

OWNER'S GUIDE

**Model Nos. 310-200
310-300 310-400 310-500**

10 CENTS

SNOW THROWER

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 (See Figure 4)

Right hand (RH) and left hand (LH) are as observed from the operating position.

1. Assemble chrome handles to the frame with four hex head cap screws 3/8-16 x 3/4 long and four lock-washers 3/8". DO NOT TIGHTEN.
2. Assemble handle panel to the handles with four carriage bolts 1/4-20 x 1-1/2 long and hex locknuts 1/4-20 thread. 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.
3. The linkage arm for the transmission is located on the RH 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 ferrule to the shift lever handle use hole marked "21" 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 (longest rod) into the two holes in the handle panel being sure the rod passes through the lock bracket. It may be necessary to loosen the black knob on the handle panel. Push the rod all the way through and assemble it to the universal joint with a cotter pin.
5. Remove the wing nut, washer and carriage bolt 5/16-18 x 5/8 long from the chute assembly. Lift the deflector and reassemble. If the deflector will not move loosen the screw and nut slightly so it pivot freely.
6. Attach the drift cutters to each side as shown on the parts drawing.

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. Always shut off the main clutch when engaging and disengaging the auger clutch. It is shown in the disengaged position in the photo.

(See Figure 1)

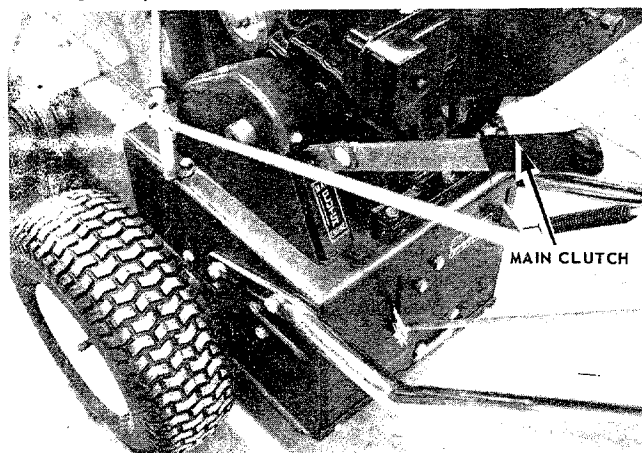
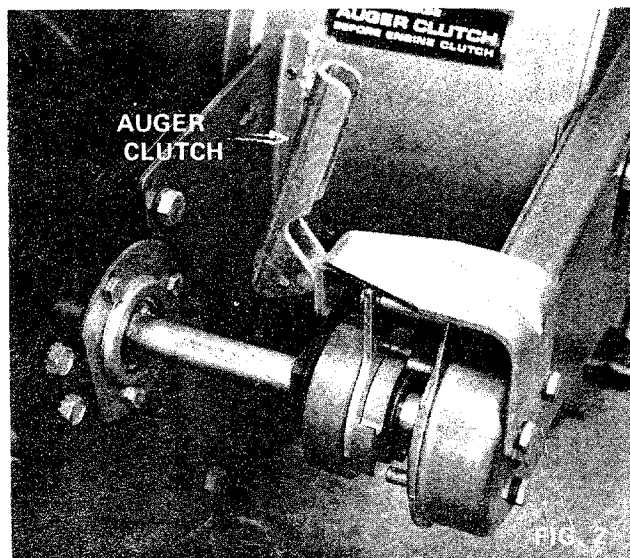


FIG. 1



Auger Clutch is located on the right hand side of the frame just behind the thrower housing. The clutch is shown in the disengaged position.

When the handle is up the auger is disengaged. Do not engage or disengage the clutch without disengaging the main clutch. Disengaging the auger clutch allows you to drive the snow thrower to and from the work area without the auger turning. (See Figure 2).

It is not necessary to disengage auger clutch when starting. CAUTION—Main clutch must be disengaged when starting.

Shift Lever. Move the shift lever into either forward or reverse rapidly. 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 3)

Chute Controls. Release the lock and turn the crank to rotate the chute. Loosen the wing nut to adjust the deflector. (See Figure 3)

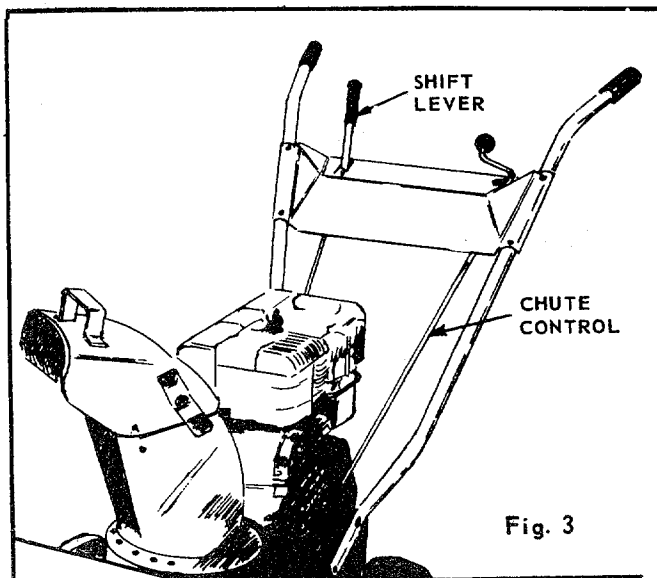


Fig. 3

PARTS LIST FOR MODELS 310-200, 310-300, 310-400, 310-500

Ill. No.	Part No.	DESCRIPTION	Ill. No.	Part No.	DESCRIPTION	Ill. No.	Part No.	DESCRIPTION
1	748-162	62 Teeth Spur Gear (Not used on 200 model)	53	312-9351	Rim Half w/ Valve Hole (Not used on models 200, 300)	92	394-5114	Sprocket Assembly 40 Teeth
2	310-5053	Shifting Bracket		734-270	Tire Only 4.10/3.50 x 4 (Not used on models 200, 300)	93	429-5001	Shave Plate
3	394-5137	Spacer Hub Assembly		734-211	Tube Only 4.10/3.50 x 4 (Not used on models 200, 300)	94	310-5107	Spiral Plate
4	716-106	E-Ring Truarc #5133-62 5/8 Dia.* - (Not used on 200 model)		712-798	Hex Nut 3/8-16 Thread *	95	310-5107	Shift Yoke Assembly (Not used on 200 model)
5	715-108	Spiral Pin 1/4 Dia. x 1 lg.		736-169	Spring Lockwasher *	96	732-171	Compression Spring (Not used on 200 model)
6	748-227	Flange Bearing 5/8 Dia.		734-306	Wheel Assembly Complete 10 x 2.75 - (Not used on models 200, 300, 400)	97	310-5105	Yoke Bracket (Not used on 200 model)
7	736-116	Flat Washer 625 I.D. x 937 O.D. x .062. Thd.*		710-259	Sems Hex Head Cap Screw - 5/16-18 x 5/8 lg. *	98	310-5106	Eccentric (Not used on 200 model)
8	748-852	8 Tooth Sprocket		712-116	Hex Elastic Stopnut 3/8-24 Thread *	100	710-347	Hex Head Cap Screw 3/8-16 x 1-3/4" lg. *
9	716-104	E-Ring Truarc #5133-50 1/2 Dia.*	54	710-259	Sems Hex Head Cap Screw - 5/16-18 x 5/8 lg. *	101	723-168	Sprocket Idler - 10 Teeth
10	711-355	Shaft		712-116	Hex Elastic Stopnut 3/8-24 Thread *	102	429-5037	Chain Guard
11	394-5051	Gear-Housing Assembly		756-137	Flat Idler (Not used on model 200)	103	710-137	Allen Set Screw 5/16-18 x 5/16" lg. *
12	710-216	Hex Hd. Cap Sew. 3/8-16 x 3/4" lg. *	55	712-116	Hex Elastic Stopnut 3/8-24 Thread *	104	714-105	Square Key 3/16 x 3/16 x 1" lg. *
13	736-119	Spring Lockwasher 5/16 Screw *	56	756-137	Flat Idler (Not used on model 200)	105	710-224	Hex Head Self Tapping Screw #10 x 1/2 lg. *
14	712-267	Hex Nut 5/16-18 Thread *	57	711-110	Shoulder Bolt 3/8-16 Thread	106	736-300	Flat Washer 3/8 Screw *
15	711-354	Shifting Shaft	58	712-181	Toplock Hex Nut 3/8-16 Thread *	107	710-170	Hex Head Cap Screw 5/16-24 x 5/8" lg. *
16	713-131	Roller Chain w/Master Link #41 x 17 lg.	59	732-185	Tension Spring	108	394-5068	Belt Guard Assembly
17	394-5093	Shaft Assembly	60	310-5058	Idler Bracket Assembly	109	720-142	Top Belt Guard
18	748-164	10 Teeth Spur Gear	61	736-264	Flat Washer 5/16 Screw *	110	394-5055	Flat Bar End Grip
19	712-158	Center Lock Hex Nut 5/16-18 Thd.	62	710-371	Hex Head Cap Screw w/Lock 5/16-18 x 7/8 lg. *	111	710-224	Frame Cover
20	748-163	21 Teeth Spur Gear (Not used on 200 model)	63	710-289	Hex Head Cap Screw 1/4-20 x 1/2 lg. *	112	710-224	Sems Hex Head Self Tap Screw Type "A" - #10-32 x 1/2" lg. *
21	711-118	Shoulder Bolt 5/16-18 Thread	64	310-5065	Bearing Housing Assembly	113	712-107	Centerlock Hex Nut 1/4-20 Thread *
22	714-110	Hi Pro Key HP-503 5/8 Dia. x .0938 *	65	741-133	Ball Bearing .500 I.D.	114	429-5031	Chute Flange Keeper Assembly
23	714-314	Hi Pro Key HP-606 3/4 Dia. x 3/16 *	66	736-192	Flat Washer .53 I.D. x .94 O.D. x 13 Ga. *	115	736-199	Flat Washer .34 I.D. x 1" O.D. x .25 Thick *
24	748-165	Key 3/16 Thick x 3/4 Dia. (Special)	67	756-136	5" Dia. Pulley w/Sprocket	116	710-256	Carriage Bolt 1/4-20 x 1-1/2" lg. *
25	748-161	Clutch Collar	68	756-135	2-3/4" Pulley	117	305-1166	Grip
26	394-5054	Shifting Yoke	69	754-133	3 V Belt Gates #3V 31.5 lg.	118	722-121	Knob (Not used on 200 model)
27	726-100	Push Nut 3/8 Rod Palmut *(Not used on 200)	70	429-5041	Frame Assembly	119	310-5121	Chute Crank-Bracket Assembly - (Not used on 200 model)
28	310-5057	Rod	71	711-350	Drive Shaft (Not used on 200 model)	120	722-120	Hand Knob (Not used on 200 model)
29	394-5049	Gear Housing Half Assembly	71	711-350	Drive Shaft (Used on 200 only)	121	310-5131	Shift Grip
30	715-107	Spiral Pin 5/16 Dia. x 1-3/8 lg.	72	741-132	Ball Bearing 750 I.D.	122	310-5123	Handle Left Hand
31	711-374	Shifting Rod	73	310-5033	Housing	123	310-5124	Handle Right Hand
32	714-111	Cotter Pin 3/32 Dia. x 1 lg. *	74	710-258	Hex Head Cap Screw 1/4-20 x 5/8 lg. *	124	310-5120	Chute Crank (Not used on 200)
33	713-119	Roller Chain w/Master Link #41 x 24 lg.	75	736-329	Spring Lockwasher 1/4 Screw *	125	711-179	Adjustment Ferrule
34	713-128	Roller Chain w/Master Link #41 x 42 lg.	76	712-287	Hex Nut 1/4-20 Head *	126	429-5139	Guide Blade
35	310-5118	Sprocket Shaft Assembly (Not used on 200 model)	77	310-5110	Sprocket Hub Assembly (Not used on 200 model)	127	310-5090	Wheel Axle Assembly
36	715-103	Roll Pin 1/8 Dia. x 3/4 lg. (Not used on 200 model)	78	310-5156	Sprocket Hub Assembly (Used on 200 only)	128	429-5125	Handle Panel Assembly
37	711-358	Joint Block (Not used on 200 model)	79	748-171	Spiral Pin (Used on 200 only)	129	394-5147	110 Volt Plug In Starter Bracket (Model 310-500)
38	310-5066	Joint Bracket Ass'y (Not used on 200 model)	80	716-101	Flat Washer .765 I.D. x 1-5/16 x .035 Thick (Not used on 200 model) *	130	715-248	Roll Pin 3/16 x 3/4 lg. (Not used on 200 model)
39	429-5056	Chute Bracket	81	429-5012	Spiral Housing Assembly	131	736-189	Flat Washer 3/4 I.D. x 1-1/4 O.D. x 12" lg.
40	717-151	Clutch Cone (Not used on 200 model)	82	429-5017	Spiral Assembly R.H.	133	712-429	Hex Elastic Stopnut 5/16-18
41	748-173	Clutch Housing (Not used on 200 model)	83	429-5018	Spiral Assembly L.H.	134	732-193	Compression Spring
42	748-172	Clutch Sleeve (Not used on 200 model)	84	429-5023	Spiral Pin 1/4 Dia. x 1-1/2" Harden - (Not used on 200)	135	736-117	Flat Washer .39 I.D. x 5/8 O.D. - (Not used on model 200)
43	732-189	Belleville Washer (Not used on 200 model)	85	736-123	Flat Washer .34 I.D. x 1-1/2 x .060 Thick *	136	735-111	Rubber Bellow (Not used on model 200)
44	716-116	Truarc Snap Ring (Not used on 200 model)	86	712-798	Hex Nut 3/8-16 Thd. *	137	736-169	Spring Lock Washer 3/8 Screw *
45	429-5028	Top Chute Assembly	87	710-389	Carriage Bolt 3/8-16 x 3/4 lg. *	138	901-5175	Universal Joint - Complete
46	429-5140	Chute Wing Assembly	88	305-5136	Plastic Bushing	139	732-211	Chute Guard
47	736-105	Belleville Washer 3/8 Screw	89	429-5002	Slide Shoe	140	310-5145	Handle - Idler Bracket
48	710-260	Carriage Bolt 5/16-18 x 5/8 lg.	90	711-344	Spiral Axle	141	310-5145	Auger Clutch Assembly (Not used on 200 model)
49	710-621	Hex Head Cap Screw 5/16-18 x 1/2 lg. *	91	715-114	Spiral Pin 1/4 Dia. x 1-1/2" Harden - (Not used on 200)	142	310-5157	Sprocket-Shaft Assembly (Model 200 only)
50	429-5025	Chute Assembly		715-118	Spiral Pin 5/16 Dia. x 1-3/4" H/Duty - (310-300/400/500)	143	736-161	Reverse Washer (200 only)
51	748-151	Flange Bearing 3/4 Dia.		710-447	Shear Pin (Used on 200 only)	144	429-5158	Reverse Bracket (Not shown on illustration)
52	310-5148	Wheel Assembly Complete 4.10/3.50 x 4 models 400/500 (Not used on models 200, 300)		712-429	Elastic Stop Nut 5/16-18 (Used on 200 only)			Extension Spring (Not shown on illustration)
53	501-5142	Hub Assembly (Not used on models 200, 300)						(Not used on 200)

* 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.

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.

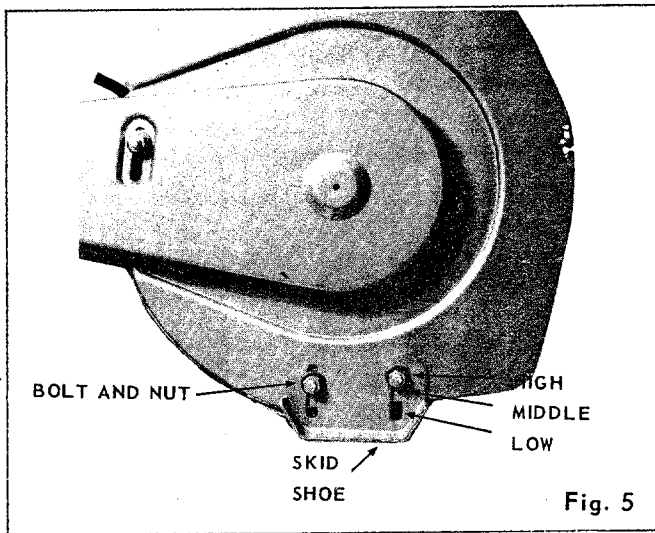
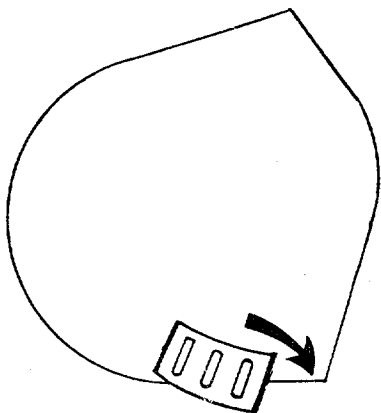
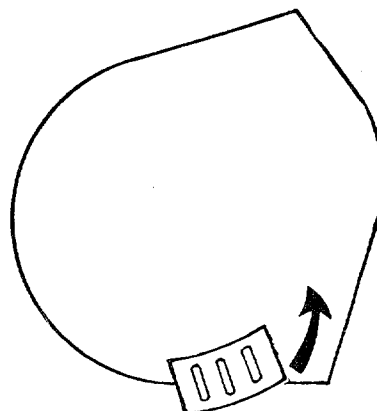


Fig. 5

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. With the engine running at near top speed, engage the auger clutch. (See controls, auger clutch page B)
2. SLOWLY engage the main clutch.
3. Move the shift lever into FORWARD (F) position.
4. 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.	Tire Size	Chains
310-400/500	723-201	10 x 3.50	390-662
310-300/200	723-202	10 x 2.75	390-663

LUBRICATION

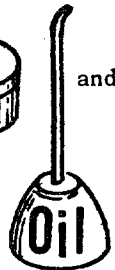
Refer to the parts drawings. Lubricate after each 25 hours of operation the parts indicated. Use multipurpose

automotive grease on parts marked



and

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."



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