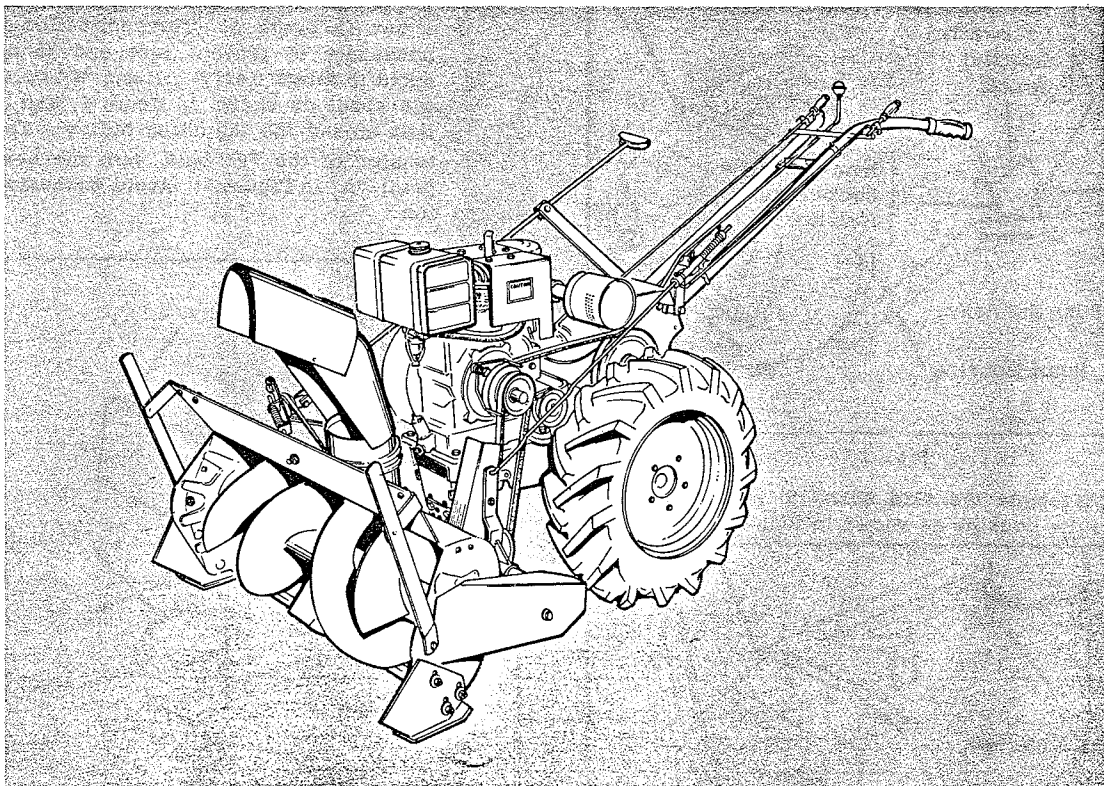


Simplicity[®]

INSTRUCTIONS AND PARTS LIST

36" Rotary Snow Thrower

ARTICLE #990187



Qty: 1 of 3 - 102.00
2 of 3 - 30.90
3 of 3 - 7.80

Assembly

The snow plow is shipped from the factory in 3 cartons. The largest carton contains the rotor housing, skid shoes, drift cutters, spout, "V" belt for spout and the hot air deflector for the engine.

The smaller carton contains the idler lever assembly, "V" belt, pulley, woodruff key, 3 washers for the rotor drive shaft, push bar assembly, hardware for attaching the push bar to the snow plow, and the support bracket for the spout adjusting rod.

The third carton contains the spout adjusting rod, and the clutch rod.

To assemble the snow plow, proceed in the following sequence:

1. Assemble the push bar to the rear of the rotor housing, using 2 hex capscrews. The long capscrew (7/16"-14 NC x 4 1/2" lg.) and the spacer are used in the rear hole of the push bar as shown in figure 1. The other capscrew (1/2"-13 NC x 2 3/4" lg.) is used in the front hole of the push bar. Fasten the capscrews in place with lockwashers and hex nuts.

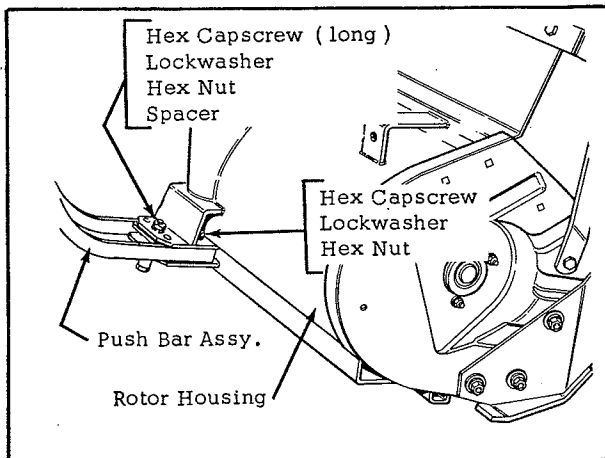


Fig. 1

2. Assemble the skid shoes to each side of the rotor housing as shown in figure 2.

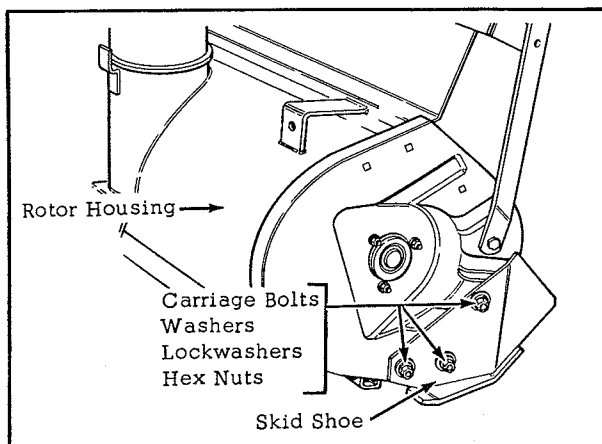


Fig. 2

3. Assemble the drift cutters in place on each side of the rotor housing as shown in figure 3.

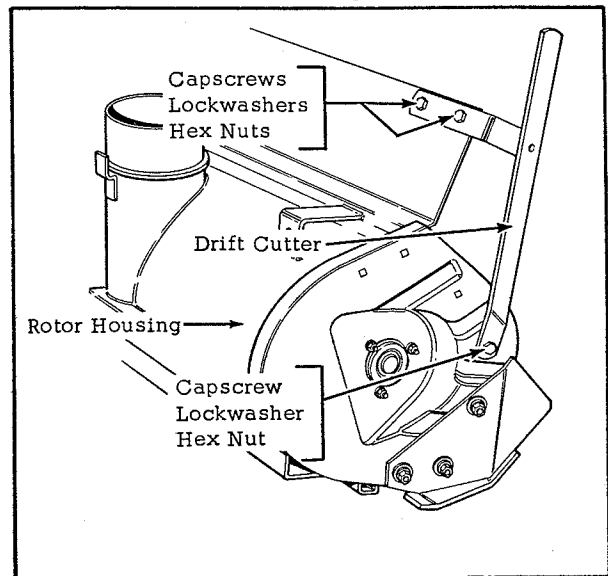


Fig. 3

4. Apply a coating of light oil to the neck of the discharge spout mounting colar and install the spout in place on the rotor housing as shown in figure 4. The application of oil is necessary to prevent rust and to allow the spout to rotate freely. Clamp "V" belt around the spout as shown in figure 4, and loop the belt around the adjusting pulley. To adjust tension of the "V" belt, turn the hex nut at point "A" in Figure 4. Avoid excessive tension.

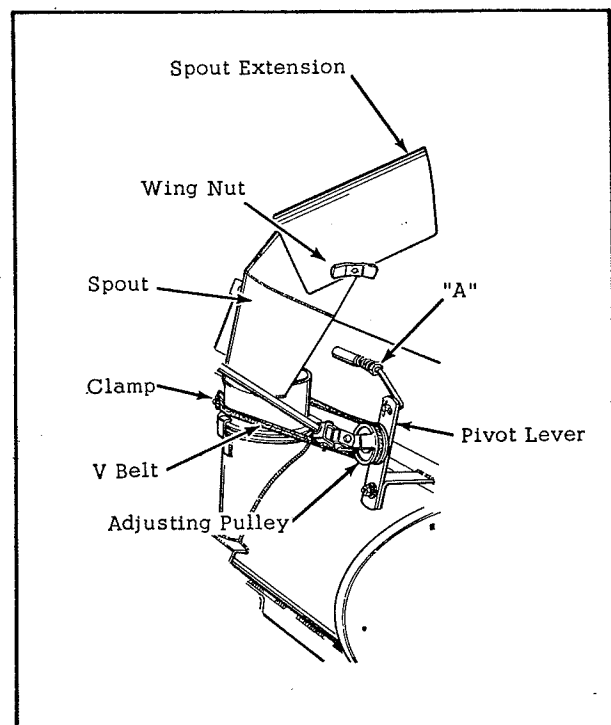


Fig. 4

5. Assemble the idler lever assembly and pulley to the rotor drive shaft in the following manner:

Three washers are shipped loose in the smaller carton; one washer has a larger hole or bore than the others. Assemble the washer (with the larger hole) to the rotor drive shaft. Slide the hub of the idler lever assembly over the rotor drive shaft. **Note:** The reinforcing bar welded to the hub and the idler lever is to face away from the pulley end of the rotor drive shaft. Assemble the two washers with the smaller hole to the end of the rotor drive shaft and place the woodruff key in its keyway on the shaft. Mount the pulley with the hub facing the idler lever assembly and secure in place with the set screw. See figure 5.

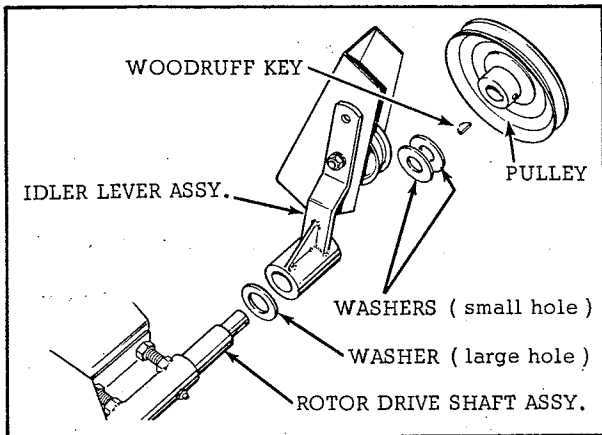


Fig. 5

Installation

For ease of attachment to the Model W tractor, follow the steps outlined below:

1. The snow plow push bar attaches to the front of the tractor frame as shown in figure 6. Loosen the 2 "T" nuts on the push bar hitch and engage the front hitch rod securely into the front notch or groove on the lower front end of the tractor frame. Depress the tractor handles and the rear hitch rod will seat itself into the rear notch or groove on the tractor frame. When the hitch rods are well seated in the notches, tighten the "T" nuts securely.

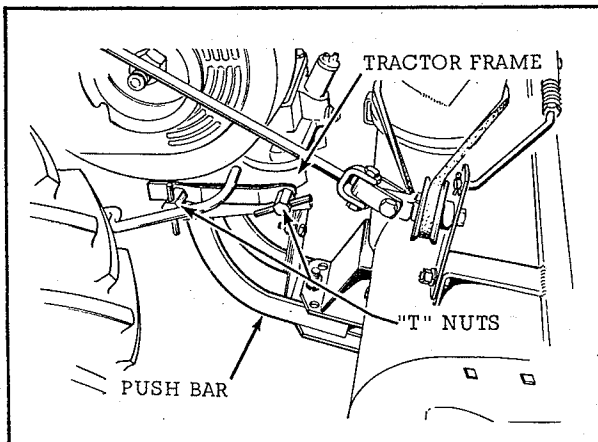


Fig. 6

2. Fasten the rod guide support to the right hand side of the tractor as shown in figure 7. Insert the adjusting rod into the rod guide and check to be sure that the rod guide does not bind or pinch as the spout adjusting handle must rotate freely.

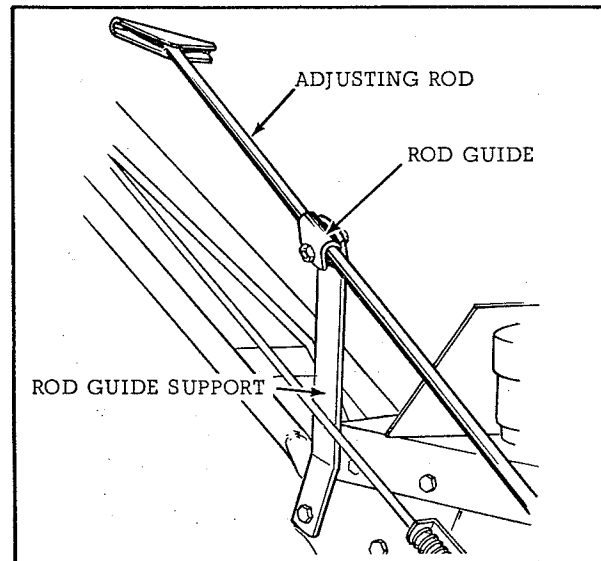


Fig. 7

3. Assemble the lower end of the adjusting handle to the fork assembly on the adjusting pulley. See figure 8.

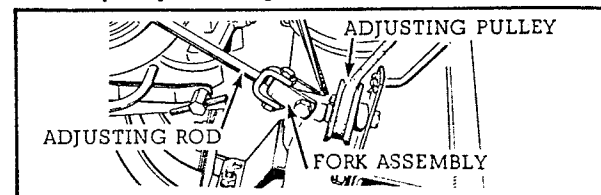


Fig. 8

4. Place the "V" belt in position on the engine drive shaft pulley, and on the rotor drive shaft pulley. **Note:** "V" belt runs under the idler pulley. See figure 9. Insert the offset end of the clutch rod into the hole on the idler lever and fasten in place with a hair pin cotter as shown in figure 9.

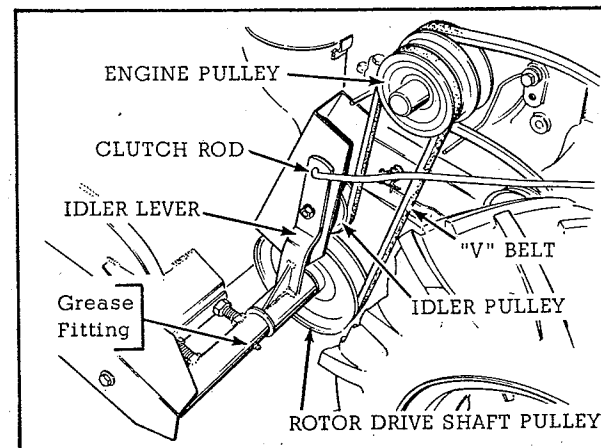


Fig. 9

- Attach the upper end of the clutch rod to the clutch rod pivot lever located on the left side of the tractor transmission. See figure 10. The projecting pin on the rod socket assembly is to be inserted into the hole in the clutch rod pivot lever and held in place by a hair pin cotter. Adjust the tension on the "V" belt by loosening the set screw and sliding collar "A" in or out while the clutch lever is in disengaged position. Retighten the set screw and engage the clutch. Belt tension will be correct when approximately 1/4" clearance is visible between collar "B" and the end of the rod socket assembly when the clutch is engaged. Avoid excessive belt tension as it will only cause premature belt failure.

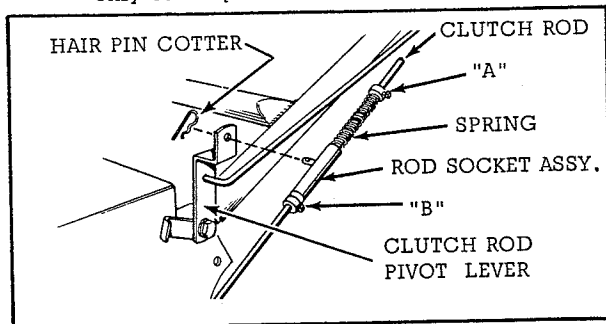


Fig. 10

- Remove 2 head bolts from the left hand edge of the cylinder head of the engine and install the heat deflector as shown in figure 11. Replace the head bolts and tighten securely. This deflector is provided for winter use only, and must be removed in warm weather to prevent overheating and damaging the engine. The deflector directs a flow of warm air around the carburetor and allows more efficient winter operation of the tractor engine.

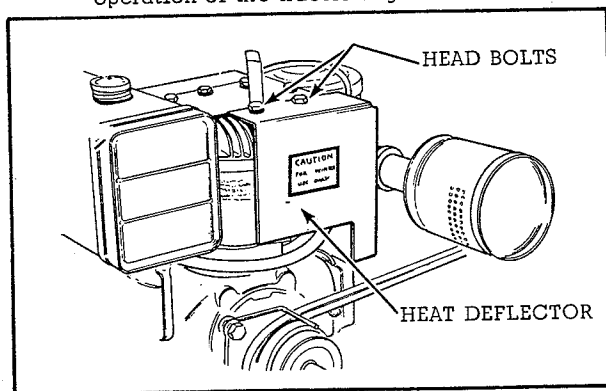


Fig. 11

Lubrication

The snow plow has 1 grease fitting which requires occasional lubrication with general purpose automotive grease. The location of this fitting is shown in figure 9.

The bearings on the rotor shaft are of a sealed type and do not require further lubrication. The occasional application of a light motor oil to the ends of the rotor shaft will aid in prolonging the life of the bearing seals.

Operation

Operation of the rotor is controlled by the position of the clutch lever located on the left handle of the tractor. To operate the rotor, push the lever forward and up to the disengaged position and start the tractor engine. Be sure that the tractor transmission is in neutral position before starting the engine. Pull the clutch lever back and downward to the engaged position and the rotor will operate as long as the tractor engine is running. Bear in mind that the rotor will be revolving as long as the clutch is engaged and the tractor engine is running. Exercise caution at all times, and never attempt to remove ice or snow from the rotor housing or discharge spout unless the clutch is disengaged and the tractor engine is stopped.

The skid shoes on each side of the rotor housing are adjustable either up or down to suit the surface over which the plow is to be operated. For a smooth surface, loosen the nuts and set the shoes so that the lower edge of the rotor housing rides on the surface. For use over an uneven or rough surface, adjust the shoes for maximum lift.

When using the plow, set the discharge spout so that the snow will be thrown with the wind and never into the wind. Throwing snow into the wind is apt to be a source of discomfort to the operator. To alter the direction of discharge, rotate the spout by means of the adjusting handle. The angle of discharge may be altered by loosening the wing nut on the discharge spout extension adjusting rod and moving the extension to the desired position. Retighten the nut.

When operating the plow through excessively heavy drifts of snow, depress the tractor handles and raise the plow while taking the first pass through the drift. Then lower the plow and go through the drift again. After the first path through the drift has been opened, it may be convenient to use only a portion of the width of the plow on succeeding passes. Naturally, efficient plowing methods will vary from one snowfall to another and from location to location and the operator must judge for himself which methods produce the best results.

Wheel weights and tire chains will offer increased traction under rugged snow conditions and are available from your Simplicity dealer.

When transporting the plow from one location to another, disengage the rotor clutch lever and depress the tractor handles slightly to lift the plow clear of the surface.

When possible, it will be best to store the snow plow in a cold area so that snow will not melt on the snow plow and cause the formation of ice.

CAUTION: It is the operator's obligation to avoid foreign material or obstructions in snow. Bear in mind that pieces of pipe, rocks, lumber, or rags may jam the rotor and damage it. Be prepared to disengage the rotor clutch quickly if this should happen. If the rotor should jam on alien material, be sure to shut off the tractor engine before attempting to remove the obstruction.

Counter Weight

The counter weight kit #990218 is designed to provide adequate counter-balancing force to the rotary snow plow and tractor. When installed as shown in figure 12, it will materially contribute to the ease of operation of the tractor when the snow plow is mounted.

To install the Socket Assembly #105215:

1. Remove the capscrew holding the rod guide support to the side of the rear frame assembly. See figure 7. Position the socket assembly over the mounting holes in the rear frame assembly and re-position the guide rod support in place over the rear mounting hole on the right hand side of the socket assembly. Replace the capscrew, lockwasher and hex nut.
2. Insert a capscrew into the front hole on the right hand side and one into the rear hole on the left hand side. Attach lockwashers and hex nuts and tighten securely in place. The left front hole of the socket assembly does not require a capscrew.
3. Insert the rod end of the counterweight into the socket of the socket assembly and secure in place with the pin and hair pin cotter, in position shown in figure 12.

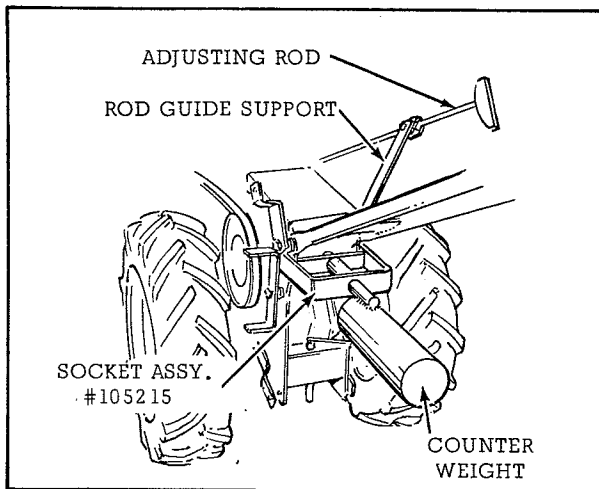


Fig. 12

"VC" Tractor

The belt and pulley kit #990188 is required to attach the rotary snow plow to the model "VC" tractor.

Follow the instructions outlined for attaching the rotary snow plow to the model "W" tractor, except for the following details:

1. The rod guide support is to be attached to the upper right hand mounting hole on the lower end of the handle assembly as shown in figure 13. The support is to be mounted on the outside of the handle assembly.
2. The engine pulley is to be removed, turned around, and re-installed on the engine drive shaft with the larger diameter of the pulley away from the engine.
3. Remove the standard pulley from the transmission drive shaft and replace it with the sheave #S1-A86.
4. Remove the tractor drive belt and replace it with the "V" Belt #GS-A53. Note that the "V" belt runs over the idler pulley of the tractor clutch.
5. Be certain that the transmission sheave and the engine pulley are in line with the tractor clutch idler pulley; and that the outer groove of the engine pulley is in line with the rotor drive shaft pulley on the snow plow.

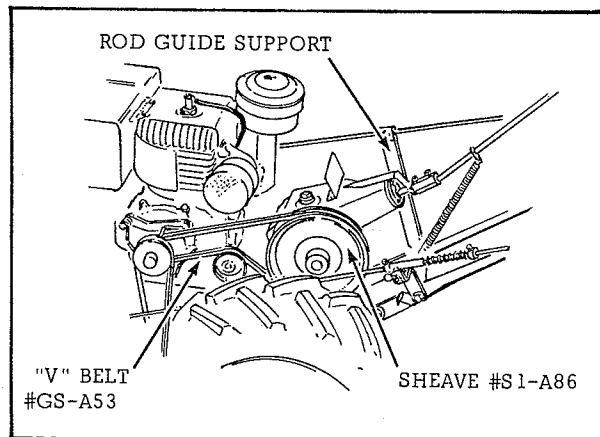
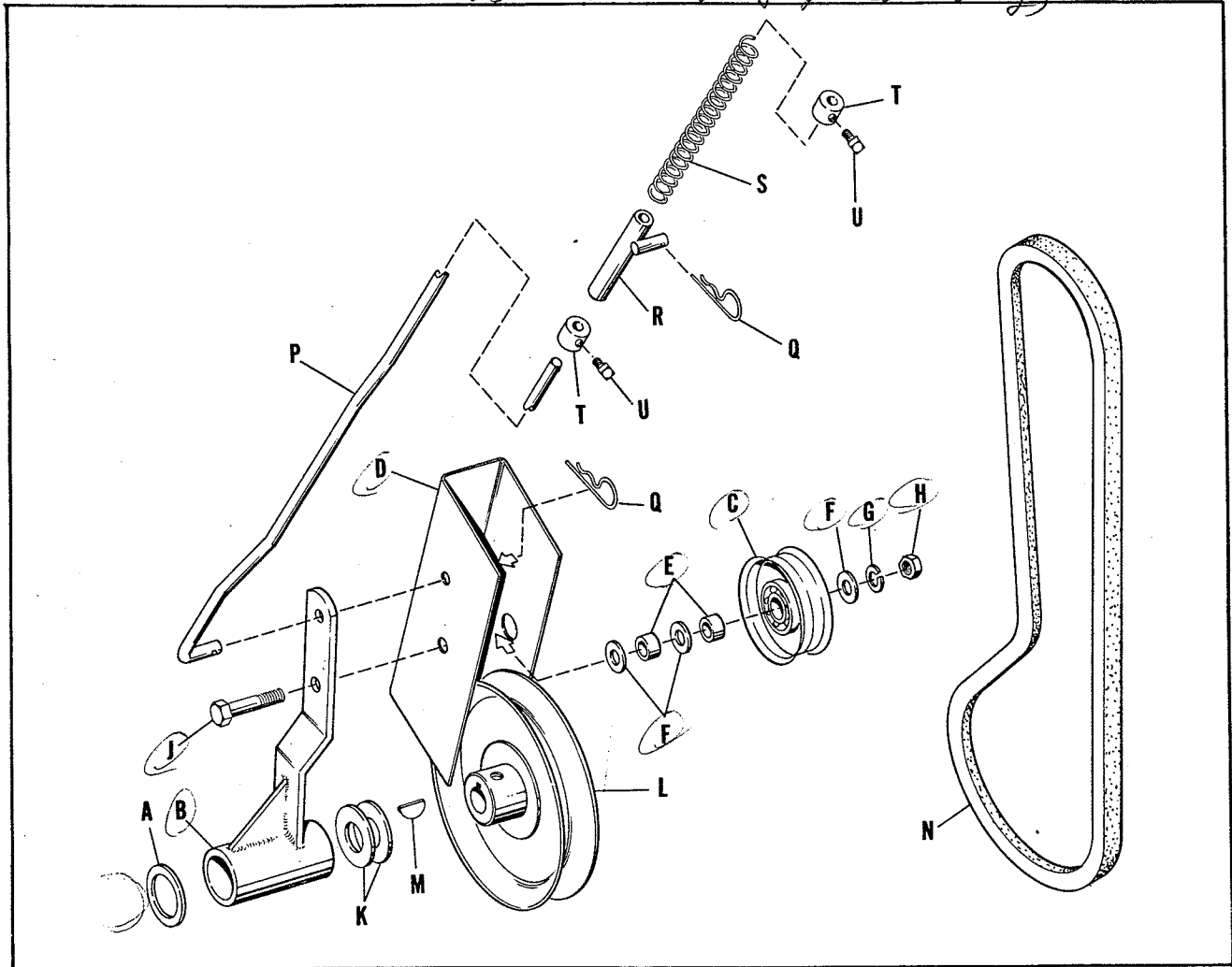


Fig. 13

VC tractor

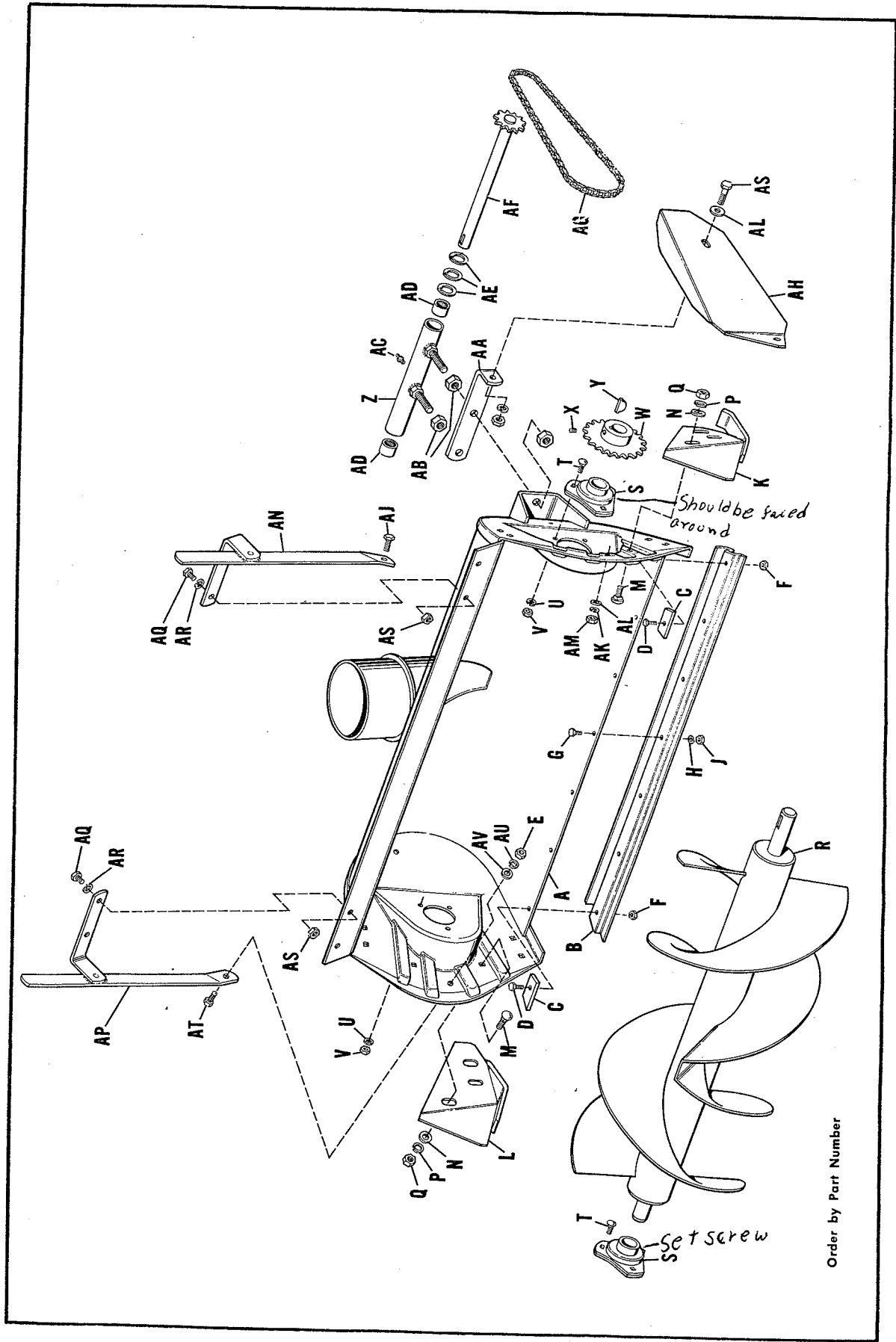
DRIVE GROUP

980043 Entire Page (Sub. Assy)



Order by Part Number

Reference Letter	Part No.	Description
<i>540318</i> { A B C D E F G H I J K L M N P Q R S T U	106059	Washer <i>as reqd</i>
	106154	Lever Assembly, Idler
	154310	Pulley, Idler <i>154534 156124</i>
	106155	Guard, Belt
	154177	Bushing
	719002	Washer, Plain, 5/16"
	720002	Washer, Lock, 3/8"
	717003	Nut, Hex., Full, 3/8"-16NC
	705010	Capscrew, Hex., 3/8"-16NC x 1 3/4" lg.
	8141003	Washer
	154272	Pulley w/ret screw <i>713563 5/16 x 9/16 - 18nc</i>
	725003	Key, Woodruff
	108099	<i>44"</i> V Belt
	106156	Rod, Clutch
	8161045	Clip, Spring <i>106787</i>
	8161518	Socket Assembly, Rod
8191045	Spring, Clutch Rod	
8191022	Collar, Set	
713001	Set Screw, Square Head, Cup Point, 1/4"-20NC x 3/8" lg.	



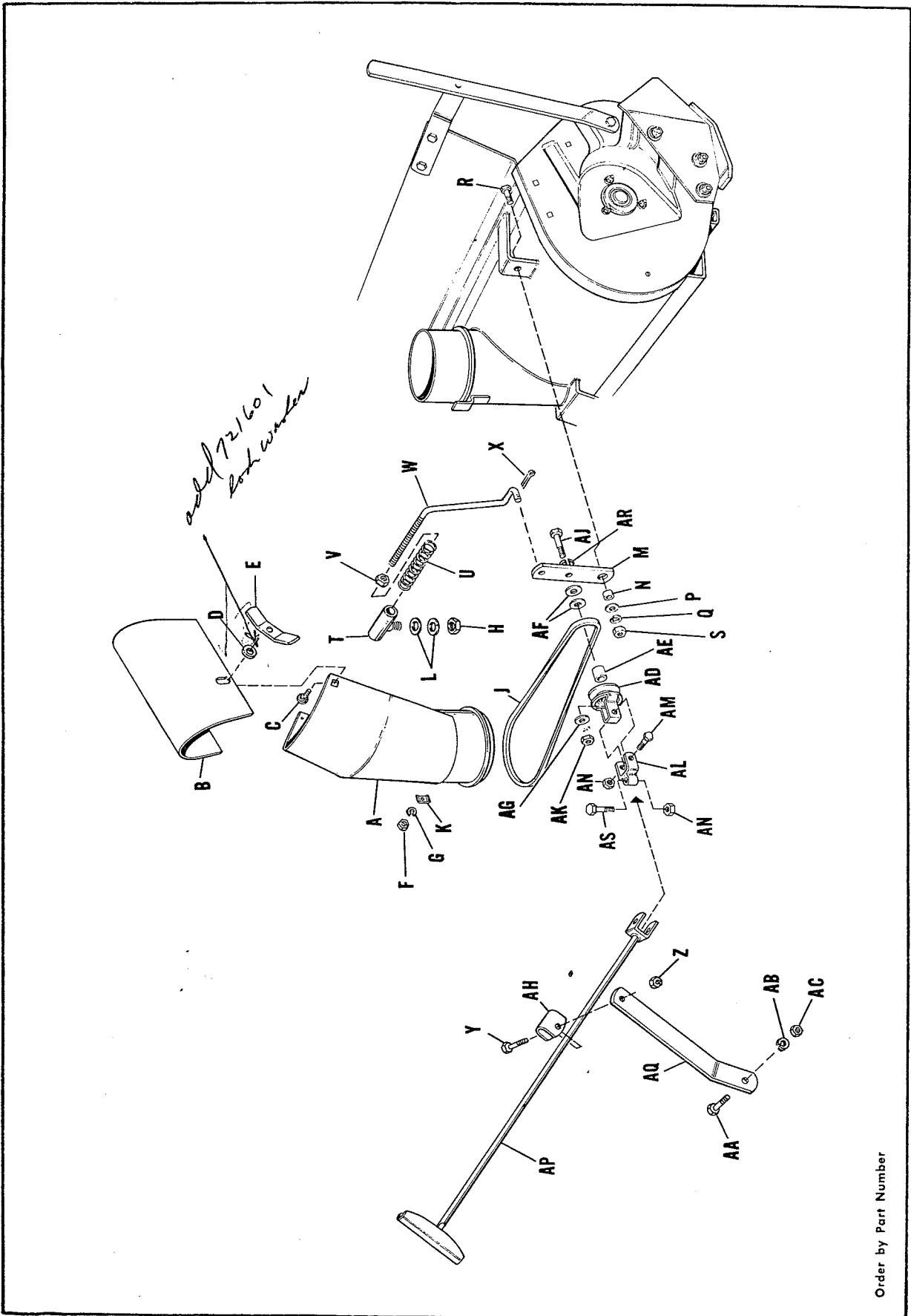
BODY & ROTOR GROUP

Order by Part Number

BODY & ROTOR GROUP

Order by Part Number
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Reference Letter	Part No.	Description
A	106031	Body Assembly <i>106593</i>
B	106438	Scraper, Body
C	106137	Clamp, Scraper
D	715020	Capscrew, Hex Hd., 5/16"-18 NC x 3/4" ^{7/8} lg. <i>715073</i>
E	717001	Nut, Hex, Full, 5/16"-18 NC
F	717511	Nut, Hex, Full, 5/16"-18 NC
G	715018	Capscrew, Hex Hd., 1/4"-20 NC x 1/2" lg.
H	720003	Washer, Lock, 1/4"
J	717005	Nut, Hex, Full, 1/4"-20 NC
K	106140	Shoe Assembly, Left Hand <i>106610</i>
L	106143	Shoe Assembly, Right Hand <i>106612</i>
M	703004	Bolt, Carriage, 3/8"-16 NC x 3/4" lg.
N	719001	Washer, Plain, 3/8"
P	720002	Washer, Lock, 3/8"
Q	717003	Nut, Hex, Full, 3/8"-16 NC
R	106047	Rotor Assembly
S	106051	Bearing, Ball <i>106445-106532</i>
T	705017	Capscrew, 5/16"-18 NC x 3/4" lg.
U	720001	Washer, Lock, 5/16"
V	717001	Nut, Hex, Full, 5/16"-18 NC
W	106052	Sprocket, Rotor
X	713503	Set Screw, Cup Point, Hex Socket, 5/16"-18 NC x 5/16" lg.
Y	151040	Key, "Hi-Pro"
Z	106053	Housing Assembly, Bearing
AA	106104	Bracket, Chain Guard
AB	717006	Nut, Hex, Full, 1/2"-13 NC
AC	727002	Fitting, Grease
AD	154258	Bearing, Needle
AE	8061012	Washer
AF	106055	Shaft Assembly
AG	106058	Chain, Rotor
AH	106103	Guard, Chain
AJ	705017	Capscrew, Hex Hd., 5/16"-18 NC x 3/4" lg.
AK	720001	Washer, Lock, 5/16"
AL	719002	Washer, Plain, 5/16"
AM	717001	Nut, Hex, Full, 5/16"-18 NC
AN	106146	Cutter Assembly, Drift, Left Hand
AP	106149	Cutter Assembly, Drift, Right Hand
AQ	705017	Capscrew, Hex Hd., 5/16"-18 NC x 5/8" lg.
AR	720001	Washer, Lock, 5/16"
AS	717001	Nut, Hex, Full, 5/16"-18 NC
AT	705017	Capscrew, Hex Hd., 5/16"-18 NC x 3/4" lg.
AU	720001	Washer, Lock, 5/16"
AV	719002	Washer, Plain, 5/16"



SPOUT GROUP

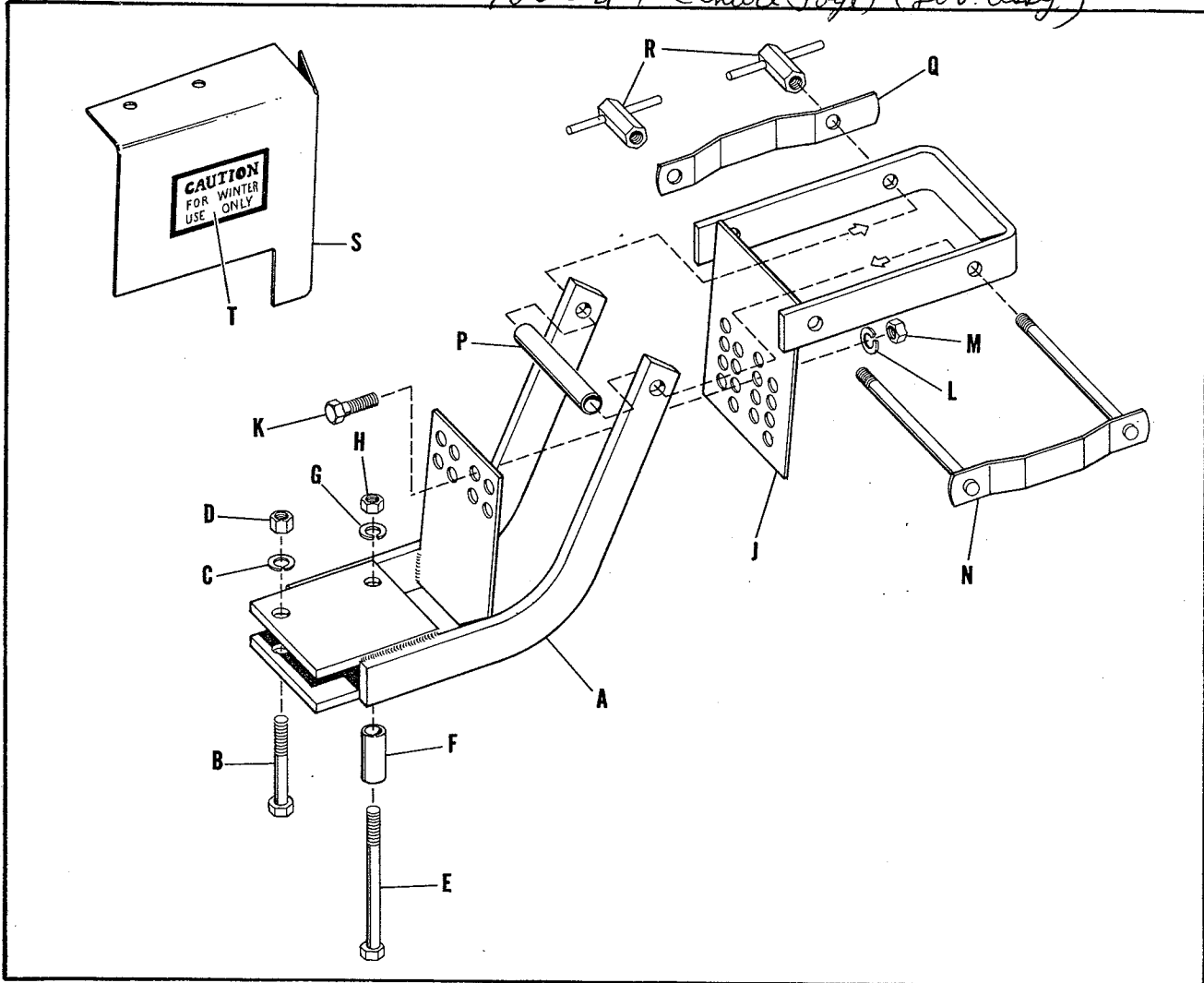
Order by Part Number

SPOUT GROUP

Ref. Letter	Part No.	Description
A	106338	Spout Assembly
B	106331	Extension, Spout <i>106489</i>
C	703005	Carriage Bolt, 5/16"-18 NC x 3/4" lg.
D	719001	Washer, Plain, 3/8"
E	106229	Nut, Wing
F	717001	Hex Nut, 5/16"-18 NC
G	720001	Washer, Lock, 5/16"
H	717511	Nut, Lock, Hex, 5/16"-18 NC
J	118116	<i>36"</i> Belt, "V"
K	121042	Plate
L	719002	Washer, Plain, 5/16"
M	106128	Lever, Idler Pulley
N	153081	Spacer
P	719001	Washer, Plain, 3/8"
Q	720002	Washer, Lock, 3/8"
R	705005	Capscrew, Hex, 3/8"-16 NC x 1" lg.
S	717003	Hex Nut, 3/8"-16 NC
T	106357	Socket Assembly, Rod
U	8191045	Spacer
V	717003	Hex Nut, 3/8"-16 NC
W	106358	Rod, Belt Tightener
X	722001	Cotter Pin, 3/32" x 3/4" lg.
Y	705019	Capscrew, 5/16"-18 x 1 1/4" lg.
Z	717511	Nut, Lock, Hex, 5/16"-18 NC
AA	705016	Capscrew, Hex, 3/8"-16 NC x 1 1/4" lg.
AB	720002	Lock Washer, 3/8"
AC	717003	Hex Nut, 3/8"-16 NC
AD	106343	Pulley Assembly, Idler
AE	8191020	Spacer
AF	121210	Washer
AG	719002	Washer, Plain, 3/8"
AH	152050	Guide, Rod
AJ	705010	Capscrew, Hex, 3/8"-16 NC x 1 3/4" lg.
AK	717003	Hex Nut, 3/8"-16 NC
AL	106131	Fork Assembly
AM	705018	Capscrew, Hex, 5/16"-18 NC x 1 1/2" lg.
AN	717511	Hex Nut, 5/16"-18 NC
AP	106160	Handle Assembly
AQ	106135	Support, Rod Guide
AR	720002	Washer, Lock, 3/8"
AS	705023	Capscrew, Hex, 5/16"-18 NC x 1 3/4" lg.

HITCH GROUP

980044 (Entire Page) (Sub. Assy)



Order by Part Number

Reference Letter	Part No.	Description
A	106169	Push Bar Assembly
B	705050	Capscrew, Hex., 1/2"-13NC x 2 3/4" lg.
C	720004	Lockwasher, 1/2"
D	717006	Nut, Hex., Full, 1/2"-13NC
E	705033 705057	Capscrew, Hex., 7/16"-14NC x 4 1/2" lg.
F	106161 106113	Spacer Y2-13 x 4 1/2
G	720006 720004	Lockwasher, 7/16" Y2
H	717022 717006	Nut, Hex., Full, 7/16"-14NC
J	106165	Hitch Assembly Y2 x 13
K	705005	Capscrew, Hex., 3/8"-16NC x 1" lg.
L	720002	Lockwasher, 3/8"
M	717003	Nut, Hex., Full, 3/8"-16NC
N	8162501	Clamp Assembly, Hitch
P	106162	Spacer, Hitch
Q	103001	Plate, Hitch, Side
R	8161041	"T" Nut, Complete
S	106172	Deflector, Hot Air
T	106173	Decal, "Caution"

