



# 32" SNOWBLOWER OPERATOR'S MANUAL

GRAVELLY  
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 **GRAVELLY®**

## NOTE

Read this manual carefully and learn to operate and service your snowblower before using it.

To keep the warranty, the snowblower must be maintained and operated as directed in this manual.

All references to "left-side", "right-side", "Front" and "back" are given from the operator's position.

Use the serial numbers to ensure prompt and correct service when ordering parts, requesting service or making inquiries.

SNOWBLOWER SERIAL NUMBER: \_\_\_\_\_



Look for this symbol to point out important safety precautions. It means -- **ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED.**



**CAUTION:** A CAUTION identifies safe operating practices or indicates unsafe conditions that could result in personal injury.



**WARNING:** A WARNING describes a condition where failure to follow the instructions could result in severe personal injury.



**DANGER:** A DANGER designates a condition where failure to follow instructions or heed warning will most likely result in serious personal injury or death.

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## SECTION 1

### INSTRUCTIONS FOR SAFE OPERATION

Improper use of this equipment can injure people and damage the equipment. People using or servicing this equipment must read and follow the instructions in this manual.

It is important to understand that this manual and any other Gravely instruction manuals do not cover every possible danger. It is impossible for Gravely to know all possible dangers in operating and servicing the equipment.

The purchaser must give these instructions to the people operating and maintaining this equipment. These people must use eye and foot protection.

#### **1.1 Training**

1. Read this manual and the tractor operator's manual carefully. Follow the instructions, cautions, warnings and dangers listed on decals and in the operator's manuals.
2. Learn the location and function of all controls.
3. Learn how to use the controls to stop the wheels and snow thrower quickly.
4. Never permit children to operate the equipment. Do not allow adults to operate unit without proper instructions.
5. Safe operation of this equipment requires your complete and unimpaired attention at all times. Do not operate unit after or during the consumption of medication, drugs or alcohol.
6. Use only Gravely accessories and attachments.
7. Keep people and animals away from the operating area.

#### **1.2 Preparation**

1. Use caution with gasoline. Gasoline is very flammable and its vapors are explosive. Keep it in a clean and approved fuel container. Never put gasoline in the fuel tank while the engine is running or hot. Clean up spilled gasoline before starting engine. Never allow smoking materials, sparks or flame (match, pilot light, etc.) near equipment or fuel container.
2. Check fuel supply before starting engine. Fill fuel tank outdoors with extreme care. Do not fill fuel tank indoors, when engine is running or when engine is still hot from operation. Replace fuel cap securely and wipe up spilled fuel and allow vapors to dissipate before starting engine.

3. Inspect and clear the work area (prior to snow) of rocks, glass, metal, bones and any other foreign objects that might be picked up and thrown or tangled in the snow thrower. Stay alert for holes and other hidden hazards. Mark obstacles that will be hidden by snow.
4. Before starting the engine, put the PTO control in the "OFF" position and the direction control lever in the neutral "N" position.
5. When hauling the equipment, connect the chassis to the transporting vehicle. Never connect from control levers, rods, or like items that could be damaged.
6. Adjust the snowblower skids to lift the snowblower above gravel so that it does not get into the snow thrower and is discharged.
7. Wear eye protection to protect eyes from objects which may be thrown from the machine. Do not wear loose clothing. Wear adequate winter outer garments and footwear which will improve footing on slippery surfaces.
8. Before making adjustments or servicing, move the PTO control to "OFF" position, turn the ignition switch to "OFF", remove the ignition key and wait until all moving parts completely stop.

### **1.3 Operation**

1. Be certain that all shields, guards, and interlock switches are in position and functioning properly.
2. Do not use the equipment in the dark without adequate lighting.
3. Keep the equipment in good condition. Maintain it as directed in this manual.
4. Keep away from moving parts. Keep away from the discharge chute at all times.
5. Do not let people other than the operator near the operating equipment.
6. Use a low gear, high engine speed and put the PTO control in the "ON" position before moving into the snow. Engage the direction control lever slowly when operating on slopes.
7. Look for and keep away from hazards.
8. After hitting an object, move the PTO control to the "OFF" position, turn the ignition key to the "OFF" position, remove ignition key and wait for all moving parts to stop, thoroughly inspect the snow thrower for any damage and repair before restarting and operating the snow thrower.
9. Look behind when operating in reverse. Look for people and hazards.

10. Operate only from the operator's position, just behind the handlebars. Always be sure of your footing and keep a firm hold on the Handles. Walk, never run.
11. Do not clear snow across the face of slopes. Exercise extreme caution when changing direction on slopes. Do not attempt to clear steep slopes.
12. If there is a sudden change in the sound or vibration of the equipment, stop the engine and check for damage. Repair any damage or failure before continuing operation.
13. Never run the engine indoors except to move it outside and only with doors open. Exhaust fumes are dangerous.
14. Go slowly on slick surfaces. Exercise caution to avoid slipping or falling, especially when operating in reverse.
15. Disengage power to snow thrower when unit is being transported or is not in use.
16. Do not overload machine capacity by attempting to clear snow at too fast a rate.
17. Exercise extreme caution when operating on or crossing gravel drives, walks or roads. Stay alert for hidden hazards or traffic.
18. Follow traffic laws when operating on or near a road.
19. Direct snowblower discharge away from windows, cars, buildings and people which could be struck by objects thrown with the snow. Thrown objects can cause severe injury.
20. Before leaving the operator's position, move the PTO control in the "OFF" position, turn the ignition key to the "OFF" position and remove the ignition key to prevent unauthorized use.
21. Allow the snowblower to clear of snow before placing the PTO control in the "OFF" position. Stop the engine and remove remaining snow and ice before putting the equipment in storage.

#### **1.4 Maintenance and Storage**

1. Replace all parts that become damaged or lost.
2. Check the operation of the operator presence controls before operating the equipment.
3. Do not overspeed the engine. Do not override the governor.

4. Do not touch equipment parts which might be hot from operation. Before attempting to maintain, adjust or service allow such parts to cool.
5. Keep all nuts, bolts and screws tight and be sure equipment is in safe working condition. Check shear bolts and all hardware at regular intervals.
6. Refer to storage section of this manual and the tractor manual for important instructions if equipment is to be stored for an extended period.
7. Never store equipment with fuel in tank inside a building where fumes may reach an open flame or spark. Allow engine to cool before storing in any enclosure.
8. Maintain or replace safety and instruction decals as necessary.



## SECTION 2

### OPERATING INSTRUCTIONS

#### 2.1 Preparation:

1. Read the tractor and snowblower operator's manuals. Be familiar with all controls and follow the safety precautions outlined in these manuals. Know how to STOP the tractor and snowblower quickly in an emergency. See figure 1.
2. Check the oil level in the gear case. Add oil as required to maintain proper level. See section 3.
3. Service the tractor as described in the tractor operator's manual.

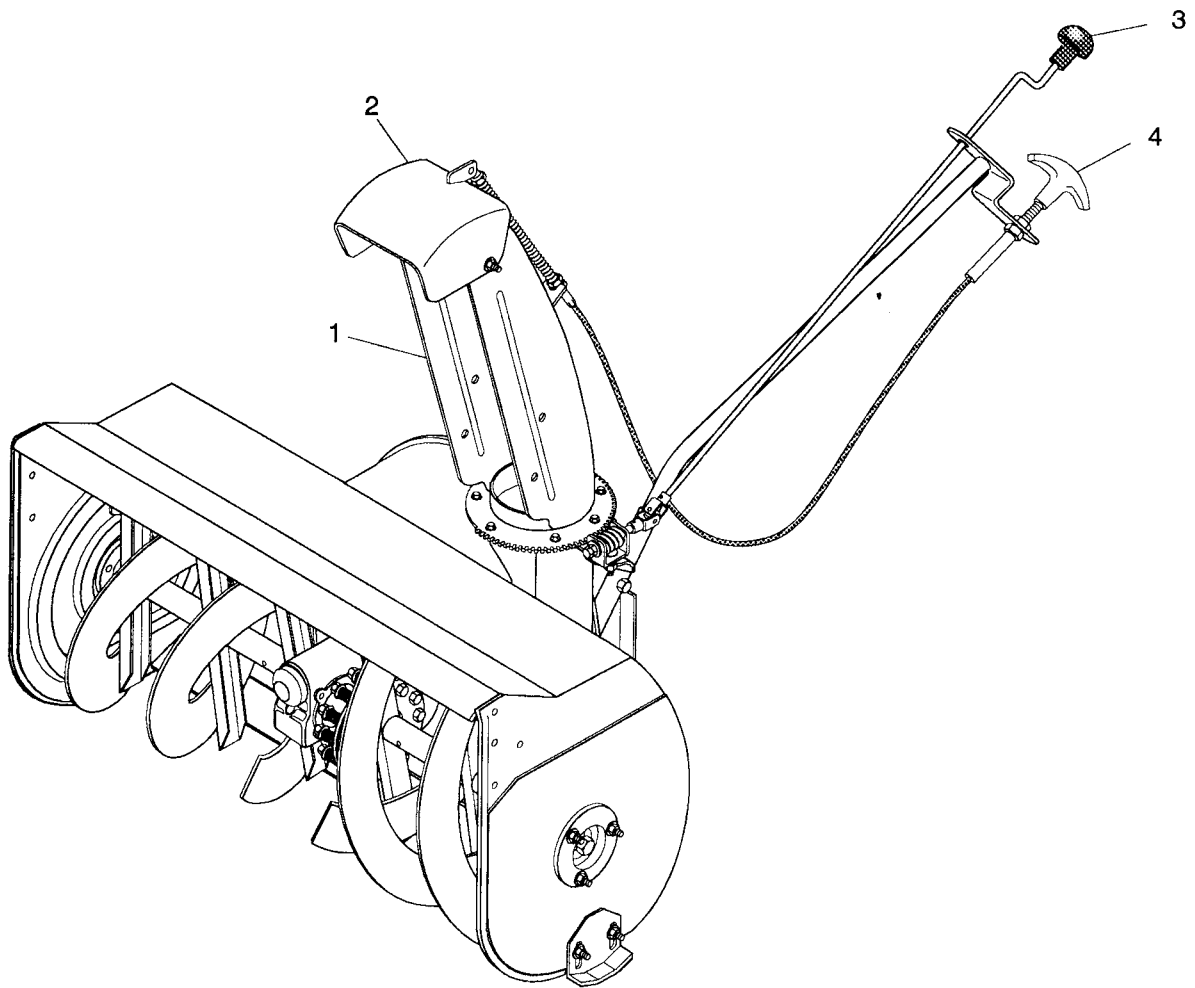


**WARNING:** Moving parts can amputate fingers, toes and cause serious injury.

- a. Before servicing, cleaning or making adjustments to any attachment:
  1. Disengage power to attachment.
  2. Shut off engine.
  3. Make sure attachment parts have stopped revolving.
  4. Disconnect engine spark plug cable to prevent accidental restart.
- b. Keep children, bystanders and pets out of the working area.
- c. Keep hands, feet and clothing away from power driven parts.
- d. Snow is best removed as soon as possible after it has fallen.
- e. Snow should be discharged with the direction of the wind.
- f. Adjust the skids and scraper blade according to the instructions in section 3.

#### 2.2 Operation:

1. Adjust the deflector angle using the chute deflector control at the operator's left. Raising the deflector will cause snow to be thrown further. Lowering the deflector will shorten the distance that the snow is thrown. Turn the "T" handle to adjust the deflector; PUSH to lower the deflector; PULL to raise the deflector. A quarter turn of the handle will lock the deflector in position.



1. Discharge Chute
2. Chute Deflector
3. Discharge Chute Control
4. Chute Deflector Control

**Figure 1**

2. Rotate the chute crank to turn the discharge chute so that the snow will be thrown in the desired direction.



**CAUTION:** The auger and gear case are protected by a slip clutch designed to slip if a solid object enters the auger. The auger will start running when the obstruction is cleared if the PTO control is in the "ON" position.

3. For maximum snow removal and discharge, operate the engine at full throttle and regulate the travel speed with the gear control lever. Put the range control in the "LO" position.

## SECTION 3

### SERVICE INSTRUCTIONS

#### 3.1 Lubrication:

1. Check gear case oil level periodically. Position snowblower in the lowest position on a flat surface. Oil level must be up to oil fill hole. Change oil every 25 hours or once each season, whichever comes first. Use SAE 80W-90 gear oil. See figure 2.
2. Grease discharge chute base shown in figure 3, approximately once a season.
3. Service the tractor according to the instructions in the tractor operator's manual.

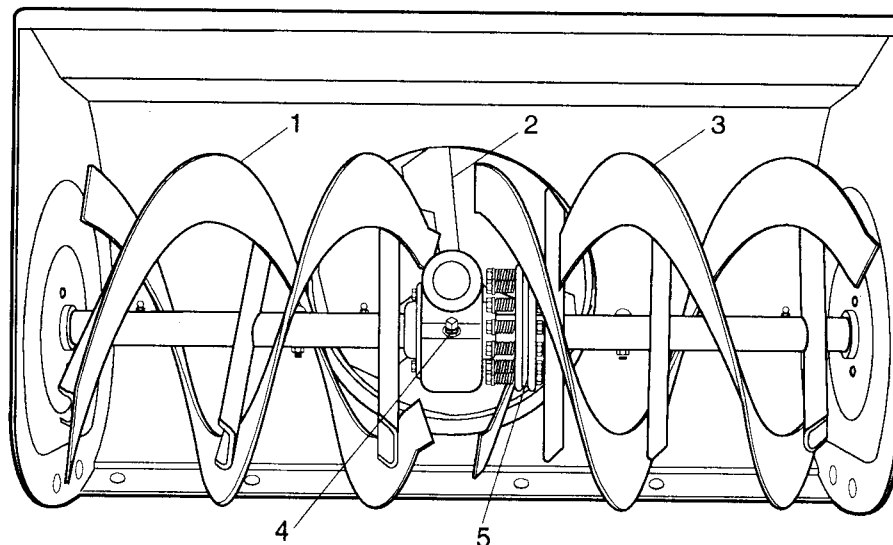
#### 3.2 Skid Adjustment:

When operating on a rough surface or over gravel, lower the skids so that the snowblower will be raised above the gravel or ground.

Adjust by loosening the mounting bolts, sliding to the desired position, and retightening the bolts.

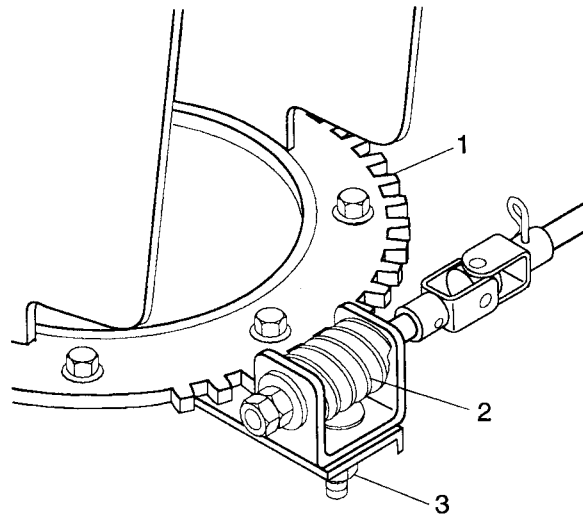
#### 3.3 Scraper Blade Adjustment:

When the scraper blade has worn near the brace, loosen the mounting bolts and advance the blade and retighten the bolts. Replace the blade when all the adjustment has been used.



- |                |                  |
|----------------|------------------|
| 1. Right Auger | 4. Oil Fill Plug |
| 2. Fan         | 5. Slip Clutch   |
| 3. Left Auger  |                  |

Figure 2



1. Discharge Chute Base
2. Worm
3. Nut

**Figure 3**

### **3.4 Chute Crank Adjustment**

1. Loosen the nut securing the worm clevis to the bracket. See figure 3.
2. Position the worm so that it aligns with the teeth on the discharge chute so that there is little clearance between the worm and the teeth.
3. Tighten the nut.
4. Operate the chute crank.
5. Readjust if it does not rotate easily.

### **3.5 Slip Clutch Adjustment:**

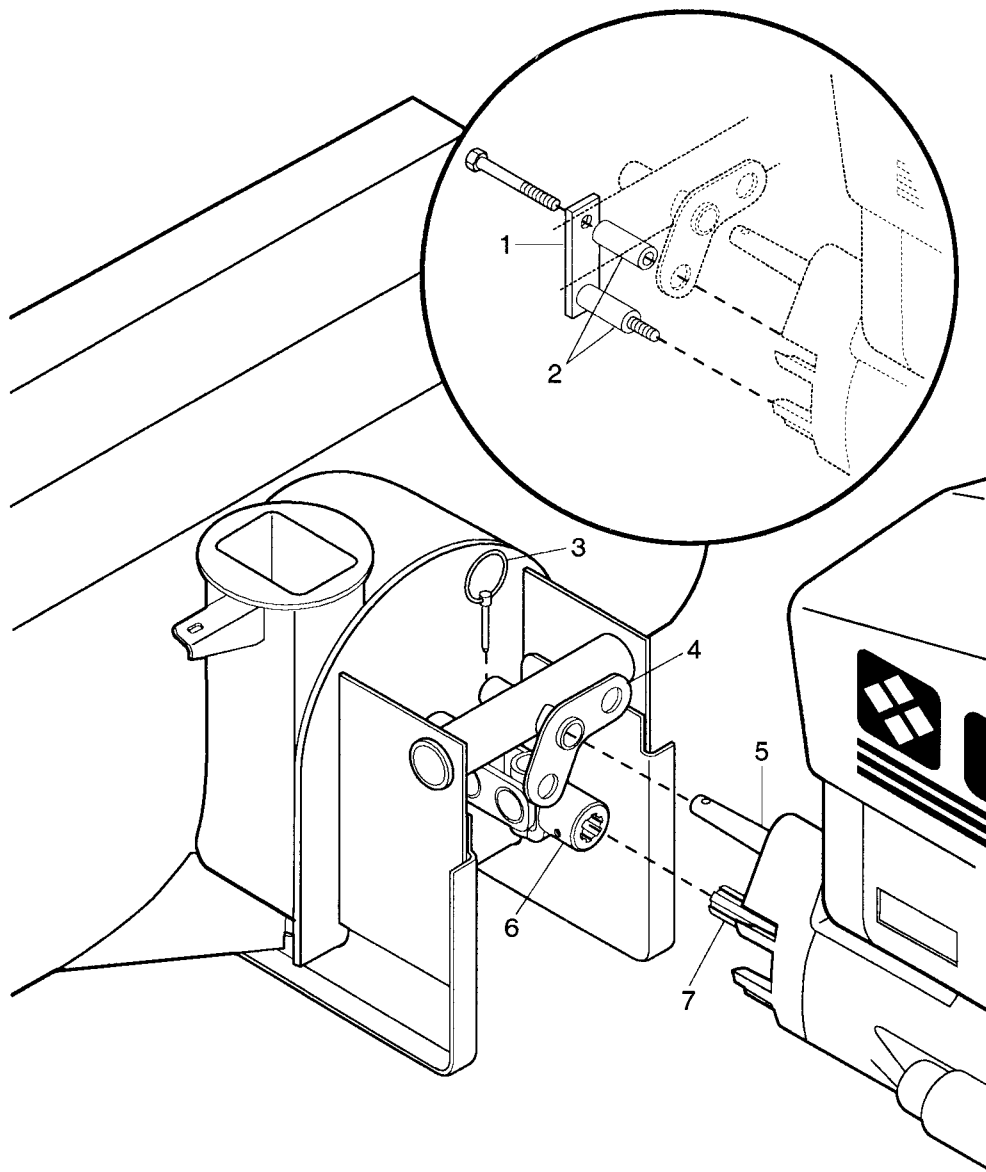
1. Tighten the twelve hex locknuts in a cross sequence until the springs are fully compressed.
2. Back off one full turn on each nut in a cross sequence.

### **3.6 Installation:**

1. Drive the tractor to the rear of the snowblower. The tractor must be fitted with a quick hitch pin. See figures 3 and 4.
2. Turn the engine off.
3. Put the tractor in gear and place the direction control lever in the forward position.
4. Put the PTO control in the "ON" position.
5. Slide the snowblower onto the quick hitch pin and at the same time, guide the U-joint assembly onto the PTO shaft.
6. Put the self-locking pin in the quick hitch pin.
7. Mount the locking strap and two spacers on the left side of the quick hitch adapter with two 1/2-13x4.5 hex bolts. The top spacer goes through the lock strap (which is part of the housing weldment) to keep the snowblower from rotating.
8. Put the PTO control in the "OFF" position.
9. Put the direction control lever in the neutral position.
10. Raise and lock the kick stand.

### **3.7 Removal:**

1. Turn off the engine.
2. Lower and lock the kick stand.
3. Remove the locking strap and spacers.
4. Remove the pin in the quick hitch pin.
5. Put the snowblower off the quick hitch pin or back the tractor away from the snowblower.



- |                     |                     |
|---------------------|---------------------|
| 1. Lock Strap       | 5. Quick Hitch Pin  |
| 2. Spacers          | 6. U-Joint Assembly |
| 3. Self Locking Pin | 7. PTO Shaft        |
| 4. Locking Strap    |                     |

**Figure 4**

## SECTION 4

### STORAGE

4.1 Clean and lubricate the snowblower as directed in section 4.



**CAUTION:** Do not use harsh or abrasive cleaners on any painted surface. Do not allow gasoline or oil to remain on any silk screened surfaces.

4.2 Inspect parts for damage and wear.

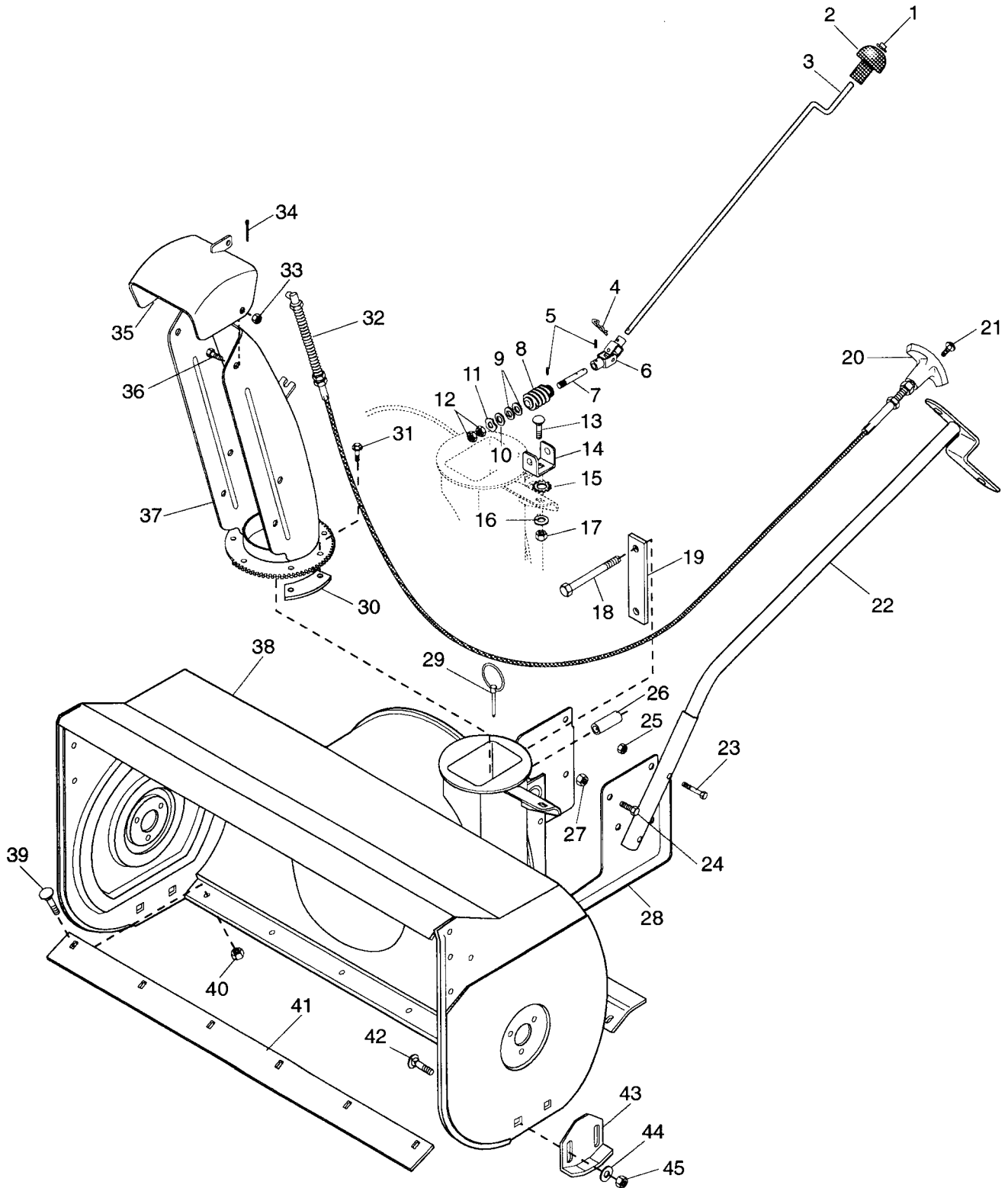
4.3 Put paint or lubricant wherever paint has been removed.

4.4 Place in a cool, dry area.

SECTION 5

ILLUSTRATED PARTS AND PARTS LISTS

**Blower Housing and Controls**

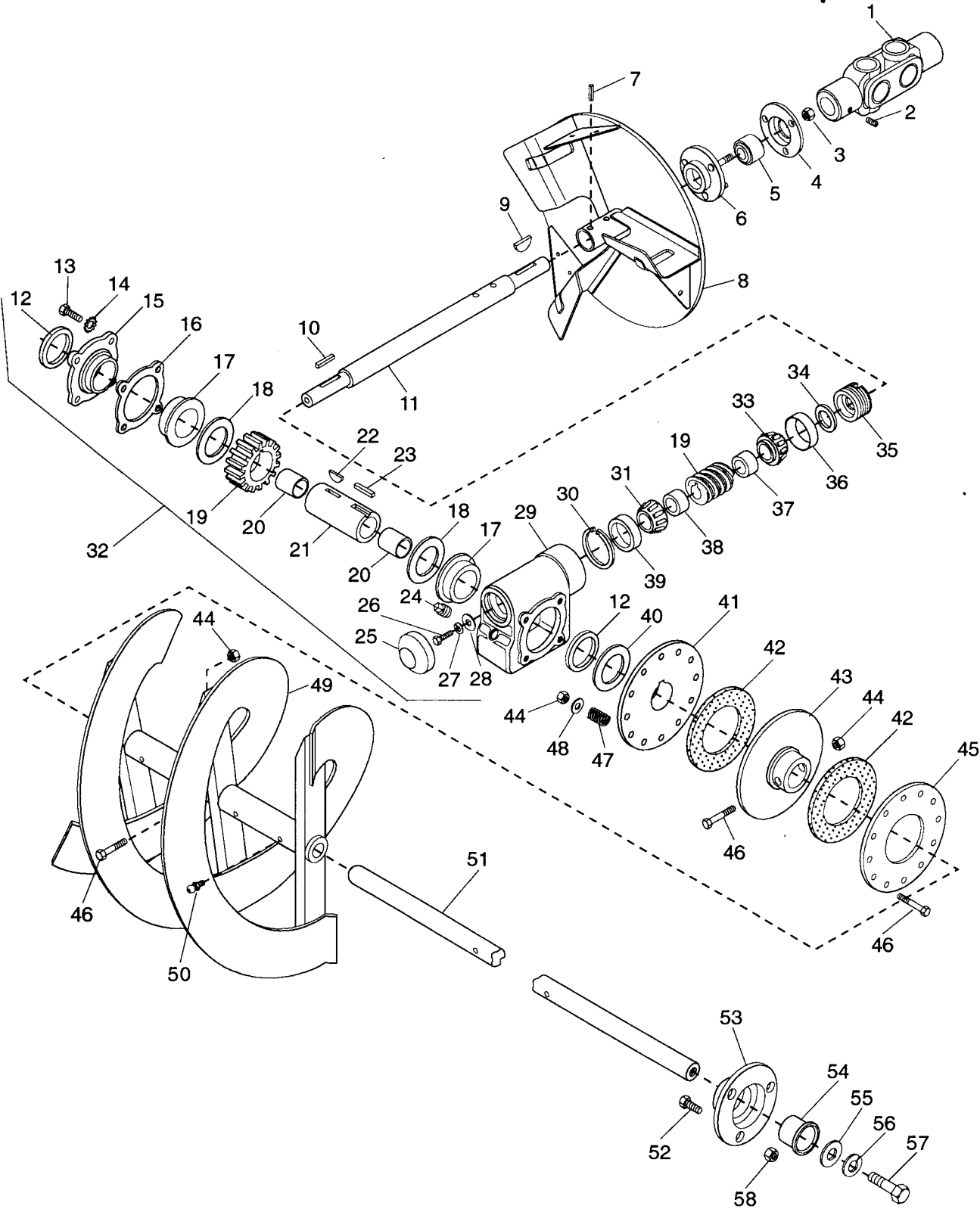




# Blower Housing and Controls

ITEM NO.	OLD PART NO.	NEW PART NO.	DESCRIPTION	QTY
1	036903	01019800	Cap 3/8 Rod	1
2	036902	07508300	Knob	1
3	038849	03330600	Crank Chute Control	1
4	036075	06701000	Pin-Hair Internal .08 x .38 x 1.42	1
5	415236	05808600	Pin-Roll .125 x .750	2
6	039376	52405000	Universal Joint Assembly	1
7	038841	02451400	Worm Shaft	1
8	038839	02450000	Worm Gear Left Hand	1
9	038840	06416800	Washer-Plastic .390 x .875 x .062	2
10	038842	06406700	Washer-Flat-Steel .390 x .875 x .18	1
11	038843	01320200	Wave Washer	1
12	124829	06500100	Nut-Jam .375-16	2
13	126216	06203400	Bolt-Round Head Square Neck .31-18 x .75	1
14	038837	02212300	Worm Clevis	1
15	063035	06303500	Washer-Lock External .375 x .035	1
16	063023	06302300	Washer-Lock .313 x .062	1
17	120376	06501500	Nut-Hex .312-18 Grade 2	1
18	059227	05922700	Bolt-Hex .50-13 x 4.50	2
19	035053	08538200	Strap, Locking	1
20	049108	07517100	Knob-Black	1
21	159658	06108600	Screw-Machine 8-32 x .75	1
22	038846	03329700	Crank Support	1
23	180130	06216600	Bolt-Round Head Square Neck .31-18 x .75	2
24	180175	05914600	Bolt-Hex .50-13 x 1.25 Grade 5	4
25	065122	06512200	Nut-Locking Top .375-16	2
26	035054	08538800	Bushing Sleeve .501 x 1.00 x 2.30	2
27	435507	06512900	Nut-Locking-Nylon .50-13 Grade 5	4
28	033368	03336800	Support Bracket	1
29	021244	07014300	Pin-Self-Lock .25 x 1.00	1
30	049103	02463500	Chute Clamp	4
31	074113	07411300	Screw-Tapping 12-24 x .500	8
32	049107	06917800	Control Cable	1
33	413534	06524800	Nut-Locking-Center .625-10 Grade 2	2
34	121222	06700100	Pin-Cotter .09 x .75	1
35	049104	53301800	Deflector w/Decal	1
36	180120	05915400	Bolt-Hex .38-16 x .75 Grade 5	1
37	038835	02449953	Discharge Chute	1
38	049154	03335300	32 Sno Thro Housing	1
39	062092	06209200	Bolt-Round Head Square Neck .31-18 x .875	6
40	413447	06504200	Nut-Locking .312-18	6
41	040457	03331500	Scraper Blade 32 In	1
42	120915	06201300	Bolt-Round Head Square Neck .38-16 x 1.0	4
43	040825	03075553	Runner-Skid Shoe	2
44	120394	06404300	Washer-Flat-Steel .406 x .812 x .065	4
45	065039	06503900	Nut-Locking .375-16	4
NS	044077	03573000	Decal, Gravel Logo	1
NS	033927	03542100	Decal, Danger Foot	2
NS	033926	03542400	Decal, Danger Hand	1
NS	038847	03330700	Decal, Chute	1
NS	038848	03330800	Decal Deflector	1

# Gear Case and Rake



# Gear Case and Rake

ITEM NO.	OLD PART NO.	NEW PART NO.	DESCRIPTION	QTY
1	038834	03329953	Joint Assembly	1
2	102592	06004000	Screw-Set .38-16 x .38	1
3	065040	06504000	Nut-Locking-Center .250-20	3
4	051655	03086100	Bearing Flange	1
5	051656	05418200	Bearing-Ball 1.0 x 2.0 x .56	1
6	051657	03086200	Bearing Flange	1
7	036869	05801500	Pin-Roll .313 x 1.75	2
8	049155	03084500	Fan, 16 Inch	1
9	066052	06605200	Key-Woodruff .188 x .875 x .375 Hard	1
10	036230	06601300	Key, Square .188 x 1.00 x .188	1
11	049156	03335200	Worm Shaft 16	1
12	036863	05607000	Seal 1.625 x 2.125 x .250	2
13	059001	05900100	Bolt-Hex .25-20 x .75 Grade 2	4
14	063017	06301700	Washer-Lock External .250 ID	4
15	036861	02401300	Gear Case Cover	1
16	036862	00200800	Gasket	1
17	036860	05505900	Bushing-Flange 1.625 x 1.87 x 1.68 x 2.250	2
18	036859	06408700	Washer-Flat-Steel 1.625 x 2.500 x .012	2
19	036858	52400900	Worm & Gear Service Assembly	1
20	037532	05513900	Bushing-Sleeve 1.125 x 1.250 x 1.000	2
21	037530	03054700	Gear Case Shaft	1
22	038820	06604800	Key-Feather .25 x .875 x .25	1
23	037536	06604700	Key-Square .25 x .625 x .375	1
24	035945	00113800	Pipe Plug	1
25	036856	00403700	Dust Cap	1
26	180077	05913500	Bolt-Hex .31-18 x .75 Grade 5	1
27	120379	06304800	Washer-Lock .313	1
28	120393	06429200	Washer-Flat-Steel .344 x .688 x .065	1
29	037524	03187900	Gear Case	1
30	036921	05707500	Ring-Retaining-Internal 1.781 x .062	1
31	018446	05404500	Bearing-Cone .750 x .61	1
32	037978	53118700	Gear Case Assembly	1
33	037526	05406900	Bearing-Cone 1.0 x .58	1
34	037528	05604600	Seal 1.125 x 1.375 x .125	1
35	037529	03188200	Adjustment Plug	1
36	037527	05407000	Bearing-Cup 1.980 x .420	1
37	036352	03188100	Bearing Spacer	1
38	036852	00200500	Bearing Spacer 1.12 x 1.52 x .5	1
39	018445	05404400	Bearing-Cup 1.78 x .475	1
40	037535	06421100	Washer-Flat-Steel 1.625 x 2.500 x .060	1
41	037537	03055000	Driver	1
42	037538	03055100	Friction Disc	2
43	037539	03055200	Driven Plate	1
44	065124	06512400	Nut Jam Nylon 1.0 - 8	15
45	037540	03055300	Pressure Plate	1
46	180087	05917000	Bolt-Hex .31-18 x 2.00 Grade 5	15
47	083216	08321600	Spring-Compression .156 x .665 x .75	12
48	064057	06405700	Washer-Flat-Steel .323 x .625 x .062	12
49	038832	03329200	32 Inch Right Side Rake	1
	038833	03333300	Spool Bracket	1
50	411027	06300600	Washer-Lock .500 x .151	4
51	038831	03329100	32 Inch Rake Shaft	1
52	036873	07005800	Bolt-Serrated Neck Slotted .25-20 x .50	6
53	036871	02437400	Bearing, Support	2
54	036872	05503500	Bushing-Flange 1.000 x 1.12 x .62 x 1.50	2
55	036840	06404700	Washer-Flat-Steel .511 x 1.441 x .125	2
56	131101	06300600	Washer-Lock .500 x .151	2
57	180173	05930000	Bolt-Hex .50-13 x 1 Grade 5	2
58	065056	06505600	Nut-Locking-Flange .250-20	6
59	037978	53118700	Gear Case Assembly	1

## SECTION 6

### SET-UP INSTRUCTIONS

- 6.1 Remove the snowblower from the shipping container.
- 6.2 Fasten the crank support to the left side of the snowblower frame with the two 3/8-16 x 2.00 hex bolts and 3/8-16 lock nuts.
- 6.3 Remove the clamps from the discharge chute.
- 6.4 Put a film of grease on the bottom of the discharge chute.
- 6.5 Set the discharge chute on the blower outlet, aligning the teeth with the worm. Replace the clamps.
- 6.6 Slide the chute crank from the rear through the top hole in the crank support.
- 6.7 Slide the front end of the crank into the U-joint of the worm gear assembly and secure with a hair pin cotter.





## Five Year Limited Warranty


### GEM, PROFESSIONAL G AND TWO-WHEEL PRODUCTS


Gravely hereby warrants to the original purchaser that all GEM, Professional G and Two-Wheel products shall be free of defects in material and workmanship for **five years** from date of purchase when used exclusively for personal or household use. Gravely will provide for the replacement of any part found to be defective. Parts and labor will be free of charge for **two years** from date of purchase. Parts but not labor will be free of charge for **three years** (36 months) thereafter.


This warranty is subject to the following exceptions and limitations.


-  Purchaser Responsibilities:
  - Maintenance and minor adjustments per Operators Manual.
  - Notification of need for warranty service
  - Transportation of the product to and from the place warranty repair.


-  Product Registration:
  - Return of Registration card to validate warranty.


-  Rental Use: - **90 days** parts and labor
  - Products used for rental purposes.

-  Commercial Use:
  - Professional G - **Two years**, parts and labor.
  - Two-Wheel - **Two years**, parts and labor.
  - GEM - **90 days**, parts and labor

-  Warranty Service:
  - For warranty service contact any Gravely dealer.
  - For the name and location of the Gravely dealer in your area and for further warranty information contact Gravely.

-  Engines, engine accessories.
  - Covered only by engine manufacturers warranty.

-  Batteries - **One year** pro-rated.

-  Exclusions: - No Warranty
  - No warranty is extended for normal maintenance, services and normal replacement items such as Spark Plugs, Oil, Oil Filters, Air Filters, Belts, Light Bulbs, Headlights, etc.
  - No warranty is extended on any product that has been altered, misused, mis-assembled, improperly adjusted, neglected or damaged by accident.
  - No warranty is extended for service completed by someone other than an Authorized Gravely Dealer.
  - No warranty is extended on any attachment not approved by Gravely nor any parts that are not genuine Gravely parts.
  - No warranty is extended on engines and engine accessories.

Gravely reserves the right to incorporate any change in design into its products without obligation to make such changes on products previously manufactured.

#### DISCLAIMER OF FURTHER WARRANTY

Gravely makes no warranty, express or implied, other than this warranty. The implied warranties of merchantability and fitness for particular purpose are hereby disclaimed. Repair or replacement of parts proving to be defective in material or workmanship shall be the exclusive remedy for breach of this warranty. Gravely shall not be liable for incidental or consequential damages, including but not limited to damages for inconvenience, rental or purchase of replacement equipment, or for loss of profits or other commercial loss, resulting from a breach of this warranty.

Some states do not allow limitations on how long an implied warranty lasts, so the above statement may not apply to you. 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. This warranty gives you specific legal rights, and you may have other rights which vary from state to state.



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