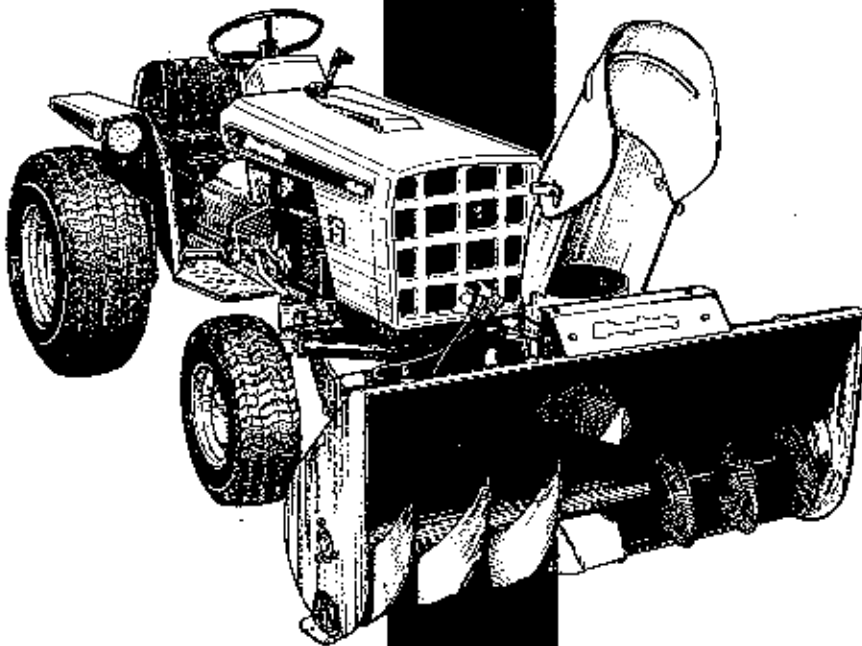


Simplicity[®]



OWNER'S MANUAL
52" SNOW THROWER
MFR'S. NO. 709

SIMPLICITY MANUFACTURING COMPANY, INC.

SER. FORM - 178094
PRINTED IN U.S.A.

1344 -

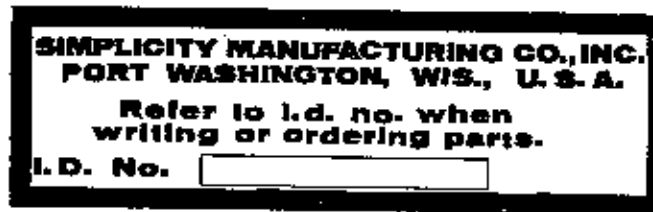
TO THE OWNER

You have made a wise choice in selecting the Simplicity 52" Rotary Snow Thrower. It has been specially designed for your Simplicity tractor and constructed to give lasting superior performance.

Before attempting to operate the snow thrower, study this manual and the manual for your tractor thoroughly. Pay special attention to the safety rules in this manual as well as the tractor owner's manual. Your Simplicity equipment is designed with your safety in mind, but it is up to you to be an alert, safety conscious operator. Be sure anyone else who may operate the snow thrower is also familiar with the operation and safety instructions.

Your Simplicity equipment requires only a minimum of care. Following the maintenance instructions carefully will assure you of maximum satisfactory service. Thank you for taking time to read this manual. The time spent will pay big dividends in the extra time saving performance you receive from your Simplicity Rotary Snow Thrower.

When ordering replacement parts for the snow thrower, be prepared to give your Simplicity dealer the identification number found on the identification plate shown below. It is located on top of the snow thrower frame. We suggest that you locate the number and record it below for easy reference.



IDENTIFICATION PLATE

SIMPLICITY NEW EQUIPMENT WARRANTY

The Company warrants Simplicity products to be free from defects in material and workmanship, except the Company makes no warranty, express or implied, with respect to tires, engines, generators and voltage regulators, which are warranted by their respective manufacturers. Any part covered by this warranty which is proven defective within one year (6 months for equipment used for rental, municipal or commercial purposes) under normal use, from date of purchase, will be replaced without charge, provided such part is returned to the factory, (if requested), and is found to be defective upon examination at the factory. This warranty does not apply to any Simplicity products altered outside of the Simplicity factory. **THE FOREGOING WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, PERFORMANCE, OR OTHERWISE.** The Company's obligation under its warranty is strictly and exclusively limited to the replacement of such parts, and in no event shall the Company be liable for any other damages, whether direct, immediate, incidental, special, or consequential. Simplicity Manufacturing Company, Inc., reserves the right to modify or change specifications without prior notification. There are no warranties which extend beyond the description of any Simplicity product.

TABLE OF CONTENTS

SIMPLICITY NEW EQUIPMENT WARRANTY	
SAFETY PRECAUTIONS	1
REQUIRED ACCESSORIES AND OPTIONS	2
RECOMMENDED ACCESSORIES AND OPTIONS	2
INSTALLATION	2
REMOVING THE ROTARY SNOW THROWER	3
OPERATION	4
PREPARING THE TRACTOR AND SNOW THROWER	4
OPERATING THE TRACTOR AND SNOW THROWER	5
MOVING THE SNOW	6
ADJUSTMENTS	7
DRIVE BELT TENSION	7
TROUBLE SHOOTING GUIDE	7
MAINTENANCE	7
ORDERING REPLACEMENT PARTS	7
AFTER EACH USE	8
EVERY 10 HOURS OF OPERATION	8
ONCE EACH YEAR	8

SAFETY PRECAUTIONS TO PROTECT YOURSELF AND OTHERS

Read and become familiar with the owner's manual for your tractor and the rotary snow thrower before operating the snow thrower.

Do not allow anyone to use the rotary snow thrower unless they have been instructed in how to operate it safely.

Never attempt to adjust, repair, or service the snow thrower while the engine is running.

Do not allow others near the snow thrower while it is operating.

Stay clear of the snow thrower auger and the discharge spout when the tractor engine is running.

Be sure the snow thrower auger has stopped turning before attempting to adjust, repair, or service the snow thrower.

CAUTION: THE AUGER MAY CONTINUE TO ROTATE A FEW SECONDS AFTER THE CLUTCH HAS BEEN DIS-ENGAGED, AND THE ENGINE SHUT OFF.

Clear the work area of objects which might be picked up and thrown by the snow thrower or cause damage to it.

Disengage power to the snow thrower and stop the tractor engine before leaving the operator's position.

Operate the snow thrower only in daylight, or good artificial light.

Use caution when operating on sloping surfaces.

When operating the snow thrower, never direct the discharge chute toward any bystanders or allow anyone near the snow thrower while it is in operation.

MFG. NO. 709-52" ROTARY SNOW THROWER

REQUIRED ACCESSORIES AND OPTIONS

Hitch assembly for front mounted attachments
Front Hydraulic kit or dual hydraulic option

RECOMMENDED ACCESSORIES AND OPTIONS

Tire Chains

Rear Wheel Weights, Two Sets

Tractor Cab

Front and rear agricultural tires and wheels are ideal for severe use.

Turf tires with weights and chains will be satisfactory for moderate use.

High flotation tires, especially with chains and weights will provide excellent traction, but are wider than the snow thrower.

INSTALLATION

1. See figure 1. Install the hitch assembly for front mounted attachments (A) to the tractor frame as shown using eight capscrews and lock washers (B). Tighten the capscrews securely. If the snow thrower drive assembly (Figure 2, item A) is already installed on the hitch assembly for front mounted attachments, it need not be removed to install the hitch assembly.
2. See figure 2. If the snow thrower drive assembly (A) is not already installed on the hitch assembly, install it as shown in figure 2, using the pin and spring clips at (B).
3. See figure 3. Place drive belt (A) around pulley (B). Remove the spring clip (Figure 2, item C) from the belt tensioning assembly and place the belt tensioning assembly (Figure 3, item C) through the hole in bracket (D). Install the spring clip (figure 2, item C) through the hole in the tensioning assembly (C), above bracket (D).
4. See figure 4. Raise the tractor hood and install drive belt (A) over the power take off pulley as shown. To do this it may be necessary to loosen the belt tightening assembly by turning the two nuts (Figure 3, item E) counter-clockwise, as viewed from below.
5. See figure 3. After drive belt (A) has been installed over

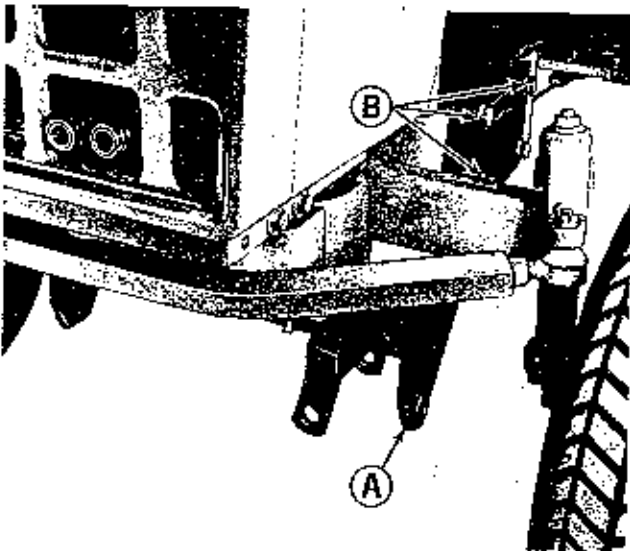


Figure 1. Hitch for front attachments installed on tractor.

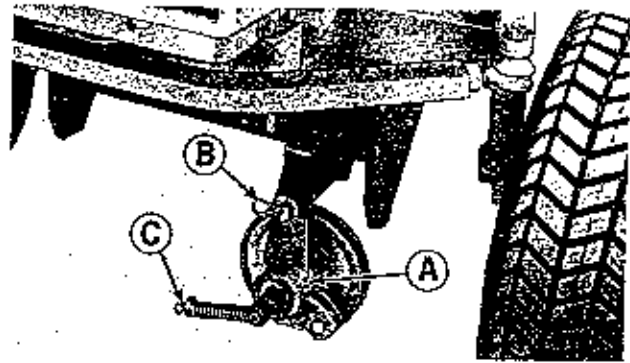


Figure 2. Snow thrower drive installed on hitch assembly.

the engine power take off pulley and the drive assembly pulley (B) the belt tension adjustment nuts (E) should be turned clockwise, as viewed from below, until spring (C) measures 2-3/8" in length. After making the adjustment, tighten the nuts snugly together so the adjustment does not change.

6. See figure 5. If it is not already in position install the hydraulic cylinder (A) as shown in figure 5, using pin (B) and spring clip (C). If the standard hydraulic cylinder which operates the tractor lift system is to be used.

On 4040 model tractors, a front hydraulic kit (Mfg. No. 990716) may be field installed. 4040 hydraulic cylinders have quick disconnect fittings, 4041 cylinders do not.

NOTES:

Since 4041 model tractors have controls, tubing, and hydraulic cylinders installed for front attachments, it is not necessary to remove the rear cylinder for front attachment operation.

7. See figure 5. Position the snow thrower so it is on a level surface and place a block (D) under the frame assembly so the mounting holes (E) are the same height as the holes in the hitch assembly which has been mounted on the tractor. A block 3-1/2 inches high will give about the right height.

8. See figure 6. Drive the tractor forward toward the snow thrower until the mounting holes in the snow thrower hitch

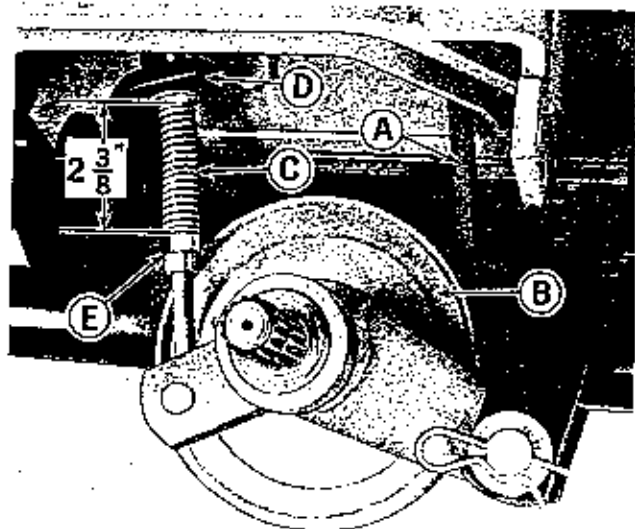


Figure 3. Drive belt tension adjustment.

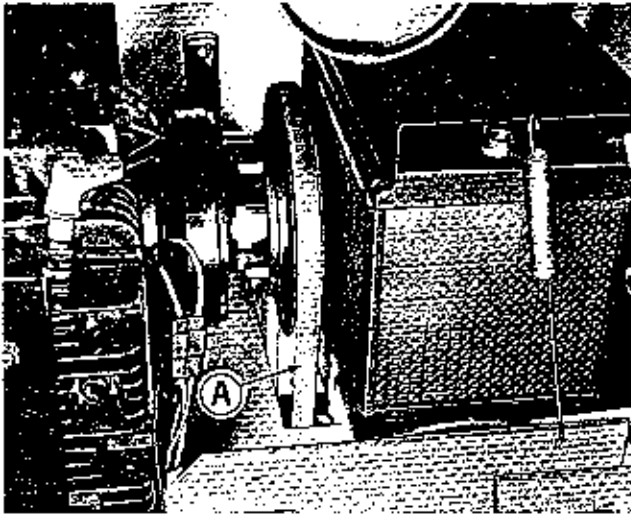


Figure 4. Tractor hood raised to show drive belt installed on PTO pulley.

and the hitch for front mounted attachments line up. Install the two pins and spring clips at (A) to mount the snow thrower to the hitch assembly.

9. See figure 7. Attach hydraulic line (C) which goes to the piston end (Stationary part of the hydraulic cylinder) as shown. Attach hydraulic line (D) which goes to the rod end or moveable part of the hydraulic cylinder. Attach the piston end of the hydraulic cylinder to the hitch assembly at (B) using a pin and spring clip. It may be helpful in doing this to extend the hydraulic cylinder by moving the tractor hydraulic lift lever to the LOWER position while the tractor engine is idling. **CAUTION: DO NOT START THE TRACTOR ENGINE WITHOUT AN OPERATOR IN THE TRACTOR SEAT.**

10. See figure 6. Wipe spline shaft (B) clean and coat it with grease or a few drops of oil.

11. See figure 8. Pull back (toward the snow thrower) on locking collar (A) so it is positioned as shown. Slide drive shaft (E) onto the spline.

12. See figure 8. After sliding the drive shaft completely onto the spline, push locking collar (B) toward the back of the tractor to lock the drive shaft in place. Check to be

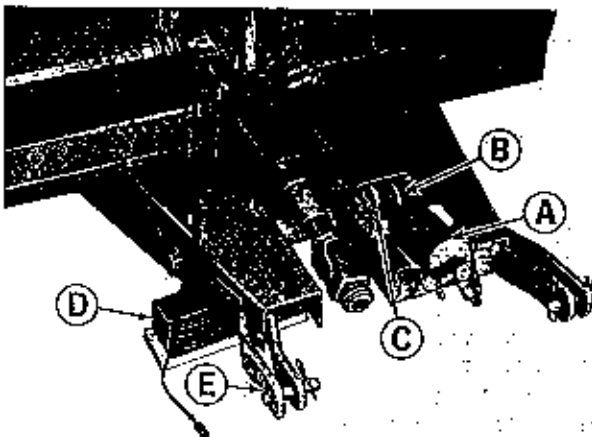


Figure 5. Snow thrower ready for mounting on tractor

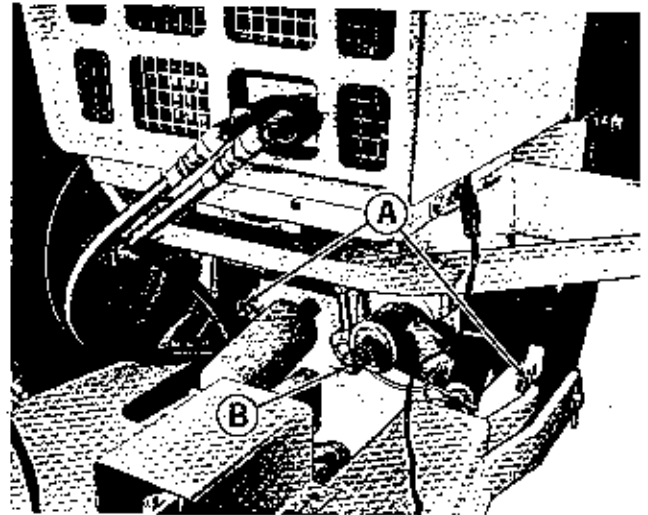


Figure 6. Snow thrower mounted to tractor.

sure the drive shaft is locked securely by attempting to pull it toward the snow thrower.

13. See figure 8. Route the spout control electrical wiring as shown, connecting it at (A). If the spout control wiring and switch (figure 12, item B) have not been installed on your tractor, request the assembly instructions provided with the snow thrower from your Simplicity dealer.

REMOVING THE ROTARY SNOW THROWER

CAUTION: BEFORE ATTEMPTING TO REMOVE THE ROTARY SNOW THROWER, BE SURE THAT THE TRACTOR ENGINE IS SHUT OFF AND THE PARKING BRAKE SET.

1. Position the tractor so it and the snow thrower are on a level surface. Shut off the tractor engine and set the parking brake.
2. Push the tractor hydraulic control lever forward to the float position.

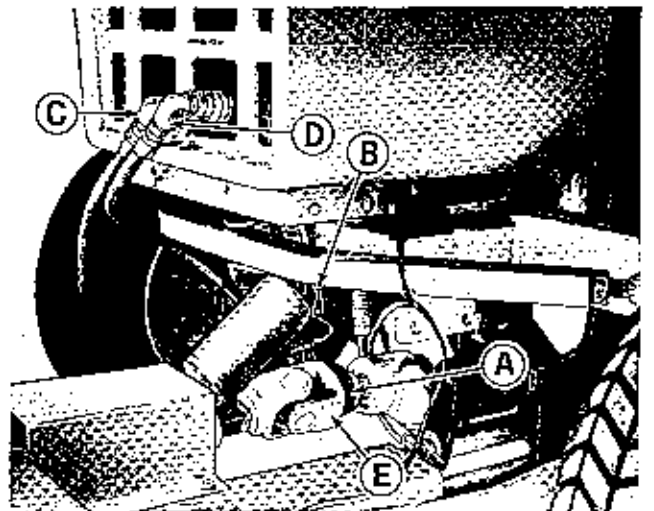


Figure 7. Hydraulic lift cylinder installed.

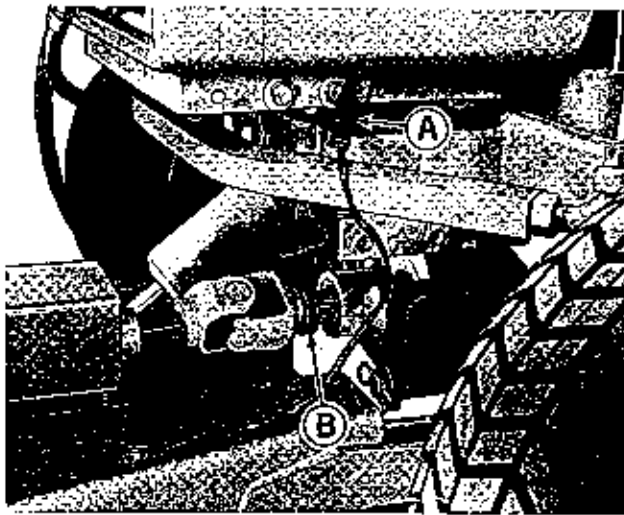


Figure 8. Drive shaft locking ring shown in locked (operating) position.

3. See figure 8. Disconnect the electric wiring at (A) and store it on the tractor as shown at (A) in figure 9.
4. See figure 7. Pull forward (toward the snow thrower) on locking collar (A) to release the drive shaft lock. Then pull forward on the drive shaft at (E) to remove it from the spline shaft.
5. See figure 7. Remove the pin and spring clip at (B) to release the hydraulic cylinder from the hitch assembly. Disconnect the hydraulic lines at (C) and (D).
6. See figure 5. Place a block (D) under the frame of the snow thrower as shown.
7. See figure 6. Remove two spring clips and mounting pins at (A) to disconnect the snow thrower from the hitch assembly.
8. See figure 3. Turn the two belt tension adjusting nuts (E) counter-clockwise as viewed from below to release tension on drive belt (A).
9. See figure 4. Remove drive belt (A) from the engine power take off pulley.
10. See figure 3. Remove the spring clip above bracket (D) and replace it as shown in figure 2, item C.
11. See figure 2. Remove the drive assembly (A) from the hitch assembly by removing a spring clip and pin at (B). The tractor can be backed away from the snow thrower and used with another front mounted attachment such as the snow plow and dozer blade, or for jobs not requiring full ground clearance. If the tractor is to be used for jobs requiring ground clearance, perform step 12.
12. See figure 1. Remove the eight capscrews and lock washers (B) and remove the hitch assembly (A) from the tractor.

OPERATION

PREPARING THE TRACTOR AND SNOW THROWER

Before attempting to inspect, adjust or service the snow thrower, insure that the power take off is disengaged, the engine shut off, and the snow thrower auger has stopped turning.

DO THE FOLLOWING

1. Read this manual and the owner's manual for your trac-

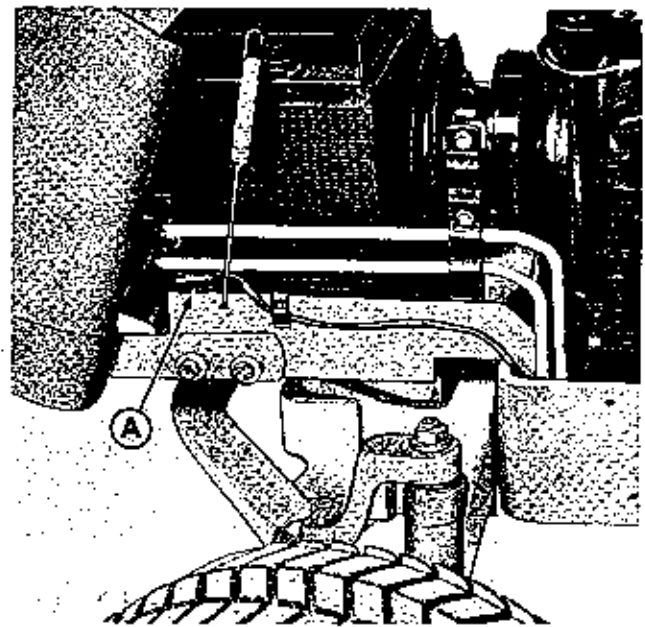


Figure 9. Left side of tractor showing spout control cable in storage position.

- tor carefully. Be sure you are familiar with the safety precautions, controls and operating instructions.
2. Check the snow thrower carefully to be sure it is properly installed. See page 2.
3. Check the condition of the snow thrower auger. Clean it of any frozen ice particles or other objects which may cause damage when it is started.
4. Lubricate the snow thrower according to the Every 10 Hour Maintenance instructions on page 8.
5. Clean the area to be cleared of any articles which may be caught or thrown by the snow thrower.

CHUTE DEFLECTOR POSITION

See figure 10. The chute deflector (A) can be adjusted by loosening the wing nut (B) and moving the deflector up or down. Be sure to tighten both wing nuts securely after positioning the deflector. The chute deflector position supplements the engine speed control to control throwing distance. The highest position provides the greatest throwing distance. Most snow throwing can be done with the deflector all the way up, by using the engine speed lever to control the throwing distance. Hold the rear of the deflector down while tightening the wing nut to make sure all the snow goes out the chute.

SKID SHOE ADJUSTMENT

Gravel Surface Adjustment

See figure 11. The two skid shoes (A) located on each side of the snow thrower housing should be lowered all the way down when operating on a gravel surface. To adjust the skid shoes raise the snow thrower housing a couple of inches off the ground. Loosen the two nuts (B) and drop the skid shoes to the lower position. Set the bottom surface of the skid shoes so they are level, or slightly (maximum of 1/8") higher in the front and tighten nuts (B) securely. Both skid shoes should be positioned the same. The snow thrower will now be supported on the skid shoes so the scraper bar can skin the snow from the surface without picking up and throwing stones.

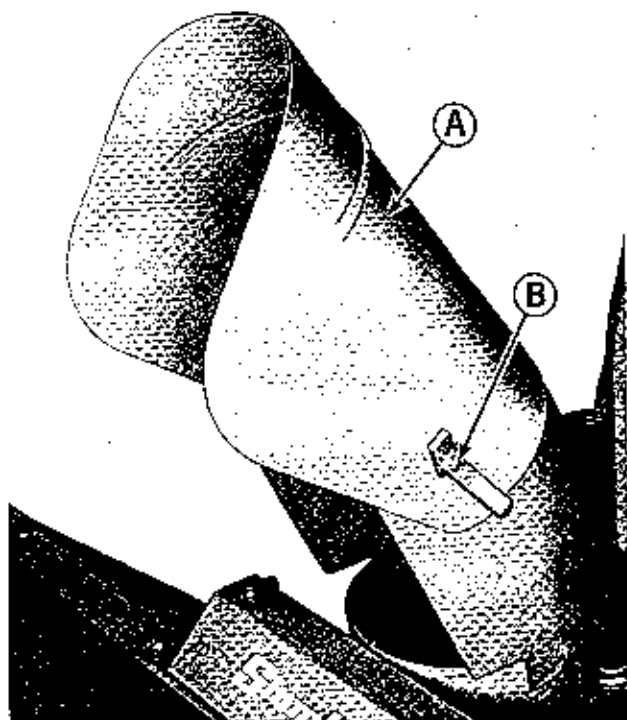


Figure 10. Snow thrower spout and deflector.

Hard Surface Use Adjustment

See figure 11. Loosen the two skid shoe mounting nuts (B) and lower the snow thrower until the scraper bar supports it. Slide the skid shoes down to contact the hard surface. Tighten the nuts on both skid shoes taking care that their position doesn't change while the nuts are tightened. The full width scraper bar on your Simplicity snow thrower will now get down to the hard surface and scrape it clean.

OPERATING THE TRACTOR AND SNOW THROWER

Refer to your tractor owner's manual for instructions on how to operate the tractor and use the controls required with the snow thrower.

DETERMINING SNOW REMOVAL PATTERN

Before beginning to remove any snow from an area the operator should determine the best snow removal pattern. The size, shape, terrain, and obstructions of the area to be cleared should be considered. Usually it is best to drive back and forth the long direction of the area to minimize turning. Required turns can often be made faster by backing the tractor and snow thrower since the direction of travel can be easily and quickly changed using the hydrostatic transmission control. **CAUTION: ALWAYS RAISE THE SNOW THROWER BEFORE TURNING OR BACKING TO PREVENT DAMAGE TO IT.**

TRANSPORTING THE SNOW THROWER

Transport the snow thrower in the raised position with the power take off switch in the OFF position. Ground speed should be adjusted according to the type and condition of the road surface. **CAUTION: WITH THE SNOW THROWER INSTALLED ON THE TRACTOR, WEIGHT ON THE FRONT WHEELS WILL BE SUBSTANTIALLY INCREASED MAKING TURNING MORE DIFFICULT UNDER SOME CONDITIONS.**

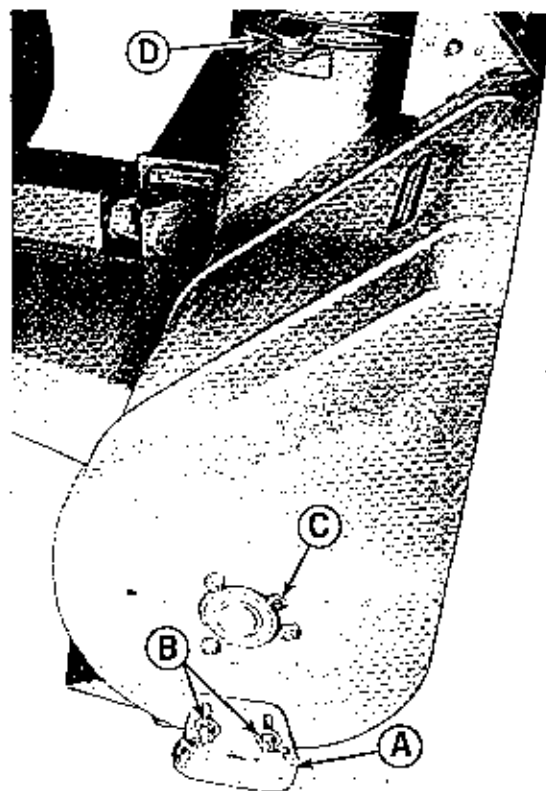


Figure 11. Grease zerk at right end of auger.

ENGINE SPEED

The tractor engine should normally be operated at $3/4$ to full speed when using the snow thrower. Operate it at full speed when throwing deep or heavy snow. Less than $3/4$ speed may be used in light snow if a short throwing distance is desirable.

ENGAGING THE SNOW THROWER DRIVE

See figure 12. The tractor engine should be operating at $1/2$ to $3/4$ throttle when the snow thrower is engaged. To engage the snow thrower drive, push forward on the **FRONT CLUTCH** switch (A). **CAUTION: IF THE SNOW THROWER DRIVE SHOULD BEGIN TO SLIP WHEN THE POWER TAKE OFF IS ENGAGED, DISENGAGE THE FRONT CLUTCH IMMEDIATELY TO PREVENT DAMAGE TO THE SNOW THROWER DRIVE BELT OR THE POWER TAKE OFF CLUTCH.** Refer to the Trouble Shooting Guide on page 7 for possible causes and corrections.

RAISING AND LOWERING THE SNOW THROWER

The snow thrower should be raised and lowered using the tractor hydraulic lift control lever. When using the snow thrower, the tractor hydraulic lift control lever should be pushed all the way forward to the **FLOAT** position, this will allow the snow thrower housing to raise and lower as it follows the contour of the ground surface. The snow thrower should not be operated with the hydraulic lift control lever in the **HOLD** position as it is possible to raise the tractor front wheels off the ground and lose steering control.

CONTROLLING GROUND SPEED

Ground speed can be easily and quickly controlled by using the tractor hydrostatic transmission control lever. The best

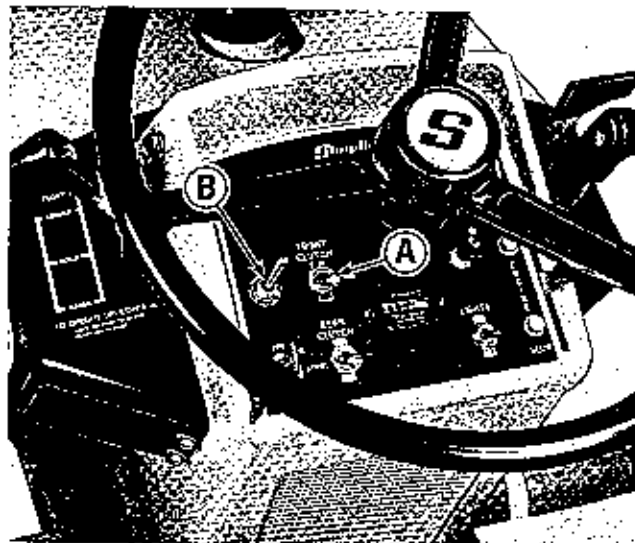


Figure 12. Tractor dash viewed from operator's position.

ground speed will vary greatly with the type and amount of snow being thrown. For most conditions 2-3 MPH will be a good starting speed. Refer to the operation chart in the operations section of the 4040 tractor owner's manual for approximate control settings to achieve these speeds.

THROWING DISTANCE

The snow should be deposited beyond the surface you want to clear if at all possible. Start with the deflector all the way up and adjust engine speed so that the thrown snow is deposited just beyond the far side of the area to be cleared. If the snow is only a couple of inches deep, it may be necessary to go over the ground quite rapidly to feed snow into the auger.

THROWING DIRECTION

See figure 12. The spout control switch (B) is used to rotate the snow thrower spout to the left and right to control the throwing direction. Simply push the switch to the left to rotate the spout to the left or to the right to rotate the spout to the right. The spout will automatically stop turning as soon as the switch is released. Whenever possible begin snow removal on the upwind side of the sidewalk or driveway so it is not necessary to blow snow over an area already cleared.

The chute should be rotated to discharge the snow downwind, not into it. Always adjust the spout and extension so you are well out of the path of the snow stream. **CAUTION: CONSTANT INHALATION OF COLD WET VAPOR IS EXTREMELY DANGEROUS. ON WINDY DAYS, HAVE YOUR NOSE AND MOUTH COVERED UNLESS THE TRACTOR IS EQUIPPED WITH A CAB.**

MOVING THE SNOW LIGHT SNOW

Snow up to 8" deep can usually be cleared in one pass the full width of the machine. Face the snow thrower into the snow, set the engine speed at 1/2 speed or more and engage the tractor front clutch switch. When the auger drive is engaged readjust the engine speed as suggested under Throwing Distance. Select the proper transmission range and hydrostatic speed control lever setting to give the speeds suggested

under Controlling Ground Speed. Drive the tractor and snow thrower slowly into the snow. When you have come to the end of a pass, raise the snow thrower and turn the tractor around or back up the cleared path to make the next pass along side of the cleared area. Allow about 2" of overlap into the cleared area. Lower the snow thrower, rotate the chute so the snow stream goes downwind, and engage the tractor drive for the second pass. Repeat these steps until the area is cleared.

HEAVY DEEP SNOW

With very dense snow or snow deeper than the center of the auger a different method is necessary.

First Pass

Lower the deflector about 1/2 way and run the engine at full speed. Raise the snow thrower until the top of the auger housing is above the top of the snow whenever possible. Drive the tractor slowly through the snow. Readjust the deflector if necessary to obtain the desired throwing distance. Remember to stop the engine before adjusting the deflector. At the end of the pass turn around or back up as described under light snow, except to go over the same path with the snow thrower in the lowered position.

In some cases it may be better to back up occasionally before making the complete pass and clear the snow down to the ground as you go along so the tractor wheels do not have to run in deep snow.

Subsequent Passes

Use the same procedure as for light snow, but substantially increase the overlap into the cleared area. In other words, take a narrower slice of snow than the width of the auger housing. Judge how wide a slice you take by watching the snow stream. It should continue to flow freely from the chute. If it does not, slow the tractor ground speed or take a narrower slice of snow. Anytime snow stops flowing freely from the spout, back away until the snow thrower clears itself and then inch slowly into the snow. You will soon get the feel of how fast to go, and how wide a slice to take.

FOREIGN OBJECT IN THE AUGER OR PLUGGED CHUTE

If the auger stalls or the chute plugs, disengage the tractor front clutch switch immediately. Stop the engine, set the parking brake and remove the foreign object or clear the spout. **ALWAYS STOP THE ENGINE BEFORE WORKING NEAR OR ON THE AUGER SPOUT.**

WHEN THE JOB IS FINISHED

After the clearing job is finished, the tractor should be transported to a sheltered area. When transporting the snow thrower, always disengage the **FRONT CLUTCH** switch, and lift the snow thrower to the raised position. Place the transmission in neutral, and the front clutch switch in the off position, and run the engine at slow speed for about five minutes to melt and dry up the snow in hidden areas to prevent icing.

REMOVING THE HYDRAULIC CYLINDER

If the hydraulic cylinder must be removed from the tractor center and rear lift system with an attachment mounted to the three point hitch, see the owner's manual for that attachment for instructions on removing the hydraulic cylinder. If

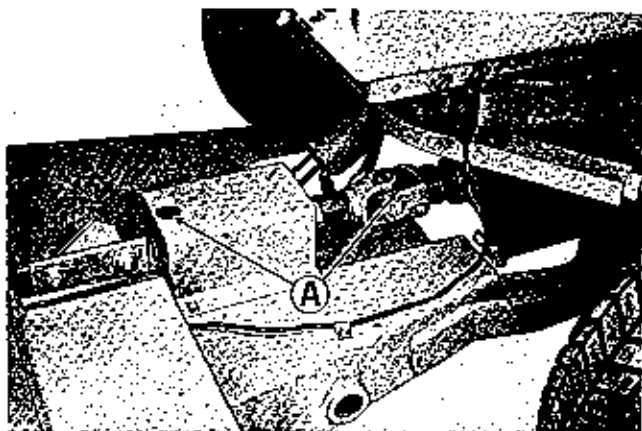


Figure 13. Grease zerks for drive shaft universal joints.

no attachment is mounted, proceed as follows:

1. Extend the rod end of the hydraulic cylinder by pulling the tractor hydraulic lift lever to the RAISE position.
2. See figure 14. Remove the spring clips and pins at (A) and (B).

3. Disconnect the hydraulic cylinder lines from the tractor and remove the hydraulic cylinder from the tractor. The hydraulic cylinder can now be used for raising and lowering the snow thrower.

ADJUSTMENTS

DRIVE BELT TENSION

See figure 3. Snow thrower drive belt tension is correct when the length of spring (C) is 2-3/8". If adjustment is required, hold the upper nut at (E) with a wrench and use another wrench to turn the lower nut counter-clockwise (as viewed from below) to unlock them. Turn the upper nut (E) clockwise to shorten spring (C) or counter-clockwise to lengthen it as necessary. After adjusting the spring so its length is 2-3/8", tighten the two nuts (E) securely against each other to prevent the adjustment from changing.

MAINTENANCE

ORDERING REPLACEMENT PARTS

Replacement parts required for performing maintenance services, or repair work should be purchased from your

TROUBLE SHOOTING GUIDE

PROBLEM OR SYMPTOM	POSSIBLE CAUSES	CHECKS AND CORRECTIONS
Snow thrower auger does not rotate.	Tractor front clutch switch not engaged. Wood or other foreign material caught in auger. Snow thrower drive belt slipping.	Engage front clutch switch. See Foreign Object in Auger or Plugged Chute on page 6. Adjust drive belt tension. See page 7.
Auger rotates, but snow not thrown far enough.	Engine speed too slow. Ground speed too fast. Snow thrower discharge spout clogged.	Operate engine at full speed. Reduce ground speed. STOP ENGINE. Unplug discharge spout.
Scraper bar does not clean down to hard surface.	Snow thrower not lowered enough. Skid shoes not properly adjusted.	Place tractor hydraulic lift lever in FLOAT position. Adjust skid shoes. Page 4.
Snow thrower picks up and throws stones on gravel drive.	Skid shoes not properly adjusted for gravel surface. Too much down pressure on snow thrower.	Adjust skid shoes. See page 4. Place hydraulic lift lever in float position.
Tractor does not have sufficient traction or is not stable on slopes.	Tractor too light at rear wheels. Operating on slippery surface. Ground speed too fast. Tractor not properly weighted. Tire pressure incorrect.	Add 2 sets rear wheel weights. Use tire chains on slippery surfaces. Reduce ground speed, use first gear. Use 4 rear wheel weights. Inflate tires according to tractor owner's manual.

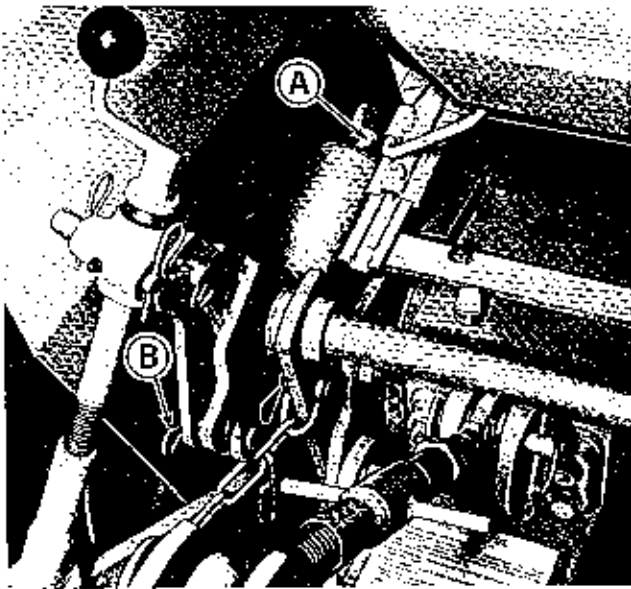


Figure 14. Removing the hydraulic cylinder.

Simplicity dealer. When ordering parts, be prepared to give him the identification number of your snow thrower. If you have not already recorded this number on the inside front cover of this manual, we suggest that you do so now for convenient future reference.

AFTER EACH USE

Inspect the snow thrower thoroughly looking for loose or missing bolts, pins or spring clips, and worn or damaged parts, etc. Also check the snow thrower housing, drive shaft and spout for any buildup of ice which may cause damage when the snow thrower is started. Clean or repair the snow thrower as needed so it is ready to use the next time you wish to use it.

EVERY 10 HOURS OF OPERATION LUBRICATE GREASE FITTINGS

The rotary snow thrower has 4 grease fittings which should be lubricated with multi-purpose grease every 10 hours of operation. Wipe the grease fittings clean. Lubricate each fitting with five shots of grease, or less if the grease is seen being forced out of the bearings. The grease fittings are located as follows.

QUANTITY	LOCATION
1	Right auger bearing (Figure 11, item C)
1	Left auger bearing (Figure 15, item A)
2	Drive shaft universal joint (Figure 13, item A)

LUBRICATE PIVOT POINTS

A thin film of grease or a few drops of SAE 30W engine oil should be placed on the snow thrower mounting pins, Figure 6, item A, the snow thrower chute rotating bearings, (Figure 11, item D), and the drive shaft spline (Figure 6, item B).

ONCE EACH YEAR

Once each year or more often if the snow thrower is used commercially the snow thrower drive chain should be inspected and adjusted. Proceed as follows.

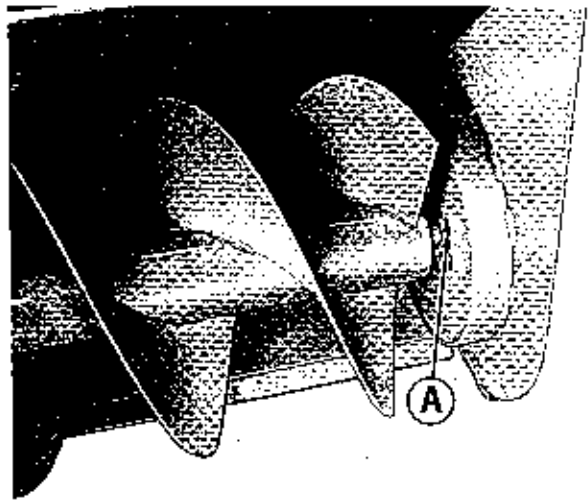


Figure 15. Grease zerk at left end of auger.

1. See figure 16. Remove the two nuts (A) and drive chain cover (B).
2. See figure 17. The drive chain (A) should be inspected for wear and replaced if worn badly.
3. After inspecting chain (A), and replacing if necessary, tighten it as follows until all slack is removed.
 - a. See figure 16. Remove the 5 capscrews (C) and remove guard (D).
 - b. See figure 17. Slightly loosen the three capscrews (B) and the four nuts and capscrews (C).
 - c. Pull rearward on chain sprocket (E) until all slack is removed from chain (A) and tighten the three capscrews (B) securely.
 - d. Move the right end of drive shaft (D) forward or back as necessary so drive shaft (D) is parallel with the snow thrower housing.
 - e. Tighten the four capscrews (C) securely.
 - f. See figure 16. Replace guard (D) using 5 capscrews (C).
4. See figure 17. After drive chain (A) has been tightened so all slack has been removed, spread a liberal coating of multi-purpose grease on it.
5. See figure 16. Replace chain cover (B) and tighten nuts (A) in place securely.

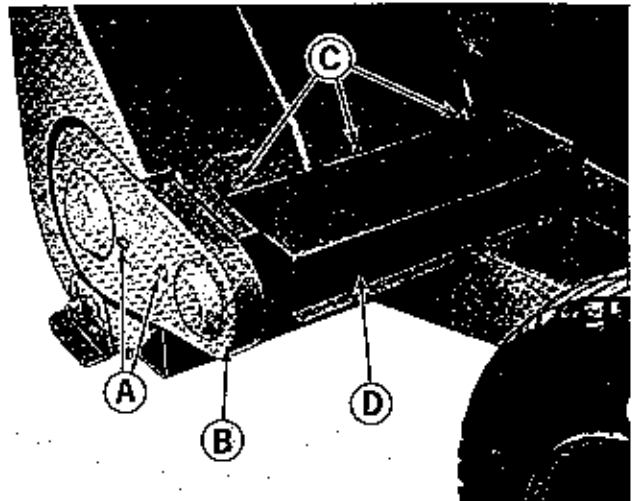


Figure 16. Left rear corner of snow thrower.

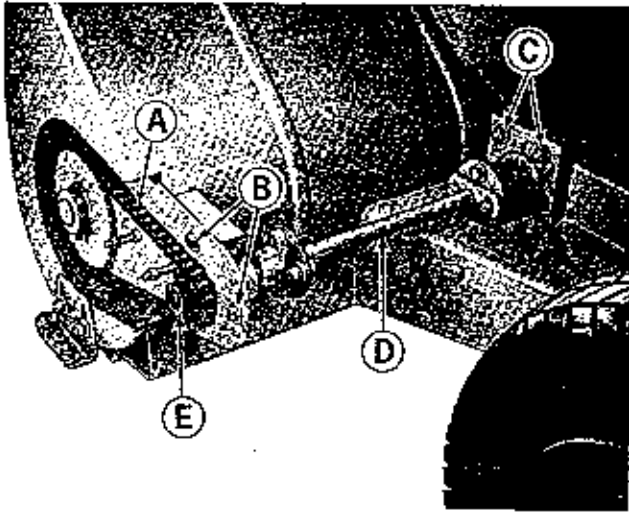


Figure 17. Snow thrower drive chain and cross drive shaft.

OUT OF SERVICE PROTECTION

1. Remove the snow thrower from the tractor. See page 3.
2. Use water pressure or a brush to thoroughly clean the snow thrower housing.
3. Paint or lightly coat with oil any area where paint has been worn or chipped away.
4. Lubricate the snow thrower according to the Every 10 Hour Maintenance service.
5. Store the snow thrower in a dry place.

SPECIFICATIONS

DIMENSIONS

Effective Width	52"
Overall Length Including Tractor	9' to 6"
Overall Width	55" including skid shoes
Auger Diameter	14"
Auger Housing Opening Height	24-1/2"
Scraper Bar to Ground Clearance Fully Raised	10"
Chute Diameter	9-1/2"
Chute Rotation Angle	260°
Approximate Weight	340 Pounds

CONTROLS

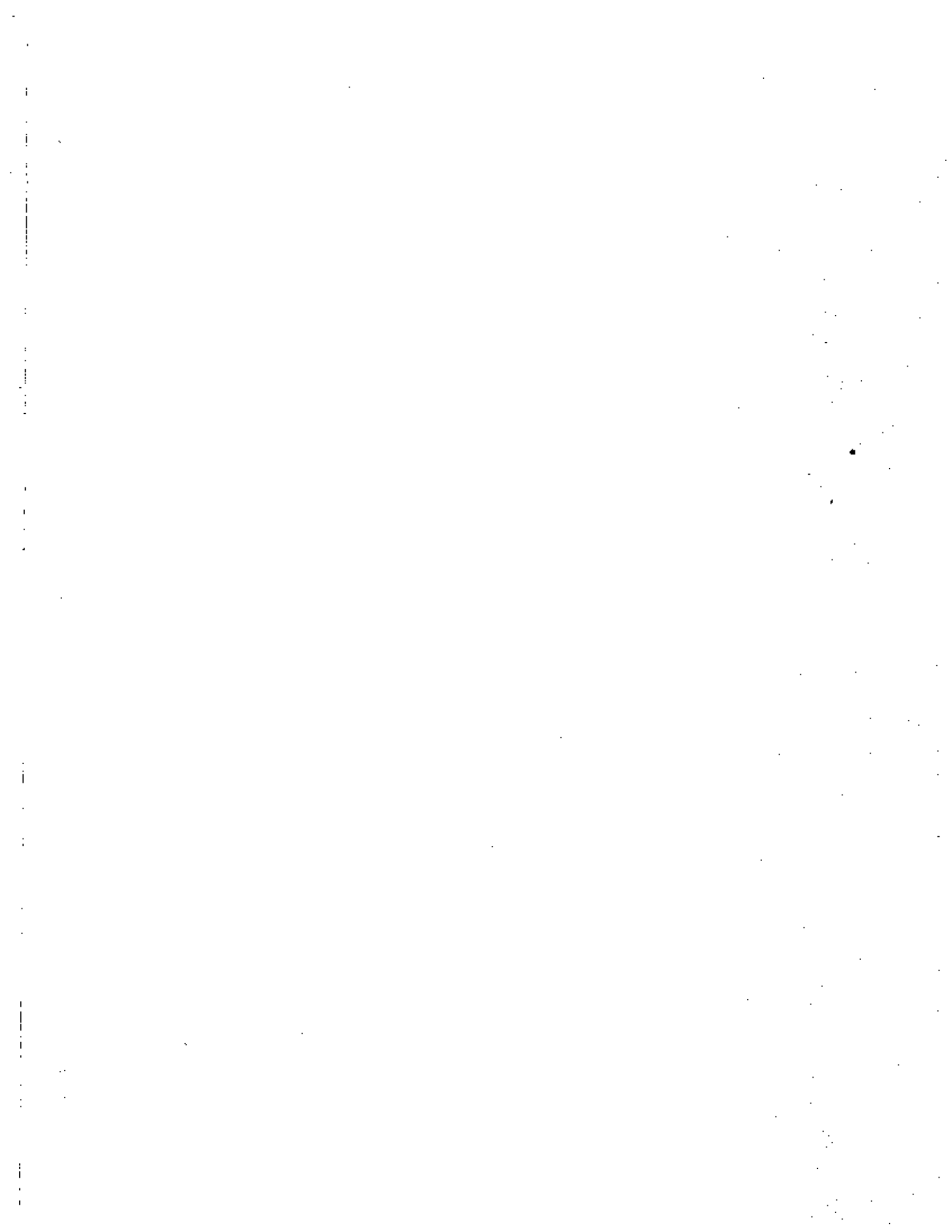
Spout Rotation	Toggle switch on tractor dash
Auger Drive	Toggle switch on tractor dash
Raise and Lower	Tractor power lift control

AUGER DRIVE

Type	Single stage
Power Source	Tractor front PTO
Clutch	Tractor front PTO electromagnetically controlled friction.
Vertical Drive	Cushioning single plane V-belt to jack shaft.
Forward Drive	Needle bearing universal joint splined drive shaft to bevel gear housing.
Cross Drive	Disc type universal joint drive shaft.
Final Drive	Roller chain with hardened sprockets.

CONSTRUCTION DETAILS

Chute Rotation	Geared reversible electric motor.
Chute Mounting	Guiding ball bearing rollers.
Front Support	Adjustable large area hardened skid shoes.
Rear Mounting	Hitch bolted to tractor frame. Thrower attaches to hitch with pins and spring clips.
Scraper Bar	Full width high carbon steel.
Frame and Auger Housing	Welded steel assembly.
Auger	Solid flite welded steel.
Auger Bearings	Self aligning sealed ball bearings with grease fittings.

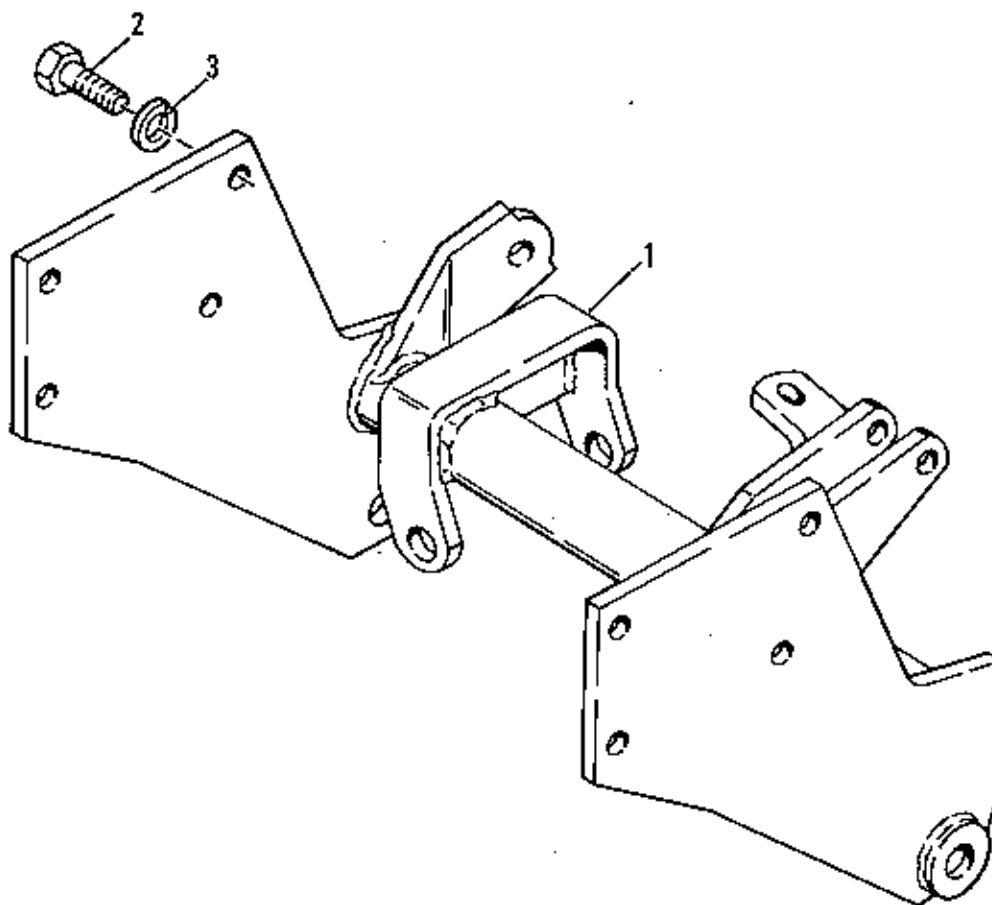






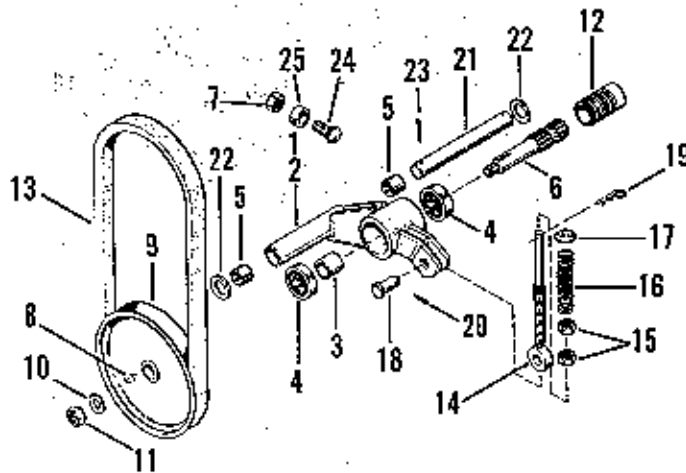
Simplicity[®]

MFG. NO. 709 52" ROTARY SNOW THROWER PARTS CATALOG
MFG. NO. 738 HITCH ASSEMBLY PARTS CATALOG

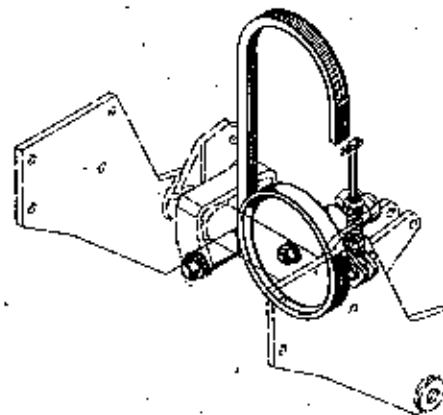


**HITCH SUPPORT ASSEMBLY
(Front Mounted)
MFG. NO. 738**

Ref. No.	Part No.	Qty. Req.	Description
1	173625	1	Hitch Support Assembly
2	715163	8	Hex Capscrew, 1/2" - 13 x 1-1/4"lg.
3	720004	8	Lockwasher, 1/2"

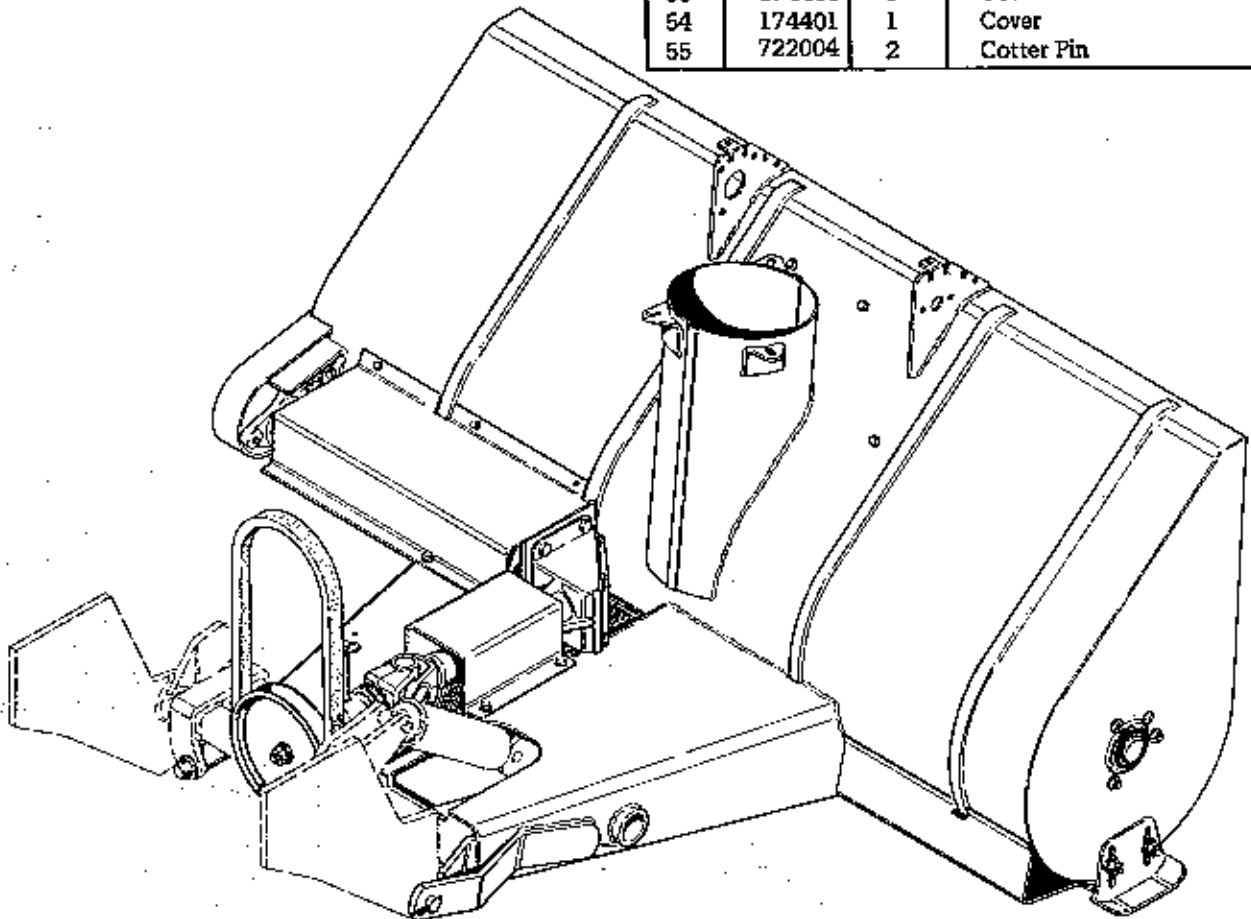


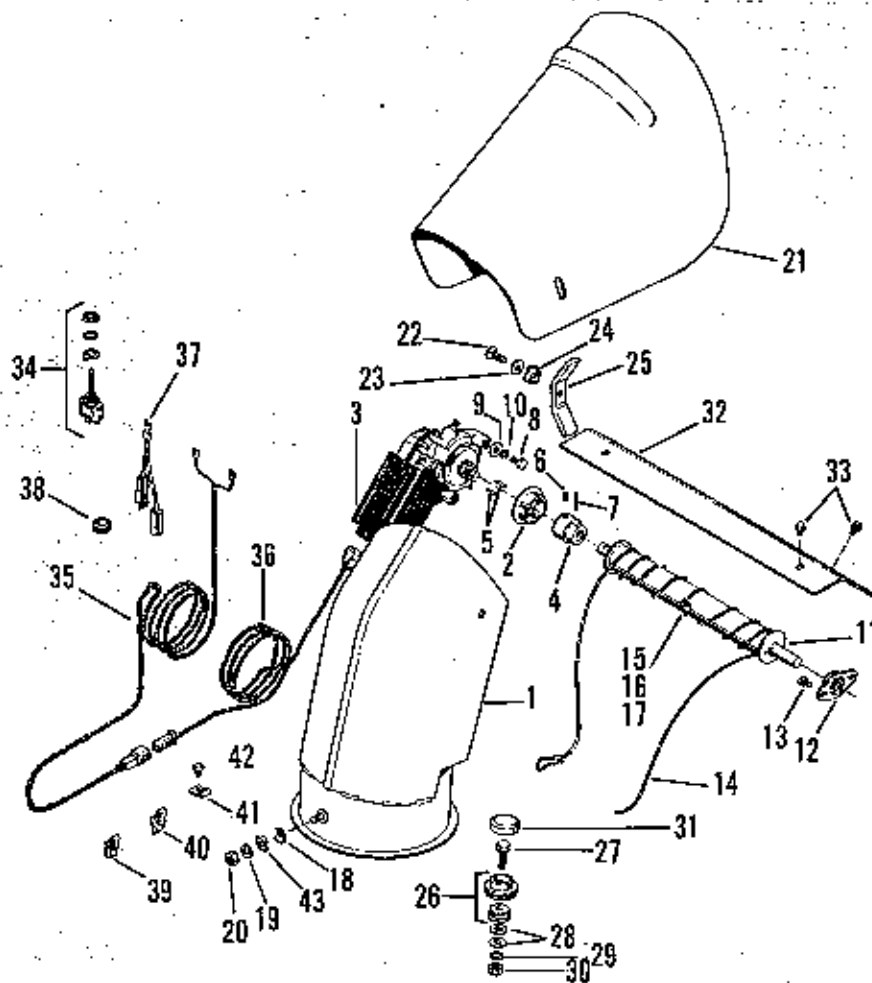
Ref. No.	Part No.	Qty. Req.	Description
1	174419	1	Bearing Hsg. Assy. W/bearings
2	174388	1	Bearing Housing Assy.
3	174415	1	Spacer
4	168078	2	Bearing
5	154289	2	Bushing
6	174547	1	P.T.O. Shaft
7	717015	1	Hex Nut, Jam, 7/16"-14
8	725504	1	Key
9	174371	1	Pulley
10	154325	1	Washer
11	717521	1	Hex Nut, Jam, Center Lock, 1/2"-13
12	154327	1	Crankshaft Guard
13	174486	1	"V" Belt
14	174373	1	Eye Bolt
15	717009	2	Hex Nut, Full, 7/16"-20
16	163103	1	Spring
17	171007	1	Clutch Spacer
18	154305	1	Yoke Pin,
19	106787	1	Spring Clip
20	722006	1	Cotter Pin, 1/8" x 1"
21	174477	1	Clutch Pivot Pin
22	101022	2	Washer
23	722004	2	Cotter Pin
24	702025	1	Carriage Bolt, 7/16"-14 x 1"
25	175647	1	Spacer



Ref. No.	Part No. Part No.	Qty. Req.	Description
1	173723	1	Frame and Body Assy.
2	173729	1	Scraper
3	715018	12	Hex Capscrew, 1/4"-20 x 5/8"
4	720003	12	Lock Washer, 1/4"
5	717005	12	Hex Nut, Full, 1/4"-20
6	173536	2	Skid
7	703003	4	Carriage Bolt, 3/8"-16 x 1"
8	719001	11	Plain Washer, 3/8"
9	720002	7	Lock Washer, 3/8"
10	717003	4	Hex Nut, Full, 3/8"-16
11	173640	1	Rotor Assembly
12	174832	1	Side Plate Assembly
13	174483	2	Bearing
14	174484	2	Flange
15	174485	2	Flange
16	702002	6	Carriage Bolt, 3/8"-16 x 1"
17	720002	18	Lock Washer, 3/8"
18	717003	18	Hex Nut, Full, 3/8"-16
19	715083	2	Hex Hd. Swange Form Screw, 5/16"-18 x 1/2"
20	173915	1	Sprocket, 34-T
21	713010	1	Set Screw
22	713006	2	Set Screw, Sq. Hd., 5/16"-18 x 1/2"
23	725507	1	Key
24	106771	2	Stud
25	718035	2	Nut, Whiz Lock, 3/8"-16
26	717510	4	Hex Nut, Full, Lock, 3/8"-16

Ref. No.	Part No.	Qty. Req.	Description
27	174403	1	Gear Box, 90°
28	715099	4	Hex Capscrew, 3/8"-16 x 1-1/2"
29	715067	9	Hex Hd. Taptite, 1/4"-20 x 3/8"
30	173741	2	Hitch Pin
31	106788	2	Spring Clip
32	154198	2	Drive Shaft Flange
33	157427	1	Key
34	715049	2	Set Screw, 3/8"-24 x 3/8"
35	157424	16	Special Washer
36	173026	2	Coupling
37	172677	8	Hex Capscrew, 3/8"-16 x 1-1/8"
38	717001	4	Hex Nut, Full, 5/16"-18
39	720001	4	Lock Washer, 5/16"
40	174361	1	Drive Shaft Assembly
41	725504	2	Key
42	174369	1	Flange, Shaft and Bearing Assy.
43	162053	3	Special Screw
44	705012	4	Hex Capscrew, 5/16"-18 x 5/8"
45	174491	1	Deflector Assembly
46	173704	1	Sprocket, 14-T
47	713002	1	Set Screw, 5/16"-18 x 3/8"
48	173247	1	Chain, W/Conn. Link
49	173733	1	Chain Guard
50	157427	1	Key
51	174548	1	Drive Shaft Assy.
52	715164	2	Set Screw, 3/8"-24 x 5/8"
53	174400	1	Cover
54	174401	1	Cover
55	722004	2	Cotter Pin

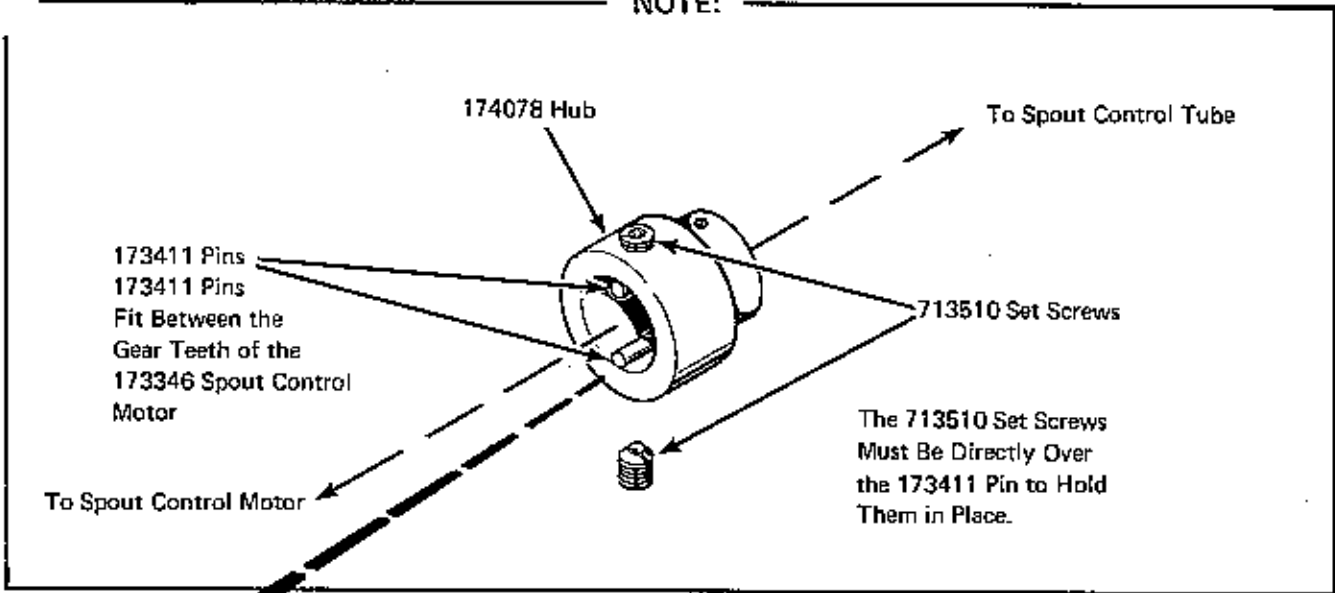




Ref. No.	Part No.	Qty. Req.	Description
1	173305	1	Spout Assembly
2	174072	1	Bearing Flange
3	173346	1	Spout Control Motor
4	174078	1	Hub
5	173411	2	Pin
6	713510	2	Set Screw, No. 10-24 x 3/8"
7	723014	1	Roll Pin
8	705030	3	Hex Capscrew, 1/4"-20 x 3/4"
9	719006	3	Plain Washer, 1/4"
10	720003	3	Lock Washer, 1/4"
11	174074	1	Spout Control Tube Assy.
12	171388	1	Bearing
13	715067	2	Hex Hd. Taptite Screw, 1/4"-20 x 3/8"
14	174470	1	Cable Assembly
15	171382	1	Clamp
16	715067	1	Hex Hd. Taptite Screw, 1/4"-20 x 3/8"
17	719006	1	Plain Washer, 1/4"
18	171379	1	Cup Washer
19	720001	1	Lock Washer, 5/16"
20	717001	1	Hex Nut, Full, 5/16"-18
21	173331	1	Spout Extension
22	703004	2	Carriage Bolt, 3/8"-16 x 3/4"

Ref. No.	Part No.	Qty. Req.	Description
23	719001	2	Plain Washer, 3/8"
24	721601	2	Shake Proof Lock Washer, 3/8"
25	173332	2	Wing Nut
26	173809	3	Pulley & Bearing Assy.
27	705016	3	Hex Capscrew, 3/8"-16 x 1-1/4"
28	719001	6	Plain Washer, 3/8"
29	720002	3	Lock Washer, 3/8"
30	171003	3	Hex Nut, 3/8"-16
31	157530	3	Cap
32	174070	1	Control Chute Cover
33	715067	4	Hex Hd. Taptite Screw, 1/4"-20 x 3/8"
34	174428	1	Spout Control Switch
35	174504	1	Switch Harness Assy.
36	174503	1	Motor Harness Assy.
37	174505	1	Wire (Control Sw. to Ign. Sw.)
38	172176	1	Grommet
39	172434	1	Cable Clip
40	172436	1	Cable Clip
41	106786	3	Clamp
42	715067	1	Hex Hd. Taptite Screw, 1/4"-20 x 3/8"
43	106785	1	Cup Washer

NOTE:



ASSEMBLY NOTE:

**PUSH HUB TIGHT AGAINST SPOUT CONTROL MOTOR
AND HOLD IN THIS POSITION WHILE TIGHTENING 713510 SET SCREWS.**

