

Operating/Service Instructions

20" SNOW THROWER

Model Nos.

313-205 & 313-230

WARRANTY

For one year from date of purchase, MTD Products Inc., will replace for the original purchaser, free of charge, F.O.B. factory or authorized service firm, any part or parts found to be defective in material or workmanship. All transportation charges on parts submitted for replacement under this warranty must be paid by the purchaser. This warranty does not include replacement of parts which become inoperative through misuse, excessive use, accident, neglect, improper maintenance or alterations by unauthorized persons. This warranty does not include the engine, motor, battery, battery charger or any component parts thereof. For service on these units refer to the applicable manufacturer's warranty.

The above warranty will apply only to the original owner and will be effective only if the warranty card has been properly processed. It will not apply where the unit has been used commercially.

Warranty service is available through your local authorized service dealer or distributor. UNDER NO CIRCUMSTANCES WILL THE RETURN OF A COMPLETE UNIT BE ACCEPTED BY THE FACTORY UNLESS PRIOR WRITTEN PERMISSION HAS BEEN EXTENDED.

SAFETY RULES

1. Know the controls and how to stop quickly—READ THE OWNER'S MANUAL.
2. Disengage power and stop motor before cleaning discharge, removing obstacles, making adjustments, or when leaving operation position.
3. Never direct discharge at bystanders nor allow anyone in front of machine—debris may be hidden in the snow.
4. Keep children and pets a safe distance away.
5. Do not allow children to operate machine nor allow adults to operate it without proper instruction.
6. Adjust height to clear gravel or crushed rock surface.
7. Exercise caution to avoid slipping or falling, especially when operating in reverse.
8. Handle gasoline with care — it is highly flammable.
 - A. Use approved gasoline container.
 - B. Never add gasoline to a running motor — fill tank out of doors and wipe up spilled gasoline.
 - C. Replace gasoline cap securely.
 - D. Open door if motor is run in garage — exhaust gases are dangerous.
9. Disengage all clutches and shift into neutral before starting motor. Keep hands, feet and clothing away from power driven parts.
10. Use a grounded three wire extension cord for all plug-in electric units.
11. Keep machine in good operating condition and keep safety devices in place.

ASSEMBLY INSTRUCTIONS

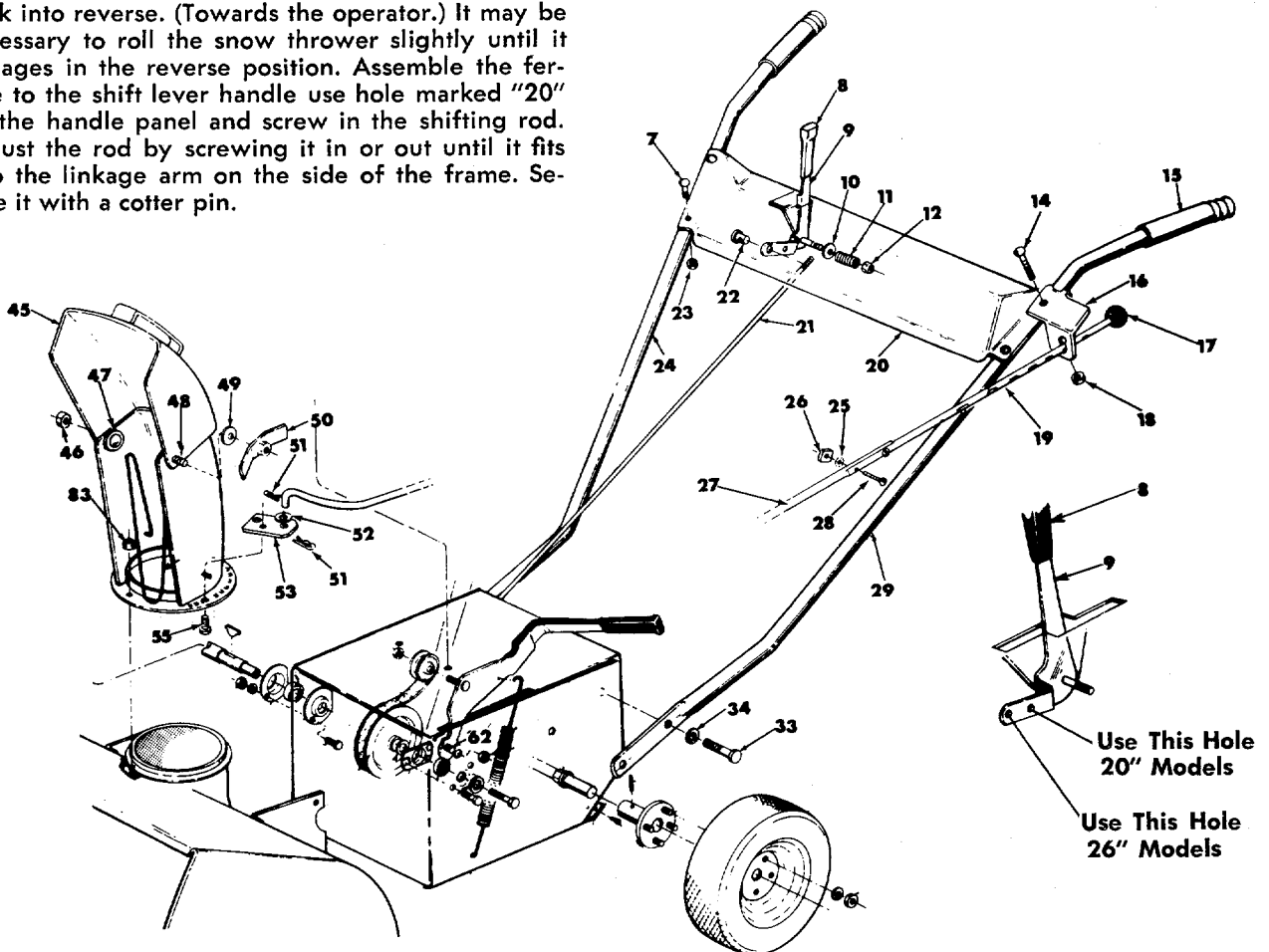
Right hand (R.H.) and left hand (L.H.) are as observed from the operating position.

1. Assemble chrome handles (Ref. No. 24 and 29) to the frame with four hex head cap screws $\frac{3}{8}$ -16 x $\frac{3}{4}$ long and four lock washers $\frac{3}{8}$ ". DO NOT TIGHTEN.
2. Assemble handle panel (Ref. No. 20) to the handles with the four carriage bolts $\frac{1}{4}$ -20 x $1\frac{1}{2}$ lg. and hex locknuts $\frac{1}{4}$ -20 thd. Assemble handle panel so you can read the instructions on the handle panel from the operating position. LIFT HANDLE UP AS YOU TIGHTEN ALL BOLTS AND NUTS ON THE HANDLE ASSEMBLY.

NOTE: Model 313-205 has no Reverse.

3. The linkage arm (Ref. No. 21) for the transmission is located on the R.H. side of the frame. Pull the arm back into reverse. (Towards the operator.) It may be necessary to roll the snow thrower slightly until it engages in the reverse position. Assemble the ferule to the shift lever handle use hole marked "20" on the handle panel and screw in the shifting rod. Adjust the rod by screwing it in or out until it fits into the linkage arm on the side of the frame. Secure it with a cotter pin.

4. **Chute Crank.** Assemble the chute crank (two parts) into the two holes in the handle panel being sure the rod passes through the chute control bracket. Push the rod all the way through and assemble it to the chute bracket with two cotter pins and flat washers.
5. Remove the wing nut, washer, and carriage bolt $\frac{5}{16}$ -18 x $\frac{5}{8}$ lg. from the chute assembly. Lift the deflector and reassemble. If the deflector will not move, loosen the screw and nut slightly so it pivots freely.



CONTROLS

MAIN Clutch. This clutch shuts off the power to the wheels and auger. When the handle is up it is in the disengaged position. It is shown in the disengaged position in the photo. (See figure 1.)

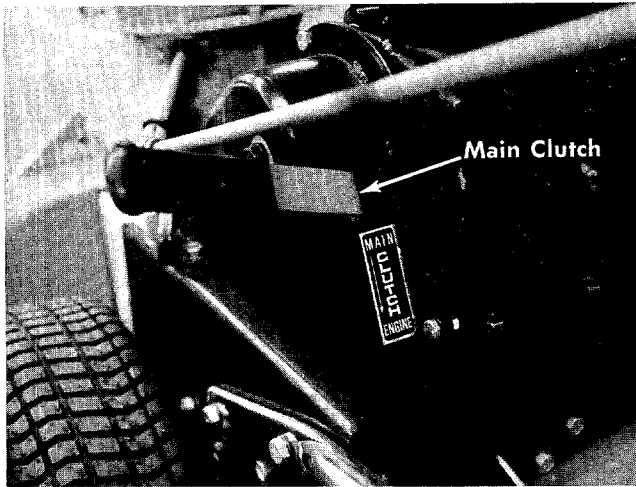


FIGURE 1

CAUTION

Main Clutch must be disengaged when starting.

Shift Lever. Move the shift lever into either forward or reverse rapidly on model 313-230 only. Engaging slowly causes wear on the clutch collars. There is no clutch to engage the drive wheels.

To stop the snow thrower move the shift lever into neutral (N). Move this control only when the engine is operating. (See figure 2.)

Chute Controls. Raise the chute control knob and push or pull to rotate the chute. Loosen the wing nut to adjust the deflector. (See figure 2.)

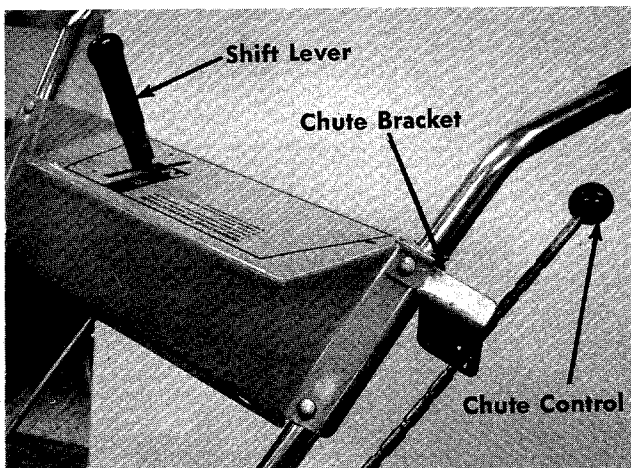


FIGURE 2.

SKID SHOES

The skid shoes on each side of the thrower are adjustable by loosening the bolts and nuts.

Low Position—Close snow removal.

Middle or High Position—Use when road is uneven. The skid shoes and shave plate should be replaced when worn.

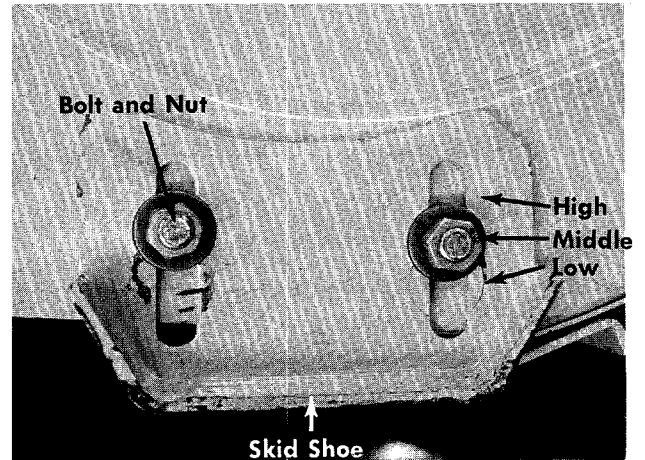
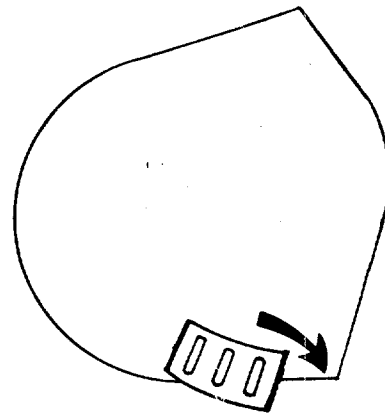
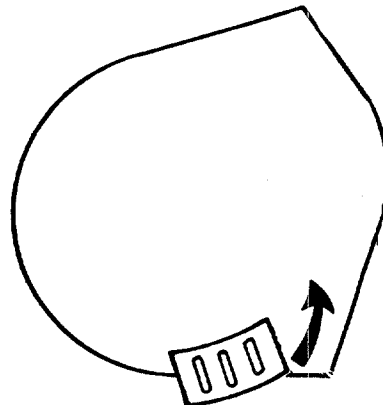


FIGURE 3.

The skid shoes may be tipped for better operation.



Tip front of skid shoe **down** when operating in hard packed snow.



Tip front of skid shoe **up** when operating in loose stone or soft areas.

STARTING YOUR SNOW THROWER

1. Follow your engine instructions for lubrication and gasoline.
2. Disengage the main clutch (Lever UP).
3. Put the shift lever in neutral position (N).
4. Start the engine in accordance with the engine manual.

OPERATION

1. SLOWLY engage the main clutch.
2. Move the shift lever into FORWARD (F) position.
3. To stop the forward drive of the snow thrower pull the shift lever into NEUTRAL (N).

NOTE

For more traction, chains are recommended.

Order Model	Part No. of Chains	Tire Size
313-205 and 230	393-988	10 x 2.75

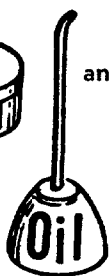
LUBRICATION

Refer to the parts drawings. Lubricate after each 25 hours of operation the parts indicated. Use multipurpose

automotive grease on parts marked



SAE 30 engine oil on parts marked

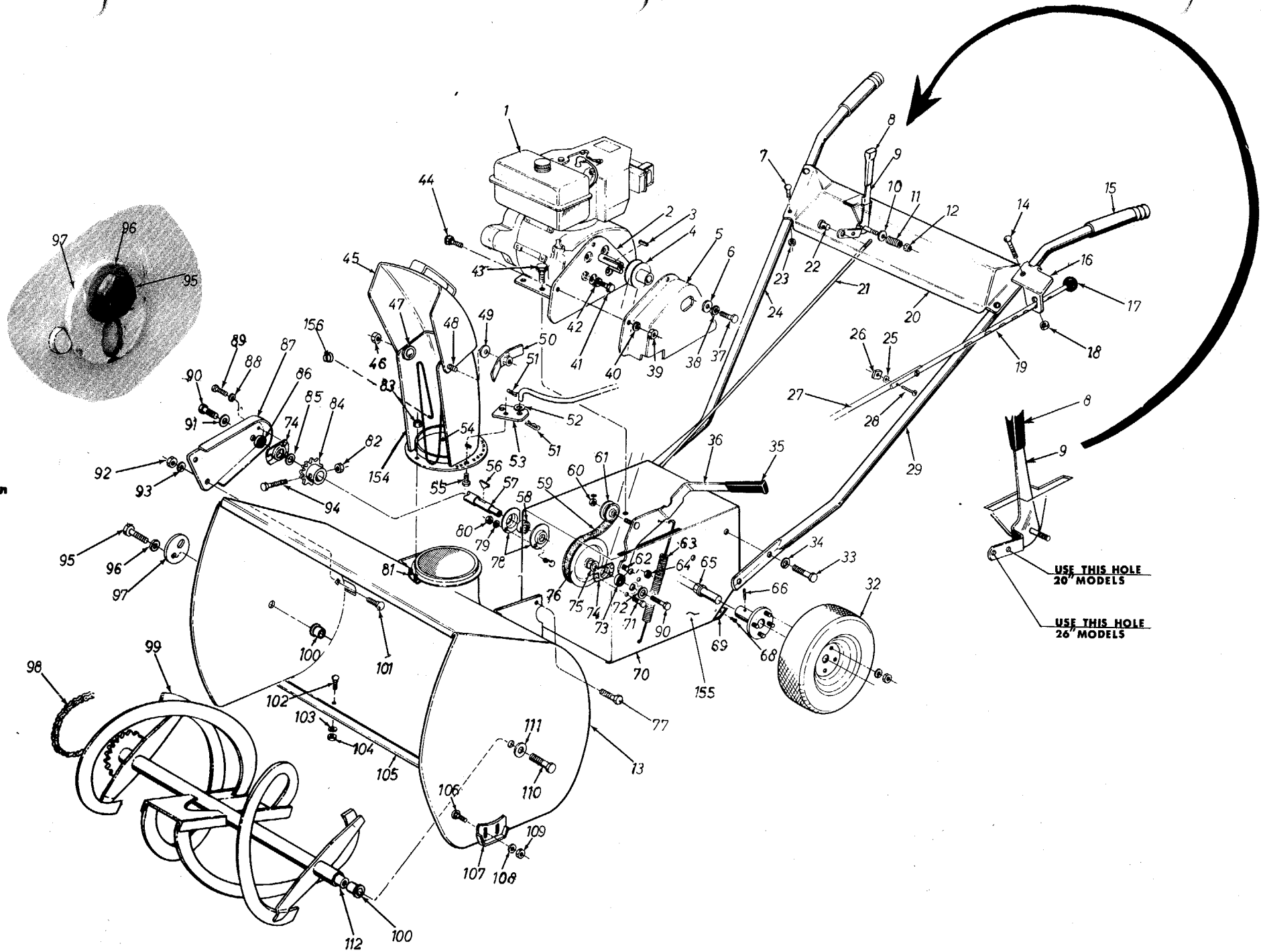


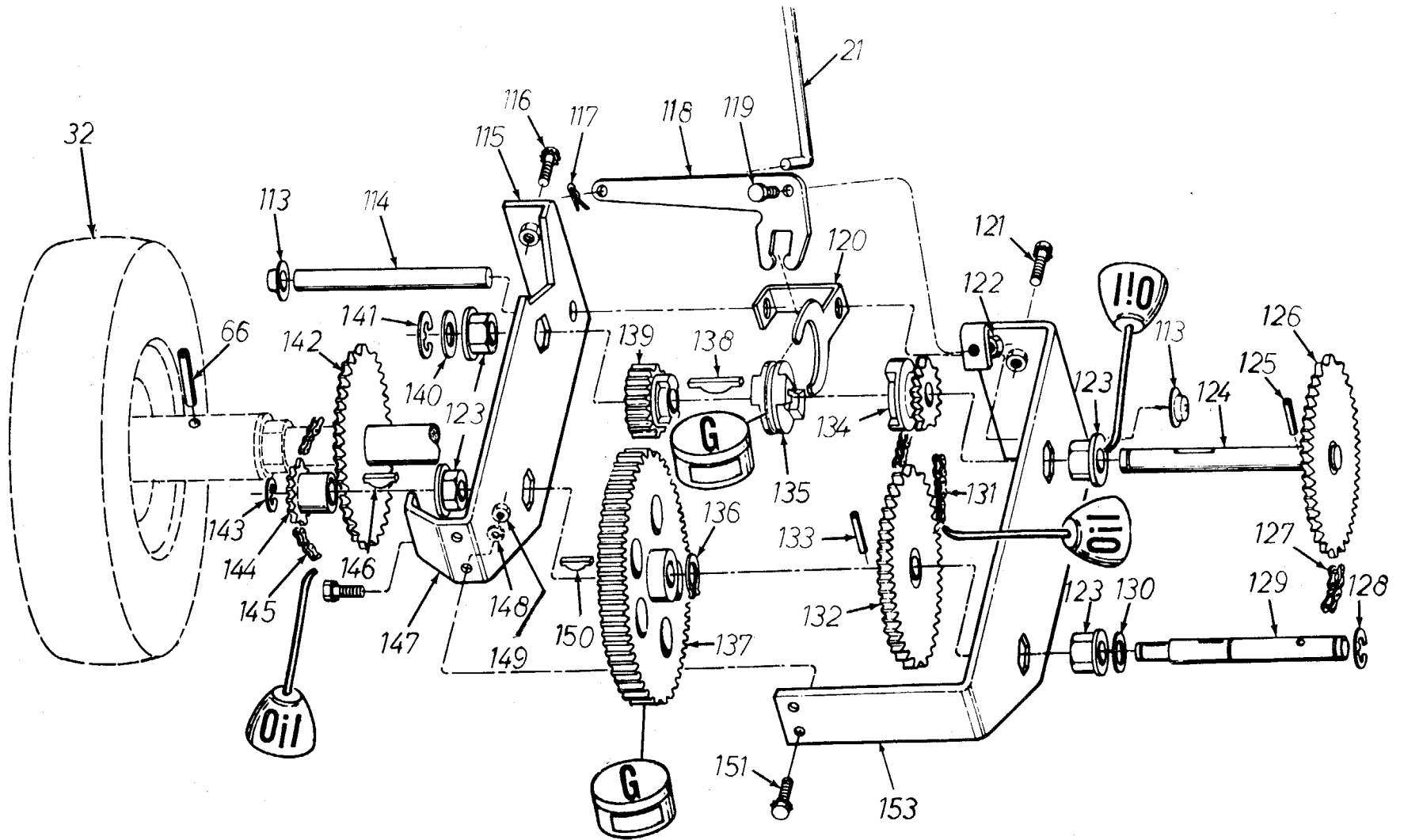
NOTE

This instruction manual covers various models and all accessories shown do not necessarily apply to your model snow thrower.

If repairs or service is needed on the engine or engine controls such as the primer, choke or throttle control, contact your nearest authorized engine service outlet. Check the "Yellow Pages" of your telephone book under "Engines—Gasoline".







PARTS LIST FOR SNOW THROWER MODELS 313-205 AND 313-230

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION
1			Engine	35	720-142		Flat Bar End Grip	68	710-224		Sems Hex Hd. Self Tap Scr. Type A #10-32 x 1/2" Lg.
2	5228		Belt Guard Assembly	36	5058		Idler Bracket Assembly	69	5051		Gear—Housing Assembly
3	714-105		Square Key 3/16 x 3/16 x 1" Lg.*	37	710-152		Hex Hd. Cap Scr. 3/8-24 x 1" Lg.*	70	5041		Frame Assembly
4	756-170		2 3/4 Pulley	38	736-169		Spring Lock Washer 3/8" Scr.*	71	710-289		Hex Hd. Cap Scr. 1/4-20 x 1/2" Lg.*
5	5230		Top Belt Guard Assembly	39	712-287		Hex Nut 1/4-20 Thd.*	72	736-264		Flat Washer 5/16 Scr.*
6	736-235		Flat Washer	40	736-329		Spring Lock Washer 1/4" Scr.*	73	741-133		Ball Bearing 1/2" I.D.
7	710-262		Carriage Bolt 5/16-18 x 1.50" Lg.	41	710-237		Hex Hd. Cap Screw 5/16-24 3/8" Lg.*	74	5245		Bearing Housing Assembly
8	720-142		Flat Bar End Grip	42	736-119		Spring Lock Washer 5/16" Screw*	75	736-192		Flat Washer
9	5131		Shift Grip	43	710-442		Hex Hd. Cap Screw 5/16-18 x 1 1/2" Lg.*	76	756-136		5" Dia. Pulley with Sprocket
10	736-105		Belleville Washer	44	710-289		Hex Hd. Cap Screw 1/4-20 x 1/2" Lg.*	77	710-555		Pilot Scr. 3/8-16 x .88" Lg.
11	732-193		Compression Spring	45	5225—435		Top Chute Assembly	78	5244		Housing
12	712-116		Hex Elastic Stop Nut 3/8-24 Thd.	46	712-158		Hex Center Lock Nut 5/16-18 Thd.	79	736-119		Spring Lock Washer 5/16" Scr.*
13	5258—435		Spirol Housing Assembly	47	736-179		Flat Washer	80	712-267		Hex Nut 5/16-18 Thd.*
14	710-256		Carriage Bolt 1/4-20 x 1 1/2" Lg.*	48	710-260		Carriage Bolt 5/16-18 x 5/8" Lg.*	81	5031—435		Chute Flange Keeper Ass'y.
15	1166		Grip	49	736-105		Belleville Washer	82	712-107		Hex Center Lock Nut 1/4-20 Thd.
16	5266—435		Chute Control Bracket	50	5140—435		Chute Wing Assembly	83	712-107		Hex Center Lock Nut 1/4-20 Thd.
17	722-115		Ball—Knob	51	714-111		Cotter Pin 3/32 Dia. x 1" Lg.*	84	5156		10 Tooth Sprocket
18	712-107		Center Lock Nut 1/4-20 Thd.	52	736-300		Flat Washer .406 I.D. x .734 O.D.	85	736-192		Flat Washer .530 I.D. x .930 O.D.
19	5269		Chute Control Rod	53	5265—435		Chute Bracket	86	741-133		Ball Bearing 1/2" I.D. x 1 3/8 O.D.
20	5125—435		Handle Panel Ass'y.	54	732-211		Chute Guard	87	5267—435		Chain Guard
21	711-374		Shifting Rod	55	710-289		Hex Hd. Cap Scr. 1/4-20 x 1/2" Lg.*	88	736-329		Spring Lock Washer 1/4" Scr.*
22	711-179		Adjustment Ferrule	56	714-126		Hi Pro Key #606	89	710-289		Hex Hd. Cap Screw 1/4-20 x 1/2" Lg.*
23	712-158		Center Lock Nut 5/16-18 Thd.	57	711-519		Drive Shaft	90	710-538		Hex Hd. Cap Screw with Lock 5/16-18 x .62" Lg.
24	5124		Handle—R.H.	58	741-162		Ball Bearing	91	736-264		Flat Washer
25	736-147		Ext. Lock Washer #10-24 Screw*	59	754-133		3 V-Belt 31.5	92	712-267		Hex Nut 5/16-18 Thd.*
26	712-425		Square Nut 10-24 Thd.*	60	712-116		Hex Elastic Stop Nut 3/8-24 Thd.	93	736-119		Spring Lock Washer 5/16 Screw*
27	5268		Chute Rod	61	756-137		Flat Idler	94	710-606		Hex Hd. Cap Screw 1/4-20 x 1 1/2" Lg.*
28	710-467		Truss Hd. Mach. Screw 10-24 x 1" Lg.*	62	738-147		Shoulder Bolt 3/8-16 Thd.*	95	710-152		Hex Hd. Cap Screw 3/8-24 x 1" Lg.*
29	5123		Handle—L.H.	63	732-185		Tension Spring	96	736-169		Spring Lock Washer 3/8 Scr.*
32	734-468		Wheel Assembly Complete	64	712-375		Hex Center Lock Nut 3/8-16 Thd.*	97	6605—435		Chain Adjuster
	734-296		Rim Assembly Only	65	748-151		Flange Bearing 3/4" Dia.	98	713-106		Roller Chain #41 x 31.5 Lg. without Master Link
	734-297		Tire—Only 10. x 2.75	66	715-107		Spirol Pin	99	5251—435		Spiral Assembly
33	710-216		Hex Hd. Cap Scr. 3/8-16 x 3/4" Lg.*								
34	736-169		Spring Lock Washer 3/8" Scr.*								

PARTS LIST FOR SNOW THROWER MODELS 313-205 AND 313-230

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION
100	748-110		Flange Bearing 5/8 I.D.	129	711-355		Shaft
101	710-260		Carriage Bolt 5/16-18 x 5/8" Lg.*	130	736-116		Flat Washer .625 I.D. x .937 O.D.
102	710-260		Carriage Bolt 5/16-18 x 5/8" Lg.*	131	713-131		Roller Chain with Master Link #41 x 17" Lg.
103	736-119		Spring Lock Washer 5/16" Scr.*	132	5093		Shaft Assembly
104	712-267		Hex Nut 5/16-18 Thd.*	133	715-114		Spirol Pin 1/4" Dia. x 1.50" Lg.*
105	5001—435		Shave Plate	134	748-164		10 Teeth Spur Gear
106	710-389		Carriage Bolt 3/8-16 x 3/4" Lg.*	135	748-161		Clutch Collar
107	5002—435		Slide Shoe	136	716-106		"E"—Ring Truarc #5133-62 5/8" Dia.*
108	736-105		Belleville Washer	137	748-162		62 Teeth Spur Gear (313-230 Only)
109	712-798		Hex Nut 3/8-16 Thd.*	138	714-137		Key 3/16 Thick x 3/4" Dia. 1.062
110	710-152		Hex Hd. Cap Screw 3/8-24 x 1" Lg.*	139	748-163		21 Teeth Spur Gear (313-230 Only)
111	736-169		Spring L-Wash. 3/8" Scr.*	140	736-116		Flat Washer .625 I.D. x .937 O.D.
112	711-520		Spiral Axle	141	716-106		"E"—Ring Truarc #5133-62 5/8" Dia.*
113	726-100		Push Nut 3/8 Rod Pal Nut	142	5090		Wheel Axle Assembly
114	5057		Rod	143	716-104		"E"—Ring Truarc #5133-50 1/2" Dia.*
115	5051		Gear Housing Assembly	144	748-852		8 Tooth Sprocket
116	710-259		Sems Hex Hd. Cap Scr. 5/16-18 x 5/8" Lg.*	145	713-131		Roller Chain with Master Link #41 x 17" Lg.
117	714-111		Cotter Pin 3/32 x 1" Lg.*	146	714-129		Woodruff Key #503
118	5053		Shifting Bracket	147	5051		Gear Housing Assembly
119	738-140		Shoulder Bolt 5/16-18 Thd.	148	736-119		Spring Lockwasher 5/16" Screw*
120	5054		Shifting Yoke	149	712-267		Hex Nut 5/16-18 Thd.*
121	710-259		Sems Hex Hd. Cap Screw 5/16-18 x 5/8" Lg.*	150	714-126		Hi Pro Key #606 (313-230 Only)
122	712-429		Hex Elastic Stop Nut 5/16-18 Thd.	151	710-322		Hex Sems Scr. 5/16-18 x 1.00" Lg.
123	748-227		Flange Bearing 5/8 Dia.	152	713-723		Master Link for #41 Chain (Use with Ref. No. 98)
124	711-354		Shifting Shaft	153	5049		Gear Hsg. Half Ass'y.
125	715-114		Spirol Pin 1/4" Dia. x 1" Lg.*	154	5223		Chute Ass'y.
126	5137		Spacer Hub Assembly	155	5055		Frame Cover
127	713-129		Roller Chain with Master Link #41 x 24" Lg.	156	726-111		Push Cap .188 Rod
128	716-106		"E"—Ring Truarc #5133-62 5/8" Dia.*				

*For faster service obtain standard nuts, bolts, and washers locally. If these items cannot be obtained locally, order by part number and size as shown on parts list.

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