

ASSEMBLY, OPERATING INSTRUCTIONS  
AND PARTS LIST FOR  
**SEARS**  
**39" ROTARY SNOW PLOW**  
MODEL NUMBER 917.251820

Sears



**SEARS, ROEBUCK AND CO.—U.S.A.**

**SIMPSON-SEARS LIMITED — CANADA**

8451H

PRINTED IN U. S. A.

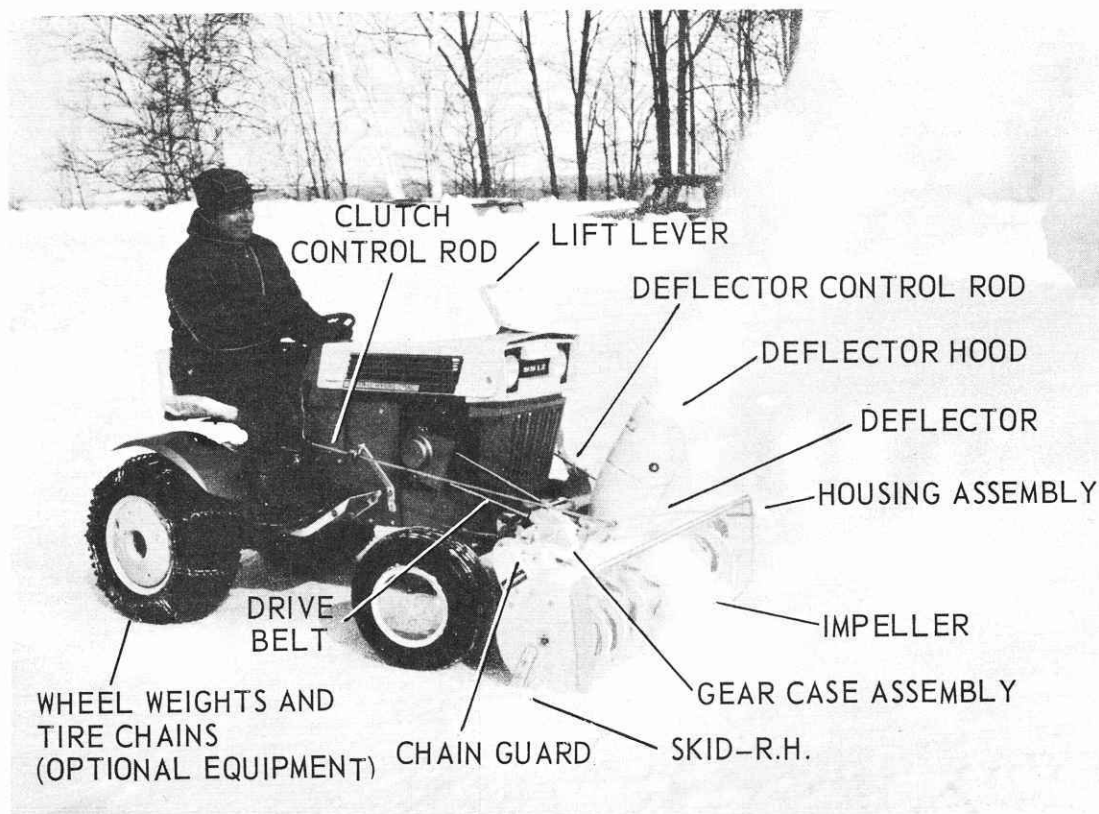
## SAFETY PRECAUTIONS

Improper use of snow removal equipment on the part of the operator can result in injury. To reduce this possibility, give complete and undivided attention to the job at hand.

Protect yourself and others by following these safety tips.

1. Disengage all clutches and shift into neutral before starting engine. Keep hands, feet and clothing away from power driven parts.
2. Know the controls and how to stop quickly – read the owners manual thoroughly before operating Rotary Snow Plow.
3. Use caution when handling gasoline – it is highly flammable. Use an approved gasoline container. Never add gasoline to a running engine or while engine is hot. Never smoke while refueling engine. Always fill engine from left side and while unit is outside of building. A spark from the fuel can touching battery could cause a fire. Wipe up any spilled gasoline, and replace gas cap securely. Never run engine indoors without opening doors or windows. Exhaust gases can be very dangerous.
4. Be sure the area to be cleaned has no hidden objects which can be hit to damage machine or smaller objects which may be picked up and thrown.
5. Do not direct deflector towards persons or windows since small rocks can be picked up and thrown causing injury to bystanders or damage to windows or buildings.
6. Keep children and pets a safe distance away.
7. Never direct discharge at bystanders nor allow anyone in front of machine. Debris may be hidden in snow.
8. No minor should operate this machine unless properly supervised.
9. Never leave machine running unattended, and remove key from ignition switch to prevent children from starting tractor and Rotary Snow Plow.
10. Do not attempt to clean discharge, remove obstacles or otherwise clean, adjust or repair machine before stopping tractor engine, and removing wire from spark plug. Never place hands or feet in or near deflector or impeller when engine is running.
11. Keep machine in good operating condition and keep safety devices in place.

## PARTS IDENTIFICATION



## INTRODUCTION

The Rotary Snow Plow has been shipped from the factory partially assembled. The operating controls were left unassembled for shipping purposes. All parts such as nuts, washers, bolts, etc. necessary to complete assembly of the unit have been included in a plastic bag.

It is suggested that this manual be read in its entirety before attempting to assemble or operate the unit.

A key letter in the following material refers to a letter in an adjoining illustration.

When R.H. (right hand) or L.H. (left hand) are used it should be understood to mean from position behind and facing the Rotary Snow Plow or direction of travel.

Drain oil from engine crankcase of tractor and refill with SAE 10 Motor oil for easier starting in cold weather.

Wheel weights and tire chains added to rear wheels will greatly improve the performance of the Rotary Snow Plow.

## SETTING UP INSTRUCTIONS

1. Remove Rotary Snow Plow from carton, and cut all wires.
2. Refer to Fig. 1.  
Remove bolts (A), washers, bushings and gripco nuts from upper holes in brackets (B), at rear of housing, and assemble swing frame upper (C), to bracket (B), with bolts (A), washers, bushings and gripco nuts just removed.  
NOTE: Slip washer over bolt (A), then bushing and insert bolt, washer, and bushing through swing frame upper (C), and into upper holes in bracket (B), and secure with gripco nuts. Tighten nuts securely.
3. Refer to Fig. 1.  
Unhook springs (F), from hanger weldment (D), and attach to front holes in swing frame lower (E), and rear holes of swing frame upper (C), as shown.

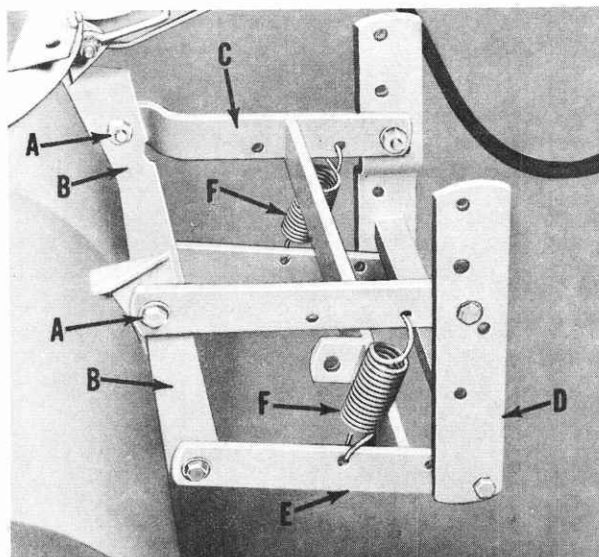


FIG. 1

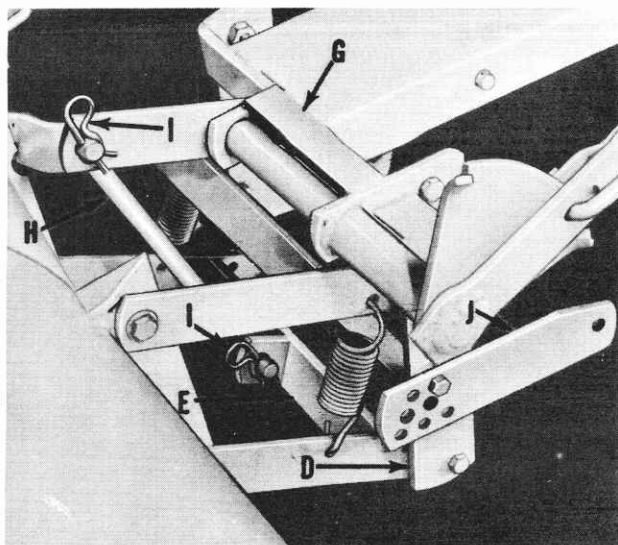


FIG. 2

4. Refer to Fig. 2. Assemble pivot frame and channel weldment (G), to hanger weldment (D), with two  $\frac{3}{8} \times \frac{1}{4}$  hex bolt and gripco nuts. Nuts to inside as shown.
5. Refer to Fig. 2. Assemble lift link (H), to swing frame lower (E), and to arm of pivot frame and channel weldment (G), and secure with two of the large retainer springs (I).
6. Refer to Fig. 2. Attach both push straps (J), to hanger weldment (D), using upper rear hole in push straps (J), as shown.

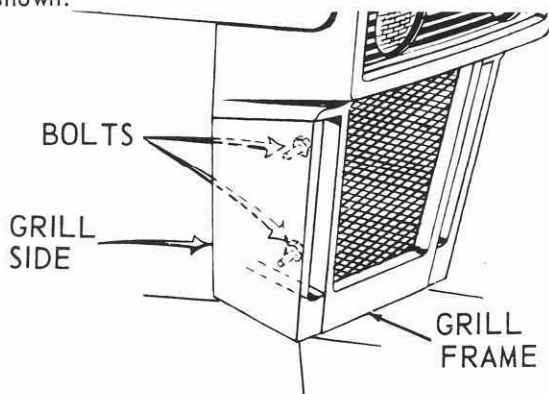


FIG. 3

7. Refer to Fig. 3 and Fig. 4 for drawing of grill bolts that match your tractor. Remove the two bolts holding grill side to R.H. side of grill frame, and remove grill side.

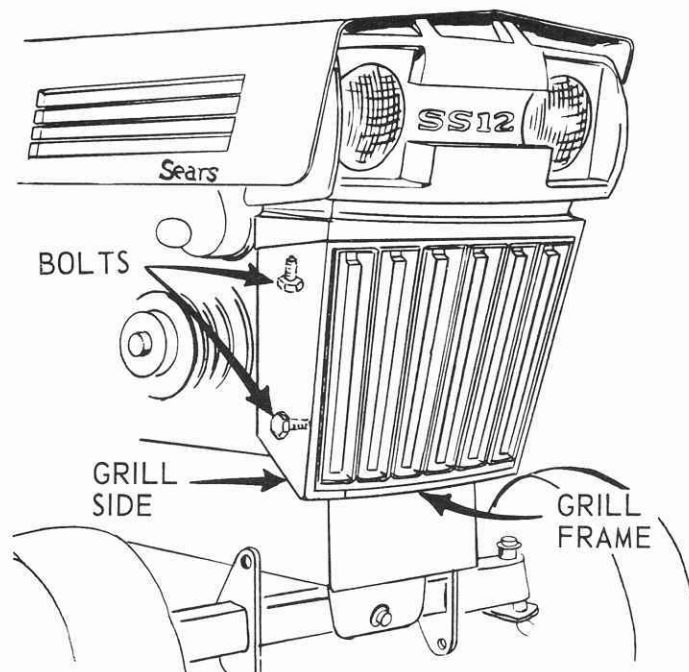


FIG. 4

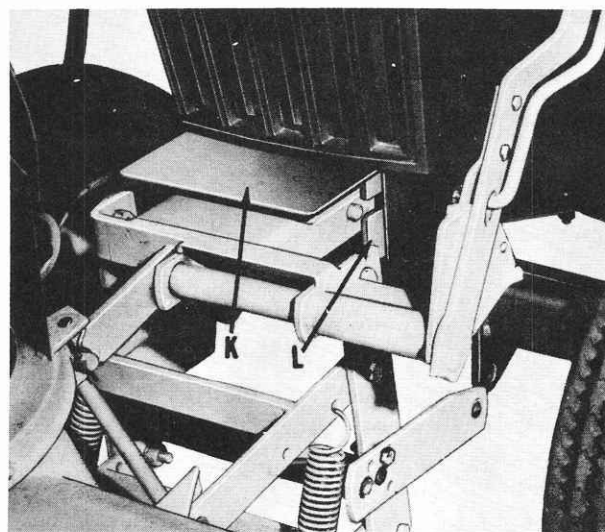
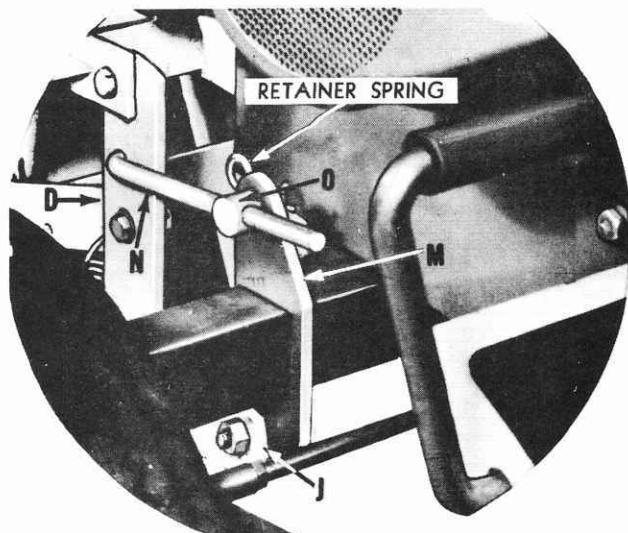
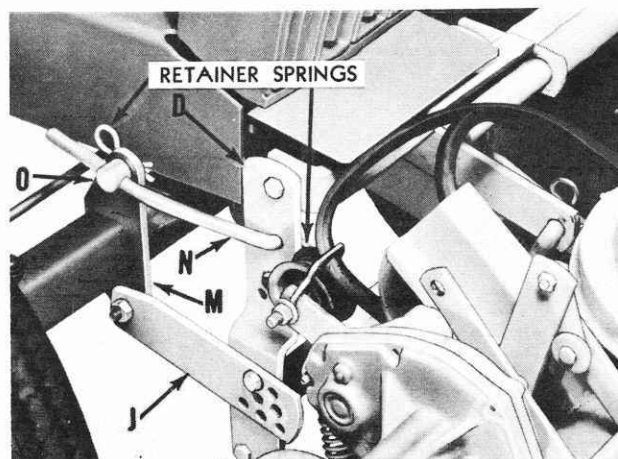


FIG. 5

8. Refer to Figure 5. Set parking brake on tractor, raise front channel cover (K), and slide Rotary Snow Plow into front frame of tractor (L), as shown.



L.H. SIDE



R.H. SIDE

FIG. 6

9. Refer to Figure 6. Attach rear of push straps (J), to lower holes of front axle brackets (M), and secure with two  $3/8 \times 1\frac{1}{4}$  hex nut, flat washers, bushings, and gripco nuts. NOTE: Place washer next to head of bolt then bushing, and insert bolt washer and bushing through axle bracket (M), and secure with gripco nut on outside as shown. NOTE: Bolts, nuts, washers and bushings will be found in plastic bag.
10. Refer to Figure 6. With front edge of snow thrower vertical (straight up and down), attach bent end of channel lock links (N), into hole in hanger weldment (D), as shown, and secure with retainer springs. NOTE: Attach offset channel lock link to R.H. side of hanger weldment. Thread adjusting pins (O), on channel lock links (N), until pins (O), will enter upper holes in front axle bracket (M), and secure with remaining large retainer springs, NOTE: Adjusting pins and retainer springs will be found in plastic bag.

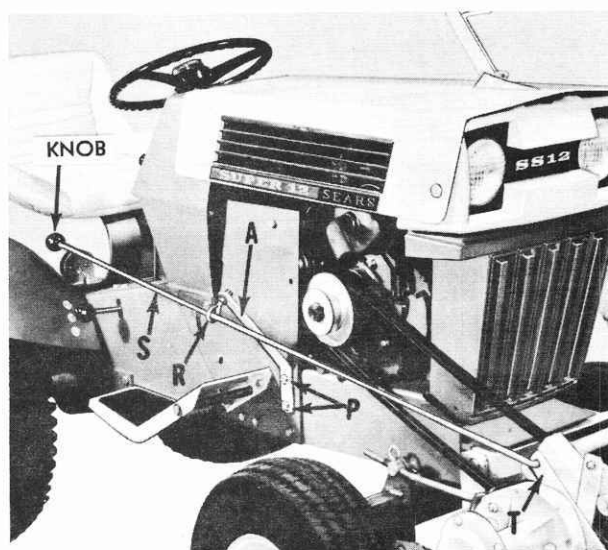


FIG. 7

13. Refer to Figure 7. Slide clutch control rod (S), through eyebolt (R), with threaded end to rear. Insert bent end of control rod (S), into hole of toggle lever assembly (T), as shown and secure with  $13/32 \times 13/16 \times 16$  Ga. washer, and  $1/8 \times 3/4$  cotter pin. Screw knob on threaded end of control rod (S), as shown. Tighten nuts on eyebolt securely. Washer, cotter, pin and control knob will be found in plastic bag.

11. Refer to Fig. 7. Remove the two upper bolts (P), in chassis channel and assemble clutch rod bracket (A), to tractor with bolts (P) removed. Tighten bolts securely.
12. Refer to Figure 7. Assemble eye bolt (R), to lower side of clutch rod bracket (A), with a keps nut on each side of bracket as shown. Leave nuts loose until after clutch rod has been installed. Keps nuts will be found in plastic bag.

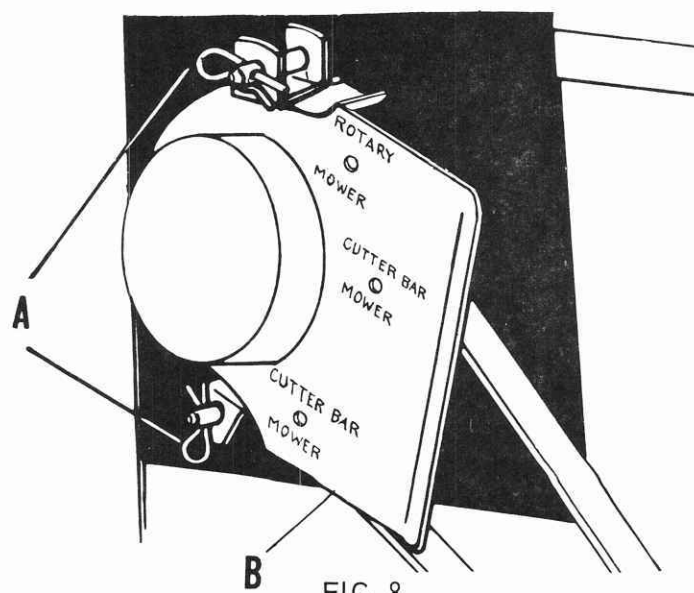


FIG. 8

14. If your tractor is equipped with a belt guard over engine pulley as shown in Fig. 8, remove spring retainers (A), holding belt guard (B), on pins attached to engine. Remove belt guard from tractor.



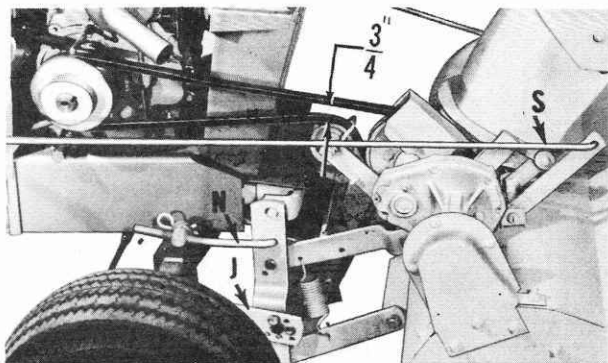


FIG. 9

15. Refer to Fig. 9. Lift Rotary Snow Plow with lift lever and disengage clutch, by pulling back on clutch control rod (S). Assemble belt on largest groove of engine pulley, (second groove from outside end). Engage clutch by pushing clutch control rod forward. Rotary Snow Plow belt must have approximately  $\frac{3}{4}$ " clearance between belt as shown. If clearance is much greater than  $\frac{3}{4}$ " clutch will not release properly. Offset links (N) can be shortened or lengthened to acquire the  $\frac{3}{4}$ " clearance. In some instances it may be necessary to also assemble bolts in different holes of push straps (J), to acquire the above clearance, and still keep front edge of snow thrower near vertical. See Page 7 for more detailed instructions for adjustment of Rotary Snow Plow drive belt.

Replace belt guard on tractor and secure with retainer springs. Release parking brake. If your tractor does not have a belt guard over engine pulley, use the three belt guide fingers found in plastic bag and assemble as instructed in steps 16, 17 and 18.

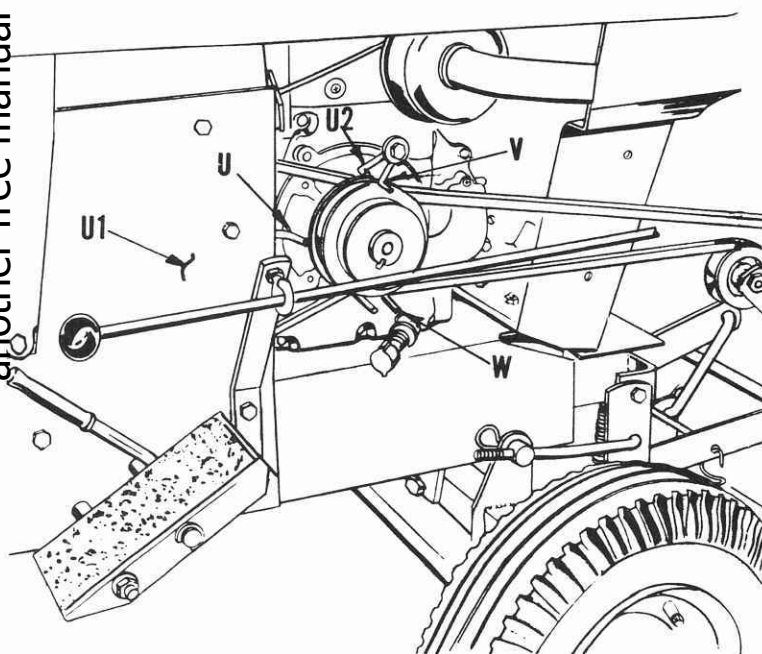


FIG. 10

16. Refer to Fig. 10. Assemble offset belt guide (U), to cover R.H. (U-1), as shown with  $\frac{5}{16}$  -  $18 \times \frac{3}{4}$  hex bolt washer and keps nut. Adjust belt guide so that it clears belt by  $\frac{1}{8}$ " when belt is tight (clutch engaged).
17. Refer to Fig. 10. Remove short belt guide (U-2), and assemble shorter of two remaining belt guides (V) over short belt guide with a  $\frac{3}{8} \times \frac{1}{4}$  hex bolt. NOTE: The heavy flat washer removed, must be next to head of new bolt and a  $\frac{13}{32} \times \frac{13}{16}$  Ga. washer is to be placed between belt guides. The  $\frac{3}{8} \times \frac{1}{4}$  hex bolt and washer will be found in plastic bag. Raise Rotary Snow Plow to transport position, and adjust upper belt guide to clear Rotary Snow Plow drive belt by  $\frac{1}{8}$ " when belt is tight (clutch engaged). Tighten bolt securely.
18. Refer to Fig. 10. Remove bolt holding belt guide under engine pulley. Assemble remaining belt guide (W), with original belt guide in same manner as the top belt guides step 17. The  $\frac{3}{8} \times \frac{1}{4}$  hex bolt and washer will be found in plastic bag. Lower Rotary Snow Plow to ground or floor level and adjust lower belt guides to clear belts by  $\frac{1}{8}$ " when belts are tight.

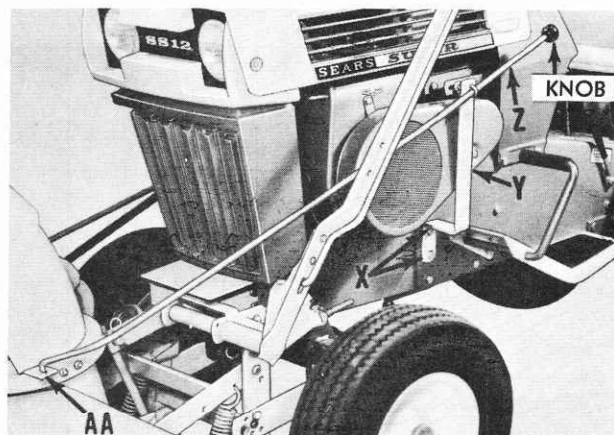


FIG. 11

19. Refer to Fig. 11. Remove upper two bolts (X), from L.H. tractor frame and assemble spout rod support (Y), to tractor with bolts removed as shown. Tighten bolts securely.
20. Assemble deflector rod (Z), to spout rod support (Y), with U clamp, two springs and two gripco nuts. U clamp, springs and nuts will be found in plastic bag.
21. Assemble deflector rod (Z), to bracket (AA), on deflector with washers and small retainer spring. A washer must be on both sides of bracket (AA), and insert retainer spring into deflector rod from front as shown. Washers and retainer springs will be found in plastic bag.
22. Screw knob on threaded end of deflector rod (Z). Tighten all bolts and make sure cotter pins are spread. Lubricate Rotary Snow Plow – see Lubrication Chart on page 7. Change oil in tractor engine to a lighter weight of oil for cold weather use.

## ROTARY SNOW PLOW DRIVE BELT ADJUSTMENT

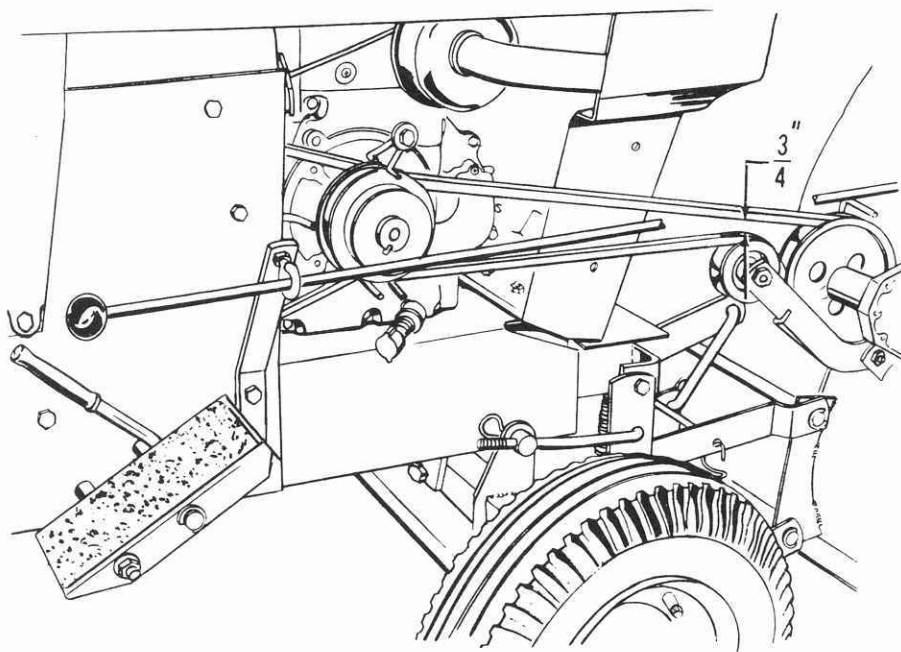
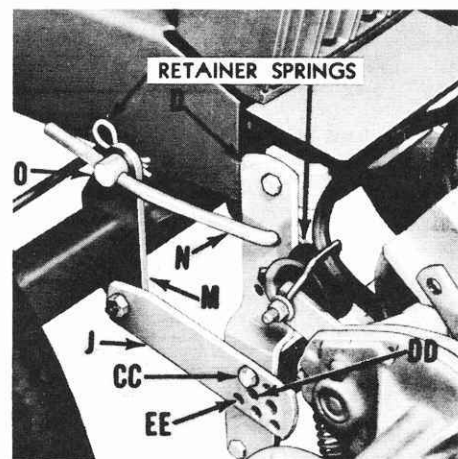


FIG. 12

With clutch engaged, (rod pushed forward), and Rotary Snow Plow in raised position, Rotary Snow Plow drive belt must have  $\frac{3}{4}$ " clearance between belt, as shown, in figure 12. If clearance is much greater than  $\frac{3}{4}$ " clutch will not release properly. If clearance is much less than  $\frac{3}{4}$ ", belt may slip. Use the necessary holes in push straps (J), to acquire this clearance, and adjust channel lock links (N), to keep front edges of housing assembly vertical with level floor. Refer to Fig. 12.

Refer to Fig. 12 and insert. If there is  $\frac{3}{8}$  inch, or less, clearance between belt, remove bolt (CC), in push straps (J), and insert bolt through hole (DD), tighten bolt securely. Remove retainer spring from adjusting pin (O), and turn adjusting pin back on channel lock link (N), approximately  $\frac{1}{4}$ ". This will keep Rotary Snow Plow vertical and will tighten belt so that belt will have approximately  $\frac{3}{4}$ " clearance which is necessary for proper clutching. If clearance is over  $1\frac{1}{8}$  between belt, move bolt in push strap to hole (EE), and turn adjusting pin (O), forward on channel lock link (N), approximately  $\frac{1}{4}$ ". This will give less clearance to belt so that clutch will release properly.



## LUBRICATION CHART

Check oil in gear case every season. Keep filled with S.A.E. 80 oil to level of plug. Refer to Key No. 71 in parts illustration, page 10.

The impeller has a plug in impeller tube near sprocket, refer to Fig. 13. There is also another oil plug in opposite end of impeller. Remove plugs and place 12 to 15 drops of light motor oil in each hole. Replace plugs. This should be done starting each season.

Oil all other moving parts with light oil including chain--such as lift lever, toggle linkage, swing frame pivots and lever plunger.

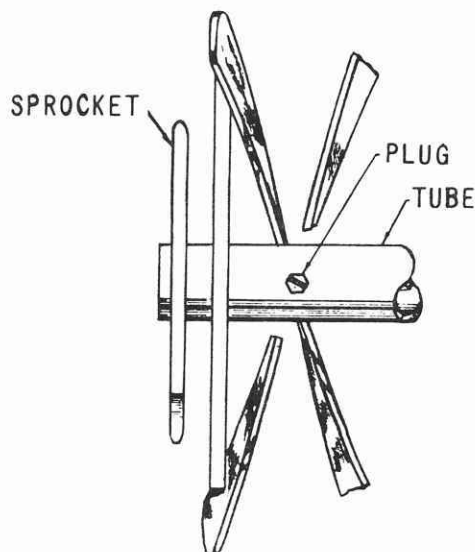


FIG. 13

## OPERATING CONTROLS

The Rotary Snow Plow has only two controls. Clutch control rod is pushed forward to engage impeller, pulled back to disengage. Deflector control rod is pushed forward to throw snow to the right, pulled back to throw snow to left.



**ALWAYS START IN NEUTRAL!**

## ROTARY SNOW PLOW TIPS

1. Never leave machine with engine running.
2. Keep people, particularly children, away from the discharge area.
3. Throw snow downwind whenever possible.
4. In deep heavy hard packed snow use first gear in low range. In lighter snow a higher gear may be used. Use the gear which seems to do the best job of throwing snow. First gear low range is  $\frac{3}{4}$  M.P.H.
5. Snow can be thrown to right by pushing deflector control rod forward, to left by pulling back on control rod. Snow can also be thrown forward when in a narrow passageway or where it cannot be thrown to right or left.
6. On driveways, etc. all the snow can be thrown in one direction or it can be thrown to each side.
7. Adjusting deflector hood up or down increases or decreases the distance snow is thrown. Depth of snow, type of snow and speed also control distance. Generally keep deflector hood low enough to keep snow from blowing back on the operator and still get distance.
8. Runner adjustment is provided. Raising runner will leave very little snow on sidewalk or smooth driveway. Lower runners for operation on gravel driveways. This prevents picking up and throwing stones. See "Runner Adjustment" top of next column.
9. Wax inside of deflector assembly and deflector hood with a good hard wax. This will allow snow to be discharged easier and not be so apt to plug.
10. Install tire chains and add wheel weights to rear tractor wheels for added traction. This will greatly reduce rear wheel slippage, and greatly improve performance of the unit.

## RUNNER ADJUSTMENT

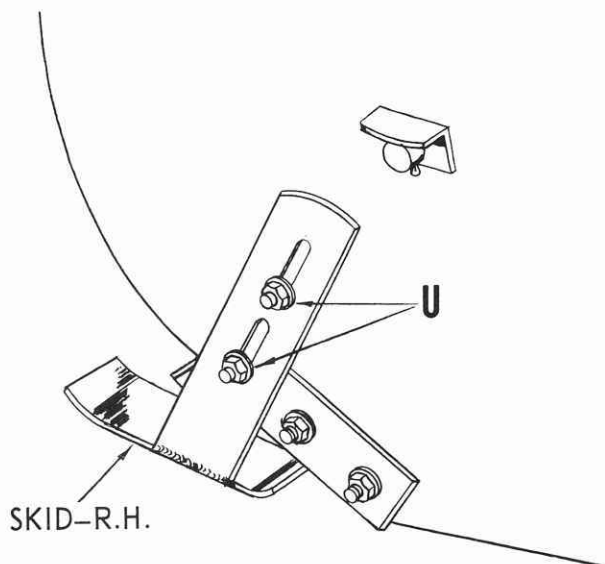


FIG. 14

Refer to Fig. 14.

Loosen two nuts (U) on each runner. Adjust runners to desired height and retighten bolts. Lower runners for gravel drives. Raise runners for smooth sidewalks or drives.

## CHAIN ADJUSTMENT

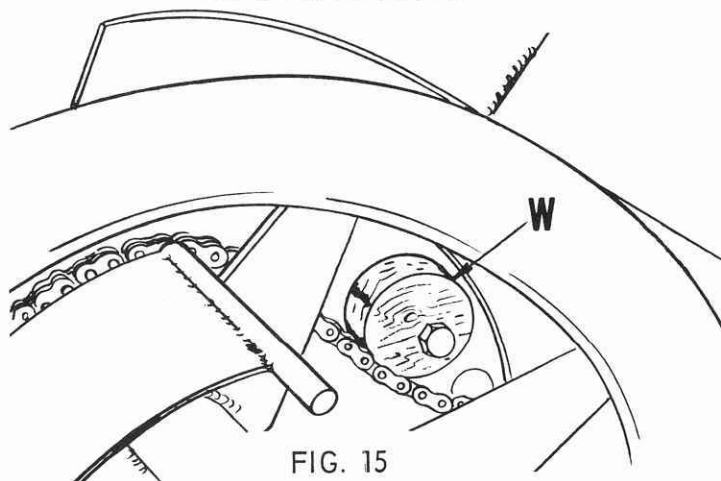


FIG. 15

A chain block (W), -made of hard wood-is located inside the housing assembly for tightening chain. Loosen bolt and turn chain block to tighten chain. Chain has proper tension when chain can be deflected slightly with slight pressure by hand. Retighten bolt.

## CARE OF ROTARY SNOW PLOW

After each use, clean snow from Rotary Snow Plow and tractor. Store in warm area if possible for easier starting. Like your automobile or any other piece of equipment this tractor and Rotary Snow Plow will need some care and maintenance for good performance. Wax or oil inside of deflector to prevent rust in storage.



## COAST TO COAST NATION-WIDE SERVICE FROM SEARS FOR ROTARY SNOW PLOW



SEARS, ROEBUCK AND CO. and SIMPSON'S-SEARS LIMITED in Canada back up your investment with quick mechanical service and genuine replacement parts.

If and when you need repairs or service, call on us to protect your investment in this fine piece of equipment.

### MODEL NO. 917.251820

The Model Number will be found on a plate attached to the Chain Guard.

### HOW TO ORDER REPAIR PARTS

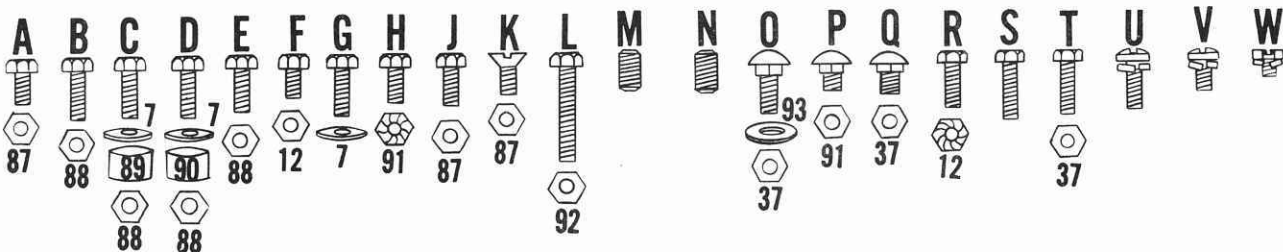
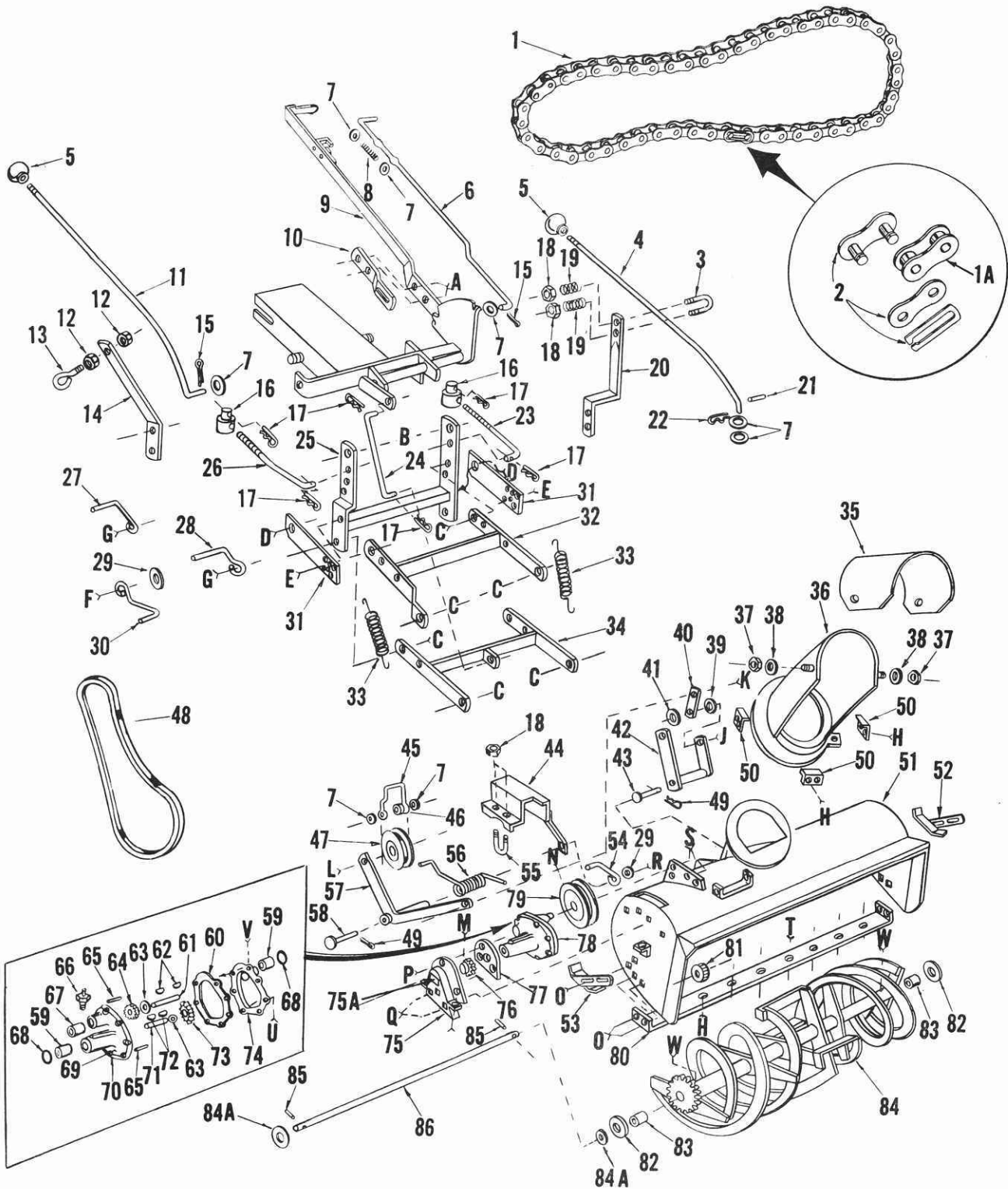
All parts listed herein may be ordered through SEARS, ROEBUCK AND CO. or SIMPSON'S-SEARS LIMITED. When ordering parts by mail from the mail order house which serves the territory in which you live, selling prices will be furnished on request or parts will be shipped at prevailing prices and you will be billed accordingly.

WHEN ORDERING REPAIR PARTS, ALWAYS GIVE THE FOLLOWING INFORMATION AS SHOWN IN THIS LIST:

1. The PART NUMBER.
2. The PART NAME.
3. The MODEL NUMBER 917.251820.
4. The NAME OF ITEM - Rotary Snow Plow.

**SEARS, ROEBUCK AND CO.  
IN CANADA, SIMPSON'S-SEARS LIMITED**

# SEARS ROTARY SNOW PLOW -- MODEL NUMBER 917.251820



## SEARS ROTARY SNOW PLOW -- MODEL NUMBER 917.251820

KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	5858H	Roller Chain	62	5863H	Woodruff Key 1/8 x 1/2
1A	277H	Roller Link	63	6266H	Thrust Washer
2	276H	Connecting Link	64	4647H	Pinion
3	4621H	U-Clamp	65	175H	Roll Pin
4	5825H	Deflector Control Rod	66	5855H	Relief Valve
5	9439M	Control Knob	67	8118M	Bearing
6	6580H	Lever Plunger	68	4200H	Oil Seal
7	120394	Washer, 13/32 x 13/16 x 16 Ga.	69	103866	Pipe Plug 1/4 N.P.T.
8	1539U1	Spring	70	634A245	Gear Case and Bearing
9	634A152A	Pivot Frame and Channel Weldment	71	8433H	Gear Shaft
10	7426H	Lever Clip Lower	72	9858M1	Woodruff Key, 3/16 x 5/8
11	7704H	Clutch Rod	73	4648H1	Gear
12	271184	Nut, Keps 5/16 - 18	74	634A39	Gear Case Cover and Bearings
13	6564H	Eye Bolt	75	7893H	Chain Guard
14	6569H	Clutch Rod Bracket	75A	-----	Model Number Plate
15	177923	Cotter, 1/8 x 3/4	76	5856H1	Sprocket - 15 Tooth
16	6568H	Adjusting Pin	77	4662H	Chain Guard Bracket
17	4940M	Retainer Spring	78	634A246	Gear Case Assembly
18	4632H	Nut, Gripco #10 - 24	79	4689H1	Pulley
19	4615H	Spring	80	634A247	Scraper and Reinforcement
20	8492H	Spout Rod Support	81	4701H	Chain Block
21	172H	Roll Pin	82	09213416	Washer, 21/32 x 2-1/8 x 16 Ga.
22	4921H	Retainer Spring	83	4696H	Bearing
23	6565H1	Channel Lock Link	84	634A249	Impeller with Bearings
24	7425H	Lift Link	84A	8447H	Fiber Washer
25	634A44	Hanger Weldment	85	7836M	Roll Pin
26	6591H1	Channel Lock Link (Offset)	86	8432H	Impeller Shaft
27	6481H	Belt Guide Finger Lower	87	1605H	Nut, Gripco 1/4 - 20
28	6563H	Guide Rod	88	1275H	Nut, Gripco 3/8 - 16
29	120393	Washer, 11/32 x 11/16 x 16 Ga.	89	280M1	Bushing
30	6590H	Belt Guide	90	5827H	Bushing
31	7890H	Push Strap	91	271178	Nut, Keps 1/4 - 20
32	634A148	Swing Frame - Upper	92	03560600	Nut, Nylock 3/8 - 16
33	4705H	Spring	93	19111114	Washer, 11/32 x 11/16 x 14 Ga.
34	634A150	Swing Frame - Lower	A	121900	Screw, Machine 1/4 - 20 x 1 Hex Hd.
35	4661H	Deflector Hood	B	122145	Bolt, Machine 3/8 - 16 x 1 1/4 Hex Hd.
36	615A78	Deflector Assembly	C	122145	Bolt, Machine 3/8 - 16 x 1 1/4 Hex Hd.
37	319H	Nut, Huglock 5/16 - 18	D	122145	Bolt, Machine 3/8 - 16 x 1 1/4 Hex Hd.
38	4614H	Compression Washer	E	122145	Bolt, Machine 3/8 - 16 x 1 1/4 Hex Hd.
39	19091216	Washer, 17/64 x 3/4 x 16 Ga.	F	122007	Bolt, Machine 5/16 - 18 x 3/4 Hex Hd.
40	5850H	Handle Link	G	122145	Bolt, Machine 3/8 - 16 x 1 1/4 Hex Hd.
41	19091807	Washer, 9/32 x 1-1/8 x 3/16	H	120706	Bolt Hex Hd. 1/4 - 20 x 1/2
42	634A149A	Toggle Lever Assembly	J	121893	Bolt, Machine 1/4 - 20 x 7/8 Hex Hd.
43	7436H	Rivet, Drilled 4 1/2 long 5/16 rd.	K	120697	Screw, Machine 1/4 - 20 x 3/4 Flat Hd.
44	634A153	Pulley Guard and Strap	L	122194	Bolt, Machine 3/8 - 16 x 2 1/2 Hex Hd.
45	7851H	Belt Retainer	M	102571	Set Screw Hex Socket Headless C.P. 1/4 - 20 x 5/16
46	7850H	Spacer	N	139043	Set Screw Hex Socket Headless ser. C.P. 5/16 - 24 x 3/8
47	4702H	Idler Pulley	O	126216	Bolt Sq. Neck Carriage 5/16 - 18 x 3/4
48	5859H	Drive Belt	P	9417711	Bolt, Sq. Neck Carriage 1/4 - 20 x 1/2
49	426663	Cotter, 1/8 x 5/8	Q	9411799	Bolt, Sq. Neck Carriage 5/16 - 18 x 1/2
50	4597H	Deflector Clip	R	100122	Bolt, Hex Hd. 5/16 - 18 x 1
51	634A250	Housing Assembly	S	122027	Bolt, Hex Hd. 5/16 - 18 x 1 1/4
52	634A197	Skid, L.H.	T	122027	Bolt, Hex Hd. 5/16 - 18 x 1 1/4
53	634A198	Skid, R.H.	U	14670416	Screw, Machine Slotted Pan Hd. W/ Sems Lockwasher 1/4 - 20 x 1
54	7852H	Belt Guide	V	14670412	Screw, Machine Slotted Pan Hd. W/ Sems Lockwasher 1/4 - 20 x 3/4
55	7440H	U-Bolt	W	15690405	Screw, Machine Slotted Pdn Hd. W/ ext. Lockwasher 1/4 - 28 x 5/16
56	5860H1	Idler Spring	---	8451H	Instruction and Parts Book
57	626A84	Idler Arm and Bushing			
58	7445H1	Rivet, Drilled 4 long 5/16 rd.			
59	8119M	Bearing			
60	4692H	Gasket			
61	6567H	Pinion Shaft			