

READ THIS MANUAL AND TRACTOR OWNERS MANUAL BEFORE ATTEMPTING TO OPERATE THE EQUIPMENT.



34" SNOWBLOWER WITH C12 CONVERTIBLE GRAVELY

GENERAL

1. These Snowblowers are front-mount units designed and built to give many years of excellent service. The tractor/snowblower combination has all gear drive from the engine to the snow and is recommended for both homeowner and commercial snow removal; has heavy-duty housing, drive, fan, reel and controlled direction of discharge.
2. The Owners Manual includes set up, safety, operator and maintenance instructions. Item numbers used in this manual are in reference to the Illustrated Parts List, fig 1. Contact The Gravelly Dealer for further information.
3. 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 obligation.

4. SPECIFICATIONS

Path Width: 28" or 34"

Extends Tractor Length: 30 inches

Weight: 28" - 210 and 34" - 235 pounds

Drive: steel shafts, universal joints, ball and needle bearings, cast iron housings, overload reel clutch
Construction: heavy gage steel tubing and stamping weldments

Features: 2 stage operation (reel and fan), directional discharge controlled from operators position, replaceable wearstrip and skids

Purpose: general snow removal

Recommended for Gravelly Two Wheel Tractors

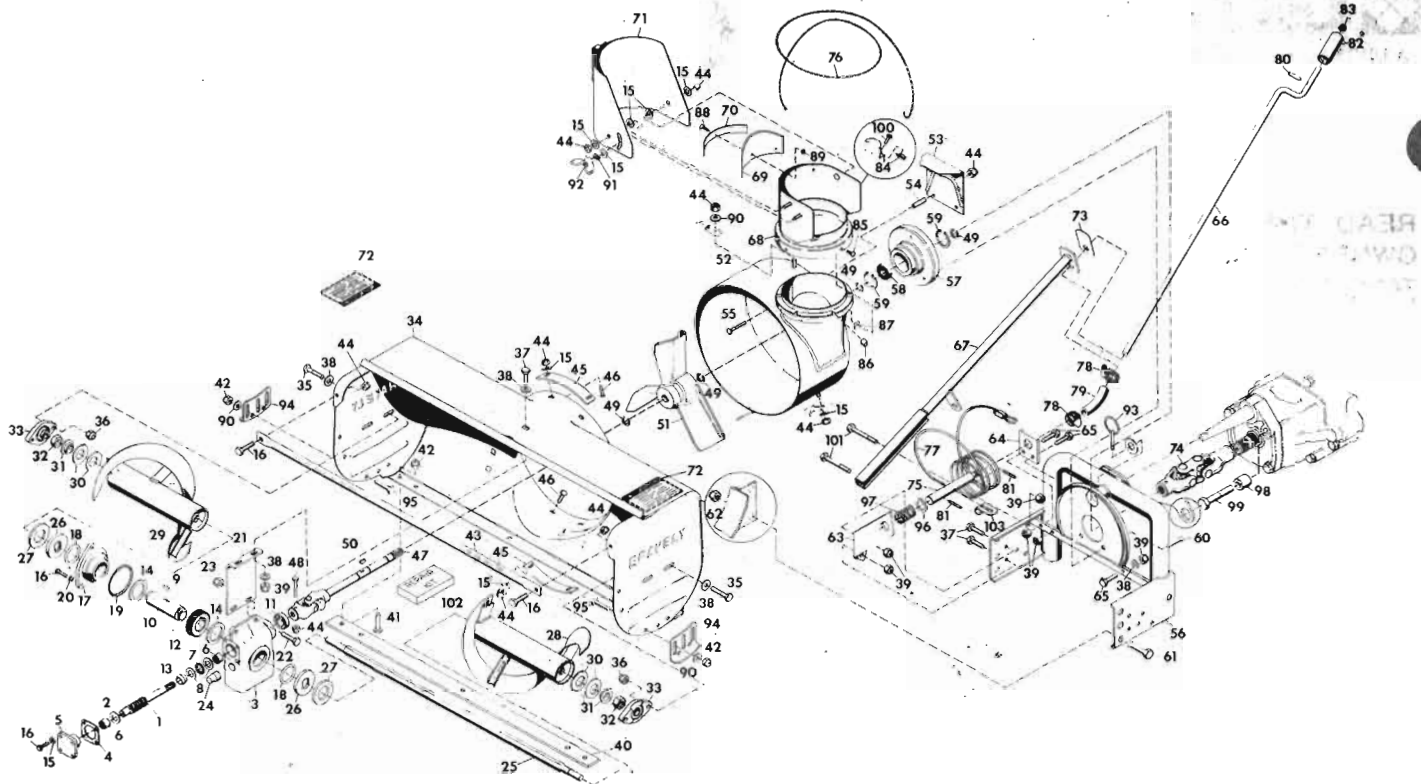
28" Blower recommended for low horsepower tractors

34" Blower recommended for high horsepower tractors

Requires Quick Hitch Kit

Recommended Accessories

Tire Chains



LINE ITEM	PART NO.	DESCRIPTION	LINE ITEM	PART NO.	DESCRIPTION
1	20696P1	Shaft, Snowblower Worm	51	19731A1	Fan Weldment
2	9659P1	Washer, Thrust	52	20994A1	Fan Housing Weldment
3	10573P1	Housing, Snowblower, Gear	53	6370A1	Guide, Cable Weldment
4	6339P1	Gasket, Bearing Cap	54	20928P1	Spacer, Tube Guard
5	6341P1	Cap, Front Pinion Bearing	55	126348	Bolt, 1/4-20 x 2-1/4 RD HD SQ NK
6	9660P1	Bearing, Torrington B-128	56	20708A1	Support Weldment
7	9661P1	Bearing, Torrington #NTC-1427	57	19740P1	Support
8	9662P1	Bearing, Needle Thrust Race	58	19741P1	Bearing, Ball 1.000 x 1.850 x .472
9	12403P1	Key	59	20859P1	Ring, Retaining
10	12402P1	Tube, Reel Gear	60	180021	Bolt, Hex 1/4-20 x 7/8
11	9667P1	Seal, Oil Garlock 94 x 6120	61	180175	Bolt, Hex 1/2-13 x 1-1/4
12	12401P1	Gear, Worm	62	435507	Nut, Lock 1/2-13 Washer Insert Hex
13	10325P1	Spacer	63	20984P1	Bracket, Support
14	12404P1	Bearing Thrust Race Torr TRD-2840	64	20998P1	Support
15	120392	Washer, Flat 9/32 x 5/8 x .065	65	180124	Bolt, Hex 3/8-16 x 1-1/4
16	180020	Bolt, Hex 1/4-20 x 3/4	66	9652P1	Crank
17	12400P1	Cap, Gear Housing	67	20985A1	Crank Support Weldment
18	9668P1	O-Ring 1-3/4 x 2-1/8 x 3/16	68	6404A1	Chute Weldment
19	9669P1	O-Ring 3 x 3-1/4 x 1/8	69	6352P1	Baffle, Deflector
20	120423	Washer, Lock 1/4 INT Tooth	70	10496P1	Retainer, Baffle
21	10579P1	Bracket, Gear Box Support	71	6399A1	Chute, Deflector Weldment
22	181666	Bolt, Hex 7/16-20 x 1	72	19479P1	Decal, Caution
23	274655	Nut, Lock 7/16-20 Type N Hex	73	21020P1	Decal, Snowblower Discharge
24	103880	Plug, Pipe 1/2 in. SQ HD Steel	74	20988P1	U-Joint Assembly Double
25	6485P1	Shaft, Reel 34 in.	75	20989P1	Shaft
26	20697P1	Shaft, Reel 28 in.	76	6381P1	Rope, Wire
27	12399P1	Plate, Drive	77	20997P1	Cable Assembly
28	9657P1	Disc, Friction	78	9630P1	Clamp, Hose SAE Type F
29	10221A1	Reel, Left Weldment 34 in.	79	9612P1	Connector
30	20698A1	Reel, Left Weldment 28 in.	80	454563	Pin, Spring 3/16 x 7/8 CAD
31	10222A1	Reel, Right Weldment 34 in.	81	456542	Pin, Spring 3/16 x 1-1/2
32	20699A1	Reel, Right Weldment 28 in.	82	10211P1	Grip, Handle
33	6493P1	Washer, Belleville Spring, 1-1/4 x 2-1/2	83	10210P1	Cap, Stud
34	6494P1	Washer, Pilot	84	6496P1	Clamp
35	426767	Nut, Hex 7/8-14	85	159582	Screw Mach 8-32 x 3/8 PAN HD
36	12409P1	Bearing, Flange	86	10580P1	Slide
37	20722A1	Body Weldment, 34 in.	87	445339	Nut, Spring Shape 8032 Type A-J
38	20703A1	Body Weldment, 28 in.	88	155886	Screw, Mach 8-32 x 1/2 Flat HD C-Recess
39	180080	Bolt, Hex 5/16-18 x 1-1/8	89	120622	Nut, Mach 8-32 Hex
40	9419455	Nut, Lock 5/16-18 Washer Insert Hex	90	446354	Washer, Flat 5/16 x 7/8 x .065
41	180122	Bolt Hex 3/8-16 x 1	91	120380	Washer, Lock 1/4 SP
42	120394	Washer, Flat 13/32 x 13/16 x .065	92	6464P1	Nut, Deflector Wing
43	456004	Nut, Lock 3/8-16 Washer Insert Hex	93	20718P1	Pin, Self Locking
44	6412P1	Strip, Wear 34 in.	94	17261P1	Shoe-Skid
45	20706P1	Strip, Wear 28 in.	95	180075	Bolt, Hex 5/16-18 x 5/8
46	180075	Bolt, Hex 5/16-18 x 5/8	96	19340P1	Bearing, Thrust Race Torr TRA-1625
47	9413447	Nut, Lock 5/16-18 Type N Hex	97	20999P1	Spring Compression
48	6396P1	Guard, 34 in.	98	19297P1	Bushing
49	20707P1	Guard, 28 in.	99	180188	Bolt, Hex 1/2-13 x 2-3/4
50	9419454	Nut, Lock 1/4-20 Washer Insert Hex	100	180016	Bolt, Hex 1/4-20 x 1/2
	6477P2	Ring, Bearing	101	180130	Bolt, Hex 3/8-16 x 2
	120518	Bolt, 1/4-20 x 3/4 RD HD SQ NK	102	12134P1	Kit, Repair Universal Joint Rockwell STD
	20992A1	Drive Shaft Weldment	103	21144P1	Eye, Single
	180044	Bolt, Hex 1/4-20 x 2			
	14987P1	Ring, Retaining Eaton 329-1			
	124553	Key, Woodruff 1/4 x 1 Hard No. 51			

fig 1 ILLUSTRATED PARTS LIST

33 = FAFNIR GPFTD 3/4

ASSEMBLY INSTRUCTIONS 28" AND 34" SNOWBLOWERS

1. Open carton, remove snowblower and miscellaneous pieces.

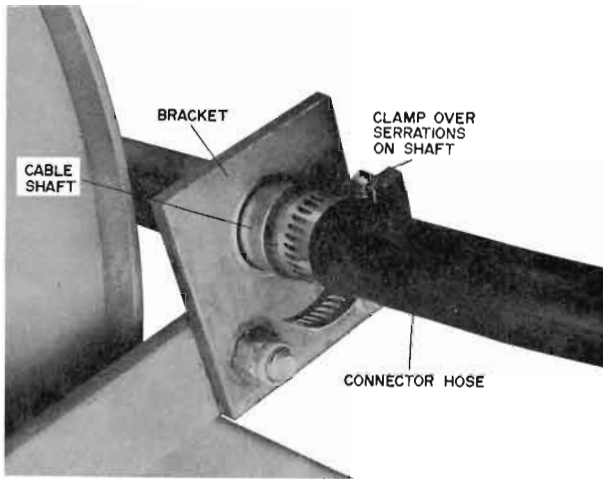


fig 2

2. Position rubber connector, item 79, over small end of control shaft and secure with hose clamp, item 78. See fig 2.
3. Assemble crank support, item 67, to snowblower with two bolts and nuts, items 101 and 39.

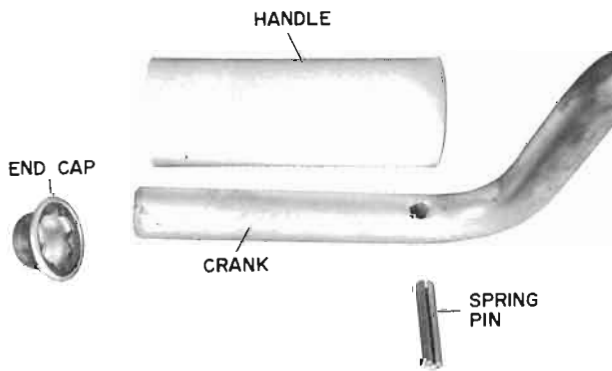


fig 3

4. Insert spring pin, item 80, into crank, item 66. Assemble handle grip and stud cap, items 82 and 83. See fig 3.
5. Position second hose clamp, item 78, over rubber connector. Position crank into both holes of crank support and into connector. Secure with the hose clamp.

Building Up The Chute Deflector

6. Fasten rubber baffle onto chute with retainer strap, nuts and bolts, items 69, 70, 88 and 89.
7. Dab inside of deflector (about the holes and slot) with general purpose grease, item 71.
8. Slide a washer on each mounting stud of chute, item 15; do not use a washer on adjusting stud that goes in slot.
9. Put deflector on chute and fasten it with washers and locknuts, items 15, 44 and 71. Tighten nuts enough to be secure and then back off until deflector can be pivoted.

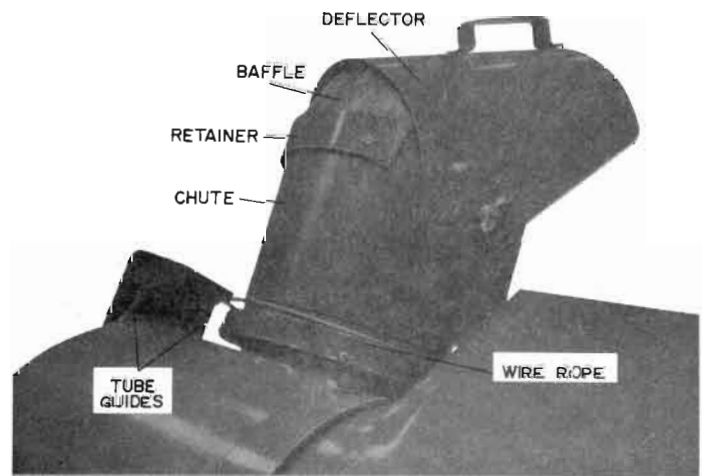


fig 4

10. Put a flatwasher, lockwasher, and wingnut on the adjusting stud, items 15, 91 and 92. Make the wingnut finger tight, fig 4.
11. Crank fan housing to maximum left position; discharge chute will rest on frame. Chute/deflector assembly should point to exact left. If adjustments need to be made, loosen cable hold-down bolt (item 100) to make adjustments, and re-tighten.

Final Assembly

12. Bolt skids onto reel housing, items 94, 90, 95 and 42.

LUBRICATION

1. Oil wire rope where it goes through tube guides, item 76.

TESTING

1. Remove gear box check plug, items 3 and 24. Add SAE 90W EP gear lubricant (if necessary) to bring level up to plug. Replace plug.
2. Turn drive shaft by hand. Reel and fan should turn free and smooth.
3. Push in and turn crank. Discharge port of fan housing should move from side to top to side and as this happens discharge chute should rotate on flange and point from side to front to side.

SAFETY OPERATING PRACTICES

TRAINING

1. Read the tractor owner's guide instruction manual carefully. Be thoroughly familiar with the controls and proper use of the equipment. Know how to stop the unit and disengage the controls quickly.
2. Never allow children to operate equipment. Never allow adults to operate equipment without proper instructions.
3. Keep the area of operation clear of all persons, especially small children and pets.
4. Exercise caution to avoid slipping or falling, especially when operating in reverse.

PREPARATION

1. Thoroughly inspect the area where the equipment is to be used and remove all door mats, sleds, boards, wires and other foreign objects.
2. Disengage all clutches and shift into neutral before starting engine or motor.
3. Do not operate equipment without wearing adequate winter outer garments. Wear footwear which will improve footing on slippery surfaces.
4. Handle fuel with care, it is highly flammable.
(A) Use approved fuel container.
(B) Never add fuel to a running engine or hot engine.

(C) Fill fuel tank outdoors with extreme care. Never fill fuel tank indoors.

(D) Replace gasoline cap securely and wipe up spilled fuel.

5. Adjust collector housing height to clear gravel or crushed rock surfaces.

6. Never attempt to make any adjustments while engine or motor is running (except where specifically recommended by manufacturer).

7. Let engine and machine adjust to outdoor temperatures before starting to clear snow.

OPERATION

1. Do not put hands or feet near rotating parts. Keep clear of discharge opening at all times.

2. Exercise extreme caution when operating on or crossing a gravel drive, walks or roads. Stay alert for hidden hazards or traffic. Do not carry passengers.

3. After striking a foreign object, disengage power take off, and stop engine (motor), then thoroughly inspect the snowblower for any damage, repair the damage before restarting and operating the snowblower.

4. If the unit should start to vibrate abnormally, stop the engine (motor), disengage the power take off and check for the cause. Abnormal vibration is generally a warning of trouble. If unable to locate cause, call your service dealer.

5. When cleaning, repairing, inspecting or unclogging the collector/impeller housing or discharge guide, or making any repair adjustments or inspections, stop engine (motor) and disengage power take off.

6. Take all possible precautions when leaving the equipment unattended. Stop the engine (motor), disengage the power take off, and remove the ignition key.

7. Do not run engine indoors, except when starting engine and for transporting equipment in or out of building. Open outside doors as exhaust fumes are dangerous.

8. Do not clear snow across the face of slopes. Exercise extreme caution when changing directions on slopes. Do not attempt to clear steep slopes.

9. Never operate snowblower without guards, plates, or other safety protection devices in place.

10. Never operate snowblower near glass enclosures, automobiles, window wells, drop offs, etc., without proper adjusting of the snow discharge angle.
11. Do not overload machine capacity by attempting to clear snow at too fast a rate.
12. Never operate machine at high transport speeds on slippery surfaces. Use care when backing.
13. Keep area of operation clear of all persons, especially small children and pets. Never direct the discharge toward bystanders or allow anyone in front of the unit.
14. Disengage the tractor power take off when transporting or not in use.
15. Use only attachments and accessories approved by the manufacturer of the snowblower (such as chains).
16. Never operate the snowblower without good visibility or light.
17. Never store with fuel in fuel tank inside a building where open flames or sparks are present. Allow the engine to cool before storing in any enclosure.
18. Run machine a few minutes after throwing snow to prevent freeze up of collector/impeller.
19. Never operate with sulky.

CONNECTING TO THE TRACTOR

1. STOP engine, disengage PTO, and put direction control in NEUTRAL.

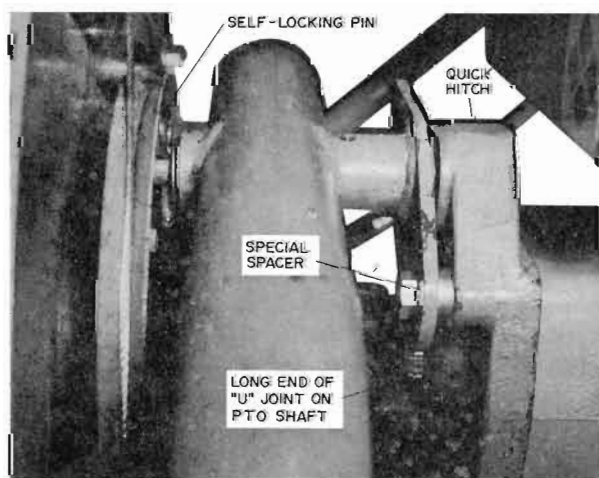


fig 5

2. Fasten Quick Hitch Kit to advance casting of the tractor, using bushing and bolt, items 98 and 99, as shown fig 5.
3. Coat pivot pin and PTO shaft of quick hitch with general purpose grease.
4. Adjust the tractor stand so that the pivot pin lines up with the snowblower pivot support weldment.
5. Position short end of "U" joint on end of snowblower fan shaft.
6. Guide the pivot pin into snowblower support and at the same time start the universal joint on the PTO shaft.
7. Secure with washer and self-locking pin, item 93. (Washer supplied with Quick Hitch Kit, self-locking pin supplied with snowblower).
8. Raise the tractor stand. Be sure the "U" joint is on the PTO shaft.

ROUTINE MAINTENANCE

1. Check oil level in gearbox before first use and then once a season, item 3. Check more often if signs of leakage are present. Visually inspect for leaks before each use. A repair should be made if leakage is substantial. Level must be up to check plug, item 24, use SAE 90W EP gear oil. Procedure for checking oil level.
 - A. Have snowblower level.
 - B. Unscrew plug, item 24.
 - C. Add gear oil (if necessary) to bring level up to hole.
 - D. Replace plug.
2. Adjust reel overload clutch as necessary, see ADJUSTMENTS.
3. After each use inspect reel, fan, skids and wearstrip for wear or damage. Repair or replace as necessary and keep the equipment in a safe working condition.
4. Periodically check all fasteners for tightness. Maintain snowblower in safe operating condition.
5. Periodic oiling of the tube guide, item 53, and areas where the fan housing meets the reel housing will aid operation, items 52 and 34.

ADJUSTMENTS

1. **DISCHARGE DIRECTION CONTROL:** Push and turn crank to direct blown snow left, forward or right. Since this adjustment is made from the operators position, it can be done any time during normal operation of the unit.
2. **CHUTE DEFLECTOR:** Used in conjunction with the discharge chute. Because the operator must leave the operator's position to adjust it. STOP the tractor engine and put the PTO in the OUT position before adjusting the deflector. Normally, the deflector is used to limit the distance the snow is blown. Procedure: Loosen wingnut, adjust deflector, tighten wingnut finger tight.
3. **GROUND CLEARANCE:** Adjusted by the positioning of the skids, item 94, on the sides of the reel housing, item 34. Generally, the snowblower can be fully lowered when removing snow from pavement. When using snowblower on crushed rock or gravel surfaces, adjust the skids so the snowblower will not pick up and throw stones, Procedure:
 - A. STOP engine, disengage PTO.
 - B. Raise the snowblower allowing the skids to be above the ground.
 - C. Loosen nuts and bolts fastening skids to reel housing.
 - D. Adjust each skid the same amount.
 - E. Tighten fasteners and remove from support.

4. **REEL OVERLOAD CLUTCH:** To be adjusted when reel stalls under moderate load while fan still turns. Procedure:
 - A. STOP engine, disengage PTO.
 - B. Block fan with piece of wood or facsimile to keep it from turning when adjusting reel clutch.
 - C. Tighten reel nut, item 32, to approximately 85 ft. lbs. of torque. Similar tightness can be reached with an 18" handle wrench when used by an average man.
 - D. Remove "block" from fan.

OPERATION

1. Read the tractor Owners Manual. Know how to operate and stop the tractor quickly in an emergency.
2. Before starting the engine adjust the skids for adequate ground clearance.
 - A. On smooth, paved surfaces the snowblower may be lowered to where the wearstrip is flush with the pavement.

B. On loose or gravel surfaces, adjust the snowblower high enough to clear the gravel so it will not pick up and throw stones.
See ADJUSTMENTS section for procedures.

3. Adjust discharge chute and deflector to desired position: see ADJUSTMENTS section for procedure.
4. Start engine; allow it to warm up a few minutes.
5. To begin, select the tractors slowest ground speed. Engage PTO, move throttle to FULL THROTTLE and start forward.
6. Generally, on the first pass, a full width swath must be made.
 - A. In snow that is deep and/or wet (most difficult for the snowblower to handle) stop forward motion as necessary until the unit clears itself. Keep the engine at full throttle.
 - B. In light snow that moves freely (dry and not very deep), change to a higher gear. Keep the engine at full throttle.
7. During the second and remaining passes, take the widest possible cut the snowblower can handle without having to stop and wait for it to clear. Keep the engine at full throttle.
8. Some trials may be necessary to find an optimum ground speed and width of cut. Keep the engine at full throttle.
9. Disengage PTO (OUT position) when transporting.

OPERATING TIPS

1. Clear the work area of foreign objects and debris before snow falls to assure safe operation.
2. Direct discharge over snow yet to be moved to avoid blowing snow on cleared areas.
3. Winterize the tractor: Maintain battery at full charge, use proper viscosity oil in engine. Keep fuel tank full to prevent condensation of water vapor inside the tank.
4. Use accessories (listed on cover page) to increase control and safety of operation.
5. Operate the engine at FULL THROTTLE when running the snowblower.

REMOVAL FROM THE TRACTOR

1. STOP engine, disengage PTO.
2. Remove self-locking pin, item 93. Remove snowblower and "U" joint from tractor.

EXTENDED STORAGE

1. Remove snowblower from tractor.
2. Check oil level in gearbox, item 3. Add oil if necessary (see LUBRICATION).
3. Thoroughly dry snowblower.
4. Inspect reel and fan for wear or damage. Replace any worn out parts such as skids or wearstrip.
5. Paint or grease any exposed metal surfaces that might rust.

LIMITED WARRANTY

Clarke-Gravely Corporation (Gravely) will replace for the original purchaser, without charge, any part or parts manufactured by Gravely which prove, in the judgment of Gravely, to be defective in material or workmanship (i) within ninety days from delivery to the original purchaser in the case of products used for commercial purposes; (ii) within one year from delivery to the original purchaser in the case of products not used for commercial purposes. The term "commercial purposes" shall mean any use of the product other than to maintain the residence of the owner of the product.

Costs of transporting a unit to and from the dealer are the responsibilities of the owner. When such transportation (service) is performed by the dealer, the dealer will charge the owner his usual rate for such services.

This warranty shall not apply to:

- (a) component parts or attachments, not manufactured by Gravely, and warranted by the original manufacturer;
- (b) normal maintenance services or adjustments and normal replacement items such as spark plugs, belts, oil filters and air filters.

GRAVELY MAKES NO OTHER EXPRESS WARRANTIES. GRAVELY MAKES NO IMPLIED WARRANTY OF ANY KIND, WHETHER AS TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE EXCEPT THAT, TO THE EXTENT ANY SUCH IMPLIED WARRANTY MAY NOT BE EXCLUDED CONSISTENT WITH THE REQUIREMENTS OF LAW, SUCH WARRANTY OR WARRANTIES ARE EXPRESSLY LIMITED IN DURATION TO THE TIME LIMIT STATED ABOVE TO THE ORIGINAL PURCHASER.

EXCEPT AS OTHERWISE REQUIRED BY LAW, 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 OTHER COMMERCIAL LOSS.

This warranty is not subject to change or modification by Gravely field representatives (Branch or District Sales Managers) or Gravely dealers.

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