

GRAVELY

CLARKE-GRAVELY CORPORATION
A Studebaker-Worthington Company

OPERATOR'S MANUAL

NAME: 48 INCH SNOWDOZER

**PART NUMBER(S): 21466 - Blade
22413 - Hitch**



The 48 Inch Snowdozer is used with the Gravely 5000 Series Tractors.

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

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

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1.0 WARNINGS FOR SAFE OPERATION

This section gives warnings for safe operation of the Gravely 48" Snowdozer.

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

It is important to understand that the warnings in this Operator's Manual and any other Gravely instruction book do not list every possible danger. It is not possible for Gravely to know and tell the operator or person doing service on the equipment of all the dangers in operating and doing maintenance on the equipment.

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

1.1 INSTRUCTIONS BEFORE OPERATION

1. Read the Operator's Manual and learn the function of the tractor's controls. Know how to stop the tractor.
2. Never let children operate or ride on the equipment.
3. Let adults operate the equipment only after reading and understanding the instructions in this Operator's Manual.

1.2 PREPARATION FOR OPERATION

1. Before snowfall, inspect the area of operation and remove all material that will be thrown by, stop, or do damage to the Snowdozer.
2. Put the Direction Control lever in the neutral position and the Power Take Off (PTO) control in the "OFF" position before starting the engine.

3. Use foot protection that will decrease sliding.
4. Use caution when putting gasoline in the fuel tank.
5. Use a clean and tight fuel container.
6. Never put gasoline in the fuel tank while the engine is running.
7. Never put gasoline in the fuel tank while the tractor is inside a building.
8. Clean off any gasoline that falls on the tractor before starting the engine.

1.3 OPERATION

1. Keep away from moving parts.
2. Never use the tractor for person transport.
3. Keep the PTO in the "OFF" position.

4. After hitting an item, turn the ignition switch to the "OFF" position, and lower the blade. Check for damage. Make repairs if needed before restarting.
5. Never start and run the engine inside a building except to move the equipment outside immediately.
6. Always stop the engine and lower the blade before leaving the operator's position.
7. When removing snow from a slope, go up and down the slope, never across.
8. Use caution when changing direction on slopes.
9. Push the snow away from any area where the snow can cause damage.
10. Use a slow speed when moving the equipment to decrease sliding on surfaces with ice.
11. Use only Gravelly accessories for the Snowdozer and tractor.
12. Do not operate unless you can check the area visually.
13. After using the Snowdozer, stop the engine and remove all snow and ice before putting the Snowdozer in storage.

2.0 BOLT TORQUE SPECIFICATIONS

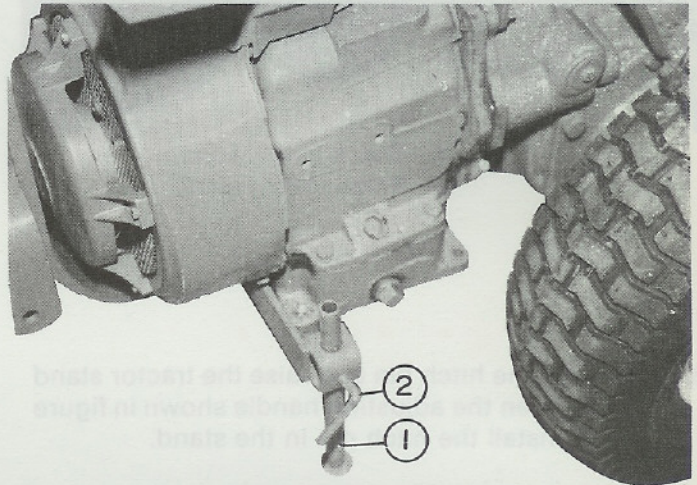
This section gives the bolt torque specifications for tightening the bolts used to assemble the Snowdozer. Tighten all bolts to the torque given in the Bolt Torque Specifications, unless shown differently.

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

3.0 PROCEDURE FOR CONNECTING THE SNOWDOZER TO THE TRACTOR

This section gives the procedure for connecting the Snowdozer to the tractor.

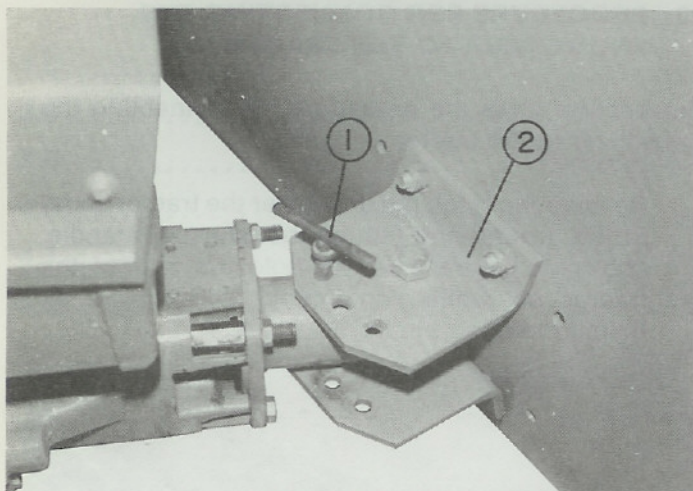
1. Remove the hitch pin and lower the tractor stand to the ground and tighten the adjusting handle, shown in figure 3.0-1, to hold the rear of the tractor up while connecting the Snowdozer. Install the hitch pin in the stand.



1 - Tractor stand
2 - Adjusting handle

Figure 3.0-1

2. Fasten the Snowdozer hitch to the quick hitch adapter as shown in figure 3.0-2.



1 - Quick Hitch Adapter
2 - Snowdozer Hitch

Figure 3.0-2

3. Remove the hitch pin and raise the tractor stand and tighten the adjusting handle shown in figure 3.0-1. Install the hitch pin in the stand.

4.0 PROCEDURE FOR OPERATING THE SNOWDOZER

This section gives the procedure for operating the Snowdozer. Read this Operator's Manual and the tractor Operator's Manual before operating the Snowdozer.

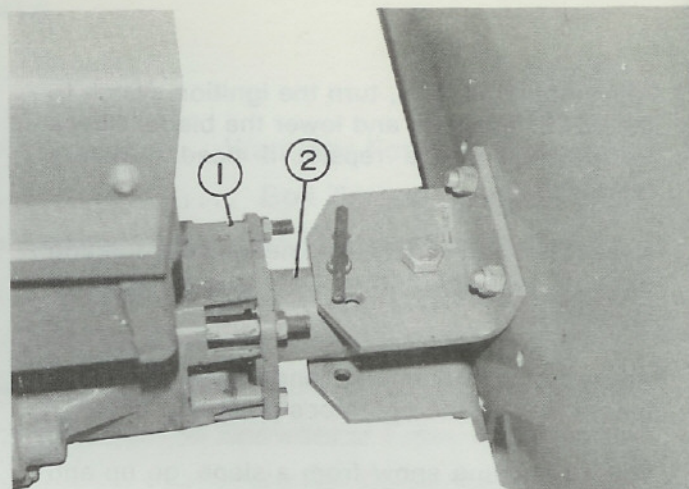
4.1 PROCEDURE FOR CHANGING THE ANGLE OF THE BLADE

The blade has three positions, left angle, center and right angle. To change the angle of the blade follow this procedure.

DANGER: Always stop the tractor engine before making any adjustments.

1. Remove the adjustment pin from the hitch and push the blade to the needed angle. See figure 4.0-1.
2. Align the holes in the hitch and install the adjusting pin.

CAUTION: Do not operate the Snowdozer without the Adjustment pin in place.



1 - Adjustment Pin
2 - Hitch

Figure 4.0-1

4.2 PROCEDURE FOR MOVING SNOW WITH THE SNOWDOZER

1. Start the tractor engine and wait until it is running smoothly before operating.
2. Move the blade to the angle position needed.
3. Put the RANGE selector in the "LOW" position.
4. Put the GEAR selector in the "LOW" position.

CAUTION: Keep the PTO in the "OFF" position.

5. Move the throttle lever to the "FAST" position.
6. Put the Direction Control Lever in the forward position. Always use caution on surfaces where the tractor can slide.

5.0 PROCEDURE FOR REMOVING THE SNOWDOZER FROM THE TRACTOR

This section gives the procedure for removing the Snowdozer from the tractor.

1. Remove the hitch pin and lower the tractor stand, shown in figure 3.0-1, to the ground and tighten the adjusting handle. Install the hitch pin in the stand.
2. Remove the bolts and nuts that fasten the snowdozer hitch to the quick hitch adapter shown in figure 3.0-2 and remove the hitch. Use caution not to cause damage to the threads on the studs.

6.0 PROCEDURE FOR DOING MAINTENANCE

This section gives the procedure for doing maintenance after each use.

1. Inspect all nuts, bolts, and other fasteners to make sure they are tight and replace any that are missing.
1. Put engine lubricant on the swivel section of the snowdozer hitch.
3. Check the wear strip and replace it if there is damage.

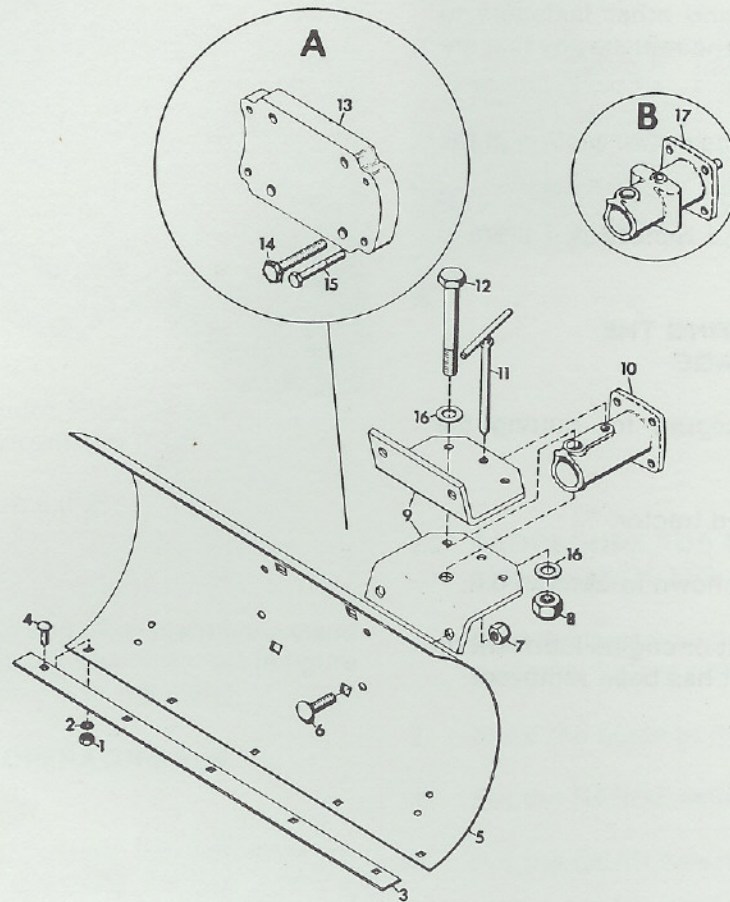
7.0 PROCEDURE FOR PUTTING THE SNOWDOZER IN STORAGE

This section gives the procedure for putting the Snowdozer in storage.

1. Clean the Snowdozer and tractor.
2. Do the maintenance as shown in Section 6.0.
3. To prevent rust, put paint or engine lubricant on any area where the paint has been removed.

8.0 SNOWDOZER ILLUSTRATED PARTS AND PARTS LIST

This section shows the Snowdozer Illustrated Parts and Parts List. Figure 8.0-1 shows the illustrated parts. Figure 8.0-2 shows the parts list.



SNOWDOZER HITCH

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>QTY.</u>	<u>DESCRIPTION</u>
1	120376	5	Nut, Hex; 5/16-18
2	138538	5	Washer, Lock; 5/16 Internal Tooth
3	12503	1	Strip, Wearing
4	126358	5	Bolt, 5/16-18 x 1; RD HD SQ NK
5	21464	1	Blade, Snow Plow
6	120917	4	Bolt, 1/2-13 x 1-1/2; RD HD SQ NK
7	435507	4	Nut, Lock; 1/2-13
8	456007	1	Nut, Lock; 3/4-10
9	21463	2	Plate, Swivel
10	22408	1	Casting, Swivel
11	10375	1	Pin, Adjustment
12	429887	1	Bolt, Hex; 3/4-10 x 5-1/2
13	21901	1	Weight, Blade
14	180191	4	Bolt Hex 1/2-13 X 3- 1/4
15	180137	4	Bolt, Hex; 3/8-16 x 2-3/4
16	131017	2	Washer, Flat; .812 x 1.469 x .134
17	12522	1	Casting, Swivel

NOTE: Circle "A" is Optional in Kit Form

NOTE: Item 17 shown in Circle "B" is used on
500 Series Tractors Only!

Figure 8.0-1



ATTACHMENT LIMITED WARRANTY

This Limited Warranty is issued by Clarke-Gravely Corporation, Gravely Division, and consists of the following terms:

1. Only the original purchaser of new Gravely manufactured attachments is covered by this Warranty.
2. This Warranty covers repair or replacement of parts manufactured by Gravely which are defective in material or workmanship. Gravely will pay for parts and labor only.
3. The Warranty starts the date of purchase and lasts for NINETY (90) DAYS for attachments used in Roofer applications, and TWELVE (12) MONTHS for products used in all other applications.
4. Some components of Gravely attachments are not covered by the Gravely Warranty. These components are covered by the original manufacturer's warranty. They are:
 - (a) Tires - Goodyear, Goodrich, Armstrong, General and Firestone
5. To obtain warranty service on Gravely attachments including components not manufactured by Gravely, use this procedure:
 - (a) Notify the Gravely dealer from whom you purchased the attachment.
 - (b) If you have moved and it is not convenient to notify the selling dealer, notify the nearest Gravely dealer. You should supply this dealer with a copy of the bill of sale as proof of the date of purchase.
 - (c) Make arrangements to have the attachment delivered to the dealer (refer to paragraph 6(a) below).
 - (d) If you have any questions concerning the Gravely Warranty, they should be referred to:

Gravely
Clarke-Gravely Corporation
A Studebaker-Worthington Company
One Gravely Lane
Clemmons, N. C. 27012
Attn: Manager of Customer Services
 - (e) Warranty service on Gravely attachments must be performed by an authorized Gravely dealer or Gravely factory branch.
6. This Warranty does not cover the following:
 - (a) Transportation between owner's home or place of business and the dealership. If the dealer provides the transportation of the attachment, he will charge the owner his usual rate for such service.
 - (b) Normal maintenance services and normal replacement of items such as belts lubricants, mower, plow or cultivator blades.
7. GRAVELY MAKES NO OTHER EXPRESS WARRANTIES. ANY IMPLIED WARRANTIES, INCLUDING WARRANTIES AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE PERIOD SET OUT IN PARAGRAPH 3 ABOVE. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE STATEMENT MAY NOT APPLY TO YOU.
8. GRAVELY SHALL HAVE NO RESPONSIBILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE BREACH OF ANY WARRANTY, INCLUDING, BUT NOT LIMITED TO, INCONVENIENCE, RENTAL OR PURCHASE OF REPLACEMENT EQUIPMENT, LOSS OF PROFITS OR COMMERCIAL LOSS. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.
9. This Warranty gives you specific legal rights, and you may have other rights which vary from state to state.
10. A Gravely registration card is supplied with each Gravely attachment. Please complete the card and return it to Gravely at the address listed on the card. The registration card will be used by Gravely for:
 - (a) Recording date of purchase.
 - (b) Notification of owners in compliance with the Consumer Product Safety Act, should any notification be necessary.The return of registration card is not required in order to take advantage of this Warranty.
11. This Warranty is not subject to change or modification by anyone, including Gravely dealers and no Gravely dealer is authorized to make any representations or promises on Gravely's behalf.