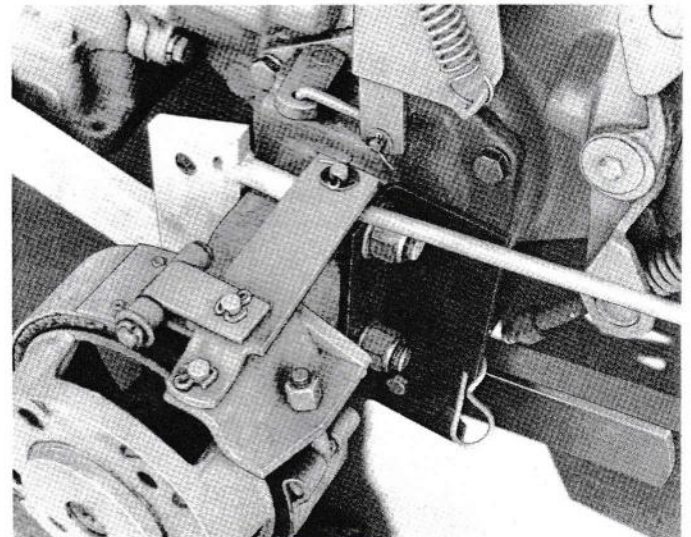


FIGURE 24

### 48" SnowDozer

1. Assemble the Frame Assembly Axle Connector and the two Axle Tiestraps with four Bolts, Nuts, and Lockwashers to the Rear Axle Housings. The bar of the Frame Assembly Axle Connector goes in front and below the Axle Housings. This Connector does not have to be removed from the Tractor once it is assembled. The Frame Assembly Axle Connector can also be mounted using the 14712E1 Rear Hitch. (See Figure 24).
2. Raise both Latches on Axle Connector and secure with Hairpin Cotters.

#### Axle Mount Attachments

3. Remove Hairpin Cotter and Washer securing the Angling Control in the Bracket on the Angling Pivot Shaft Assembly. Remove Control from bracket.
4. Remove Hair Pin Cotter and drilled rivet from Angling Handle Assembly and Latch Connector Clevis. Lay handle down toward rear of the Blade.
5. Drop Kick Stand to support end of Push Frame Assembly.
6. Move Tractor forward straddling Push Frame Assembly until it is positioned in notches in Axle Connectors.
7. Remove Hair Pin Cotters. Lower Latches over Cross Rod and secure with Hair Pin Cotters.
8. Position Lift Pivot Assembly in lift arm on Tractor. There are five tear-drop shaped holes in the Lift Arm. Position the Lift Pivot Assembly in the second hole from the top.

NOTE: The Blade has a lift-lower range of about 10 inches. The Blade can be lowered more than the normal 2½ inches below ground level by setting the Lift Pivot Assembly in one of the three holes below the normal position. However, this decreases the ground clearance in the raised position.

9. Pull Lift Lever out to side and up to secure to Angling Control Rods. (See step 4).

## ATTACHMENTS & REQUIRED ACCESSORIES

Number	Attachment for Compact Tractor	Front Drive Kit (15840E1)	Front Adapter Kit (11601E1)	Lift Assist Kit (11271E1)*	Trailing Hitch Kit (11627E1)
15570E1	50' Rotary Mower	Not Used	Not Used	Recommended	Not Used
15568E1	40' Rotary Mower	Not Used	Not Used	Optional	Not Used
15574E1	Lawn Aerator	Not Used	Not Used	Not Used	Required
15575E1	Lawn Roller	Not Used	Not Used	Not Used	Required
15576E1	Seeder-Spreader 5'	Not Used	Not Used	Not Used	Required
15578E1	Rotary Plow	Required	Required	Optional	Not Used
15591E1	Power Brush	Required	Required	Recommended	Not Used
15583E1	Snowblower, 38"	Required	Not Used	Recommended	Not Used
15683E1	48" SnowDozer	Not Used	Not Used	Not Used	Not Used
15587E1	Steel Cart	Not Used	Not Used	Not Used	Required

\* Not necessary with the Electric Lift Kit.

ALLIED EQUIPMENT (Equipment not manufactured by Gravely Corporation, but approved for use on Gravely tractors. See your Gravely Dealer.)

Moldboard Plow	Planter	Rear Blade	Compost Shredder	Lawn Vacuum
Disc Harrow	Tool Bar	Power-Caster	Reel Mowers	Hydraulic Loader



# SPECIFICATIONS

ENGINE	424	430	432	450
Type	4-cycle air-cooled	4-cycle air-cooled	4-cycle air-cooled	4-cycle air-cooled
Horsepower @ 3600 rpm	10	12	14	16.5
Number of Cylinders	1	1	1	2
Stroke (Inches)	3.00	3.0	3.25	3.00
Bore (Inches)	3.625	3.625	3.50	3.25
Displacement (Cubic Inches)	30	30	31.27	49.8
Oil Sump Capacity U.S. Pints	4	4	5	4
Oil Specifications	MS, MS/DG	MS, MS/DG	MS	MS, MS/DG
Summer	SAE 30	SAE 30	SAE 30	SAE 30
Winter	SAE 5W20	SAE 5W20	SAE 5W20	SAE 10W
<b>FUEL SYSTEM</b>				
Tank Capacity U.S. Gallons	5.3	5.3	5.3	5.3
Fuel Grade	Regular 90 octane or higher	Regular 90 octane or higher	Regular 90 octane or higher	Regular 90 octane or higher
<b>TRANSMISSION</b>				
Oil Capacity U.S. Quarts	5	5	5	5
Oil Recommendations	SAE 90W EP	SAE 90W EP	SAE 90W EP	SAE 90W EP

## Warranty

Products manufactured by Gravely 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 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

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.

FORM NO. 18527P1 (12-70)

FOR MODELS 15564E1, 15565E1, 15925E1, 18064E1

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