



Electrak[®]

SNOW THROWER

Owner's Use and Care Manual



GENERAL  **ELECTRIC**

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Congratulations. You now own a fine product produced by the General Electric Company, which has been built to assure you the high quality and excellent service.

Electricity is the cleanest, most dependable and economical source of power. Every day, all around you and often taken for granted, electrical power is working for you . . . heating, cleaning, lighting, and cooling.

The ELEC-TRAK (T) Snow Thrower is the result of careful design engineering with the operator foremost in mind. Safety, ease of attachment and operation, ruggedness, and maintenance free features are built into the ELEC-TRAK Snow Thrower. To complete the snow thrower and make it operable, the AP54 front Implement Mounting Bracket, is required to instruct you in attaching, operating, maintaining, and lubricating your snow thrower. IT IS VERY IMPORTANT THAT EACH OPERATOR FULLY UNDERSTANDS THE ENTIRE CONTENTS OF THIS MANUAL FOR SAFE, DEPENDABLE OPERATION AND TO PROLONG THE LIFE OF THE EQUIPMENT. In addition, many tips and suggestions that make use of this attachment easier and more enjoyable are also pointed out. Your ELEC-TRAK tractor dealer is equipped with a complete stock of genuine ELEC-TRAK parts. He has factory-trained service personnel using the latest approved test and repair equipment and will service your equipment to assure safe, efficient, and economical operation. UNAUTHORIZED SERVICE VOIDS WARRANTY.

WARRANTY REGISTRATION

Your dealer must complete and submit a Dealer Delivery Report to General Electric before your Warranty Registration can be sent to you. To assure proper warranty coverage be sure that the dealer prepares this report for you with a copy properly dated and sent to the General Electric Company at the address shown below.

Manager—Product Service
Outdoor Power Equipment Operation
General Electric Company
Corporations Park
Schenectady, New York 12305

Your dealer will also record the Dealer Delivery Report and model and serial number of your General Electric Snow Thrower.

Remember to specify model and serial number when ordering parts.

This manual does not purport to cover all details or variations in equipment nor to provide for every possible contingency to be met in connection with operation or maintenance. Should further information be desired or should particular problems arise which are not covered sufficiently for the purchaser's purpose, the matter should be referred to your authorized Elec-Trak tractor dealer.

SAFETY PRACTICES

As with all power devices, prime responsibility for safe operation of the equipment rests with the operator. It is necessary that both operating instructions and the following safety information be fully understood by each operator before using the tractor and attachments.

- Become familiar with the location and function of all controls.
- Be sure the work area is clear of objects which might be picked up and thrown.
- Regulate travel speed according to ground conditions.
- Don't forget to set the brake and shut off attachment power before you leave the tractor.
- Don't drive too close to creeks or ditches.
- Watch out for traffic when near roadways.
- Stay alert for holes and other hidden hazards.
- Don't carry passengers without proper provisions.
- Watch where you're driving! Pay attention!
- Beware on steep slopes! Reduce speed on all side slopes and sharp turns to prevent tipping or losing control.
- Don't attempt to operate tractor when not in seat.
- Keep children and pets at a safe distance.
- Don't wear loose-fitting clothing that might get caught in moving parts.
- Never attempt to get off the tractor while it is in motion.
- Don't stop or start suddenly when going uphill or downhill.
- Keep tractor in good operating condition.
- Remove key before leaving tractor.
- Plug tractor charger cord into a normal 110 volt, 2-hole receptacle. Do not use a 2-hole adapter unless properly grounded.
- Keep hands and feet clear of all rotating equipment.
- Disconnect power cord from PTO receptacle before handling power attachments.
- All safety devices are for your protection. Do not attempt to defeat them.
- Operate tractor and snow thrower only in daylight or in good artificial light.

INITIAL USE

Prior to initial use of the ELEC-TRAK Snow Thrower, the operator should completely familiarize himself with all tractor controls. This information and general attachment operating information is found in your Tractor Use and Care Manual. Refer to your manuals often.

Before using the snow thrower, be sure the power pack is fully charged. If you are able to anticipate heavy snow removal, place the power pack on charge several hours before use to assure peak efficiency.

GROUND SPEED

All snow throwing with the exception of the very lightest snow falls, should be done with the range selector in the lowest range (L). This prevents overloading the auger which in turn could reduce power pack range and hinder snow discharge. Use the switch on the left hand side of the tractor dash to disengage auger or to start auger.

BEFORE PLACING AUGER INTO OPERATION

1. Check all screws and nuts for proper tightness and that all parts are properly assembled.
2. Test all controls for smooth operation.

The right and left hand side of the tractor or snow thrower is identified when facing forward on the tractor seat.

Figure 1. ELEC-TRAK Snow Thrower



OPERATION

⚠ WARNING: Before leaving the tractor for any reason, turn PTO and key switch to 'Off.'

SNOW THROWER STARTING

Place the snow thrower at the desired height and start its motor by sitting on the tractor seat and turning the key switch 'On,' and turning the PTO switch to 'Off' then 'On.' An electrical interlock prevents the snow thrower motor from starting if this procedure is not followed. Should the operator leave the seat or turn the key switch to 'Off,' another interlock interrupts attachment power. For all normal use, the PTO switch should be used to turn the snow thrower on and off. To restart, the PTO switch must be turned to 'Off' and then 'On.' Refer to your tractor manual. Figure 2 shows a typical control panel.

TRANSPORTING

Before transporting the snow thrower, use the lift handle and raise it to its maximum height. This prevents unnecessary bounce on the lift system.

DISCHARGE CHUTE CONTROL

Position of the chute is easily changed from the tractor seat by rotating the crank on the right side of the tractor.

The discharge chute position can be varied in a 270 degree arc to accommodate snow removal conditions. See Fig. 6.

In removing light to heavy snow, snow throwing should be done in L range. Remember, for a good job, take a few minutes more and do it right (see Fig. 3).

EFFICIENCY AND ECONOMY

During any snow throwing operation, the swath of snow to be cleared on one pass and forward speed should be regulated to keep the power use gage indicator in the yellow zone most of the time. Continued use with indications in the red zone will open the circuit breaker and result in a

power interruption to the snow thrower motor. The circuit breaker is located on the back side of the snow thrower, above its motor. See Figure 4. In the event that the circuit breaker opens, turn the PTO switch 'Off', and after a few minutes wait for cooling. The red button can be pressed into its reset position. The thrower can then be restarted in the usual manner. If the auger becomes jammed in any way, this circuit breaker may also open. Should this occur, turn the PTO switch to 'Off' and remove the power cord from the PTO receptacle before attempting to remove the obstruction.

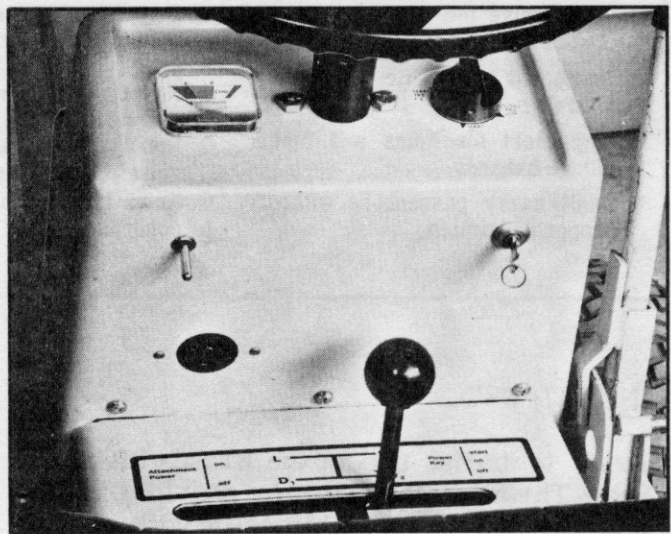


Figure 2. Control Panel (Typical)

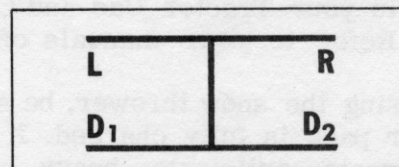


Figure 3 Range Selector Diagram

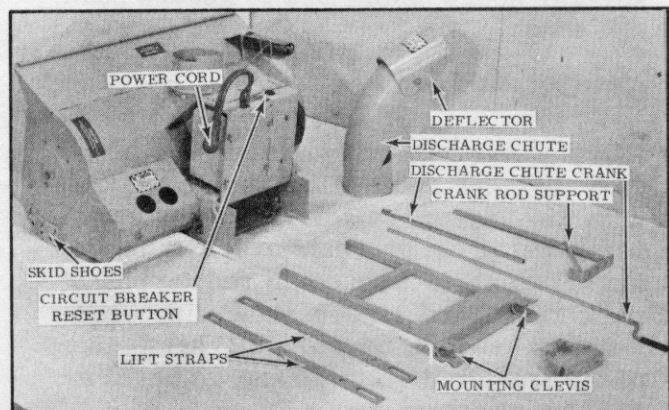


Fig.4

⚠ WARNING: Remove the power cord from the PTO receptacle before attempting to remove an obstruction or when handling the snow thrower for any purpose.

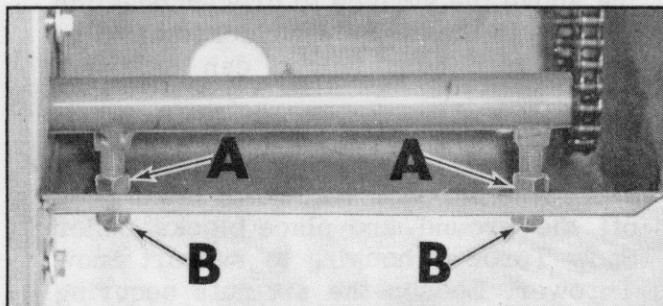


Fig. 5

Excessive slack in auger drive chain due to normal chain stretch can be removed by adjusting jackshaft housing nuts.

TO ADJUST AUGER CHAIN:

1. Remove PTO cord and loosen the two mounting nuts (A) 2 or 3 complete turns.
2. Tighten the two adjustment mounting nuts (B) to tighten chain. Make certain nuts (B) are turned the same amount to keep jackshaft housing parallel with auger housing.

⚠ CAUTION ⚠

Do not over tighten chain. A correct adjusted chain will have a slight amount of slack. An over tightened chain will result in early failure of chain. (Advise approximately 1/4" slack)

3. Tighten mounting nuts (A) to secure chain adjustment. Check chain clearance so as not to strike auger housing. Test chain and repeat adjustment if necessary until all excess slack is removed.

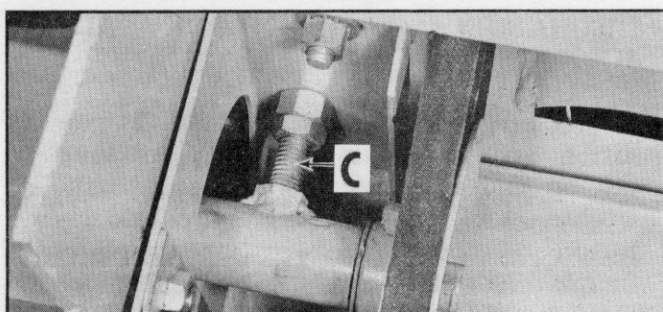


Fig. 6

Note: Anchor bolt (C) must be securely locked into place at all times. It is set-up at the factory and should not be necessary to adjust anchor bolt (C).

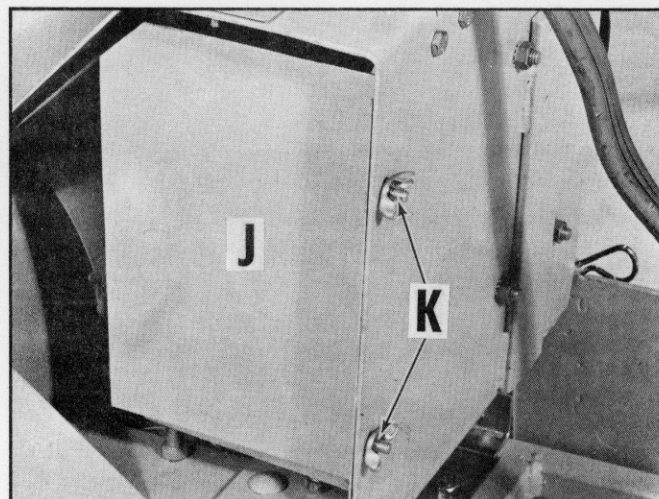


Fig. 7

V-BELT DRIVE ADJUSTMENT

Remove side cover (J) on motor housing (Fig. 7). Loosen three wing nuts (F) on top cover (G). Loosen two mounting nuts (H) and tighten adjustment mounting bolt (D) to the correct setting for V-belt. Adjust mounting bolt (E) to same setting as (D). To hold setting retighten two mounting nuts (H). Slide cover (G) so it is snug against rear of header; retighten three wing nuts (F) (Fig. 8). Replace side cover (J) over motor housing, secure with two wing nuts (K) (Fig. 7).

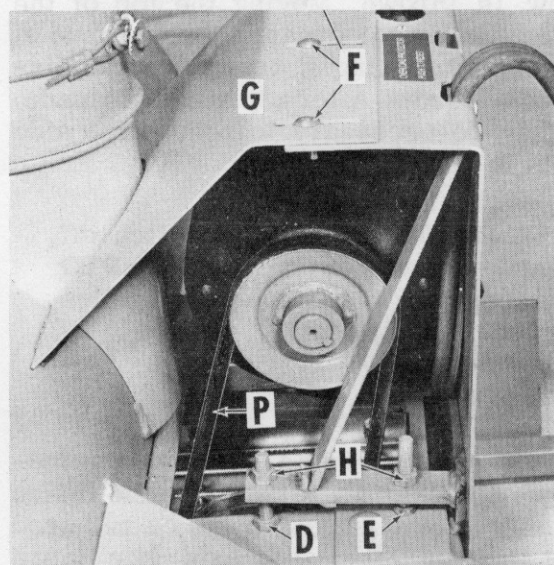


Fig. 8

OPERATION

Periodically check auger drive belt to insure that it is properly adjusted. It is important to maintain proper belt adjustment to obtain maximum belt life.

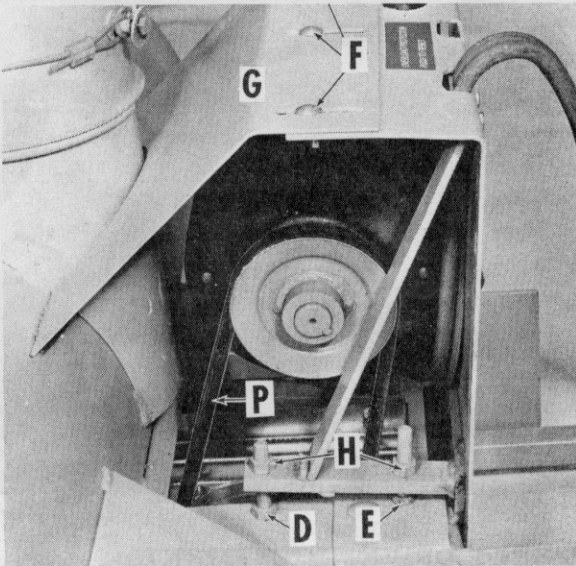


Fig.9

Proper tension on V-Belt (P) is set up at the factory. It may be necessary after normal use to add more tension to V-Belt drive. A correctly adjusted V-Belt will have a slight amount of slack, approx. 1/2" deflection of belt when applying firm finger pressure midway between pulleys.

DISCHARGE CHUTE DEFLECTOR

The deflector mounted on the top of the discharge chute determines the distance snow is thrown. Moving the top of the deflector down decreases the distance of throw and raising it increases the distance of throw. After adjustment is made, it may be necessary to tighten the side bolts to hold this position.

⚠ WARNING: Turn PTO switch off and remove power cord from PTO receptacle before making deflector adjustments.

SKID SHOES

The Snow Thrower is shipped from factory with skid shoe flange to the inside housing. Skid shoes should be removed and then installed with skid shoe flange to the outside.

The skid shoes mounted on each side of the auger housing, adjust the distance the auger housing is raised above the working surface. When removing snow from a gravel driveway or any uneven surface, it is advisable to keep the housing above the surface to prevent possible damage to the auger. On black top or concrete, minimum height can be used.

To adjust the skid shoes, remove the power cord from the PTO receptacle and raise the snow thrower a few inches off the ground and place blocks under Snow Thrower housing to support Snow Thrower. Loosen the six nuts securing the skid shoes to the auger housing (three on each side) and move them to the desired position before retightening the nuts. The front part of the shoe should be slightly higher than rear part of shoe. Adjust both sides to the same height to keep the auger level. See Fig.10.

⚠ WARNING ⚠

When making the skid shoe or elbow drive tube adjustment, shut attachment drive motor off.

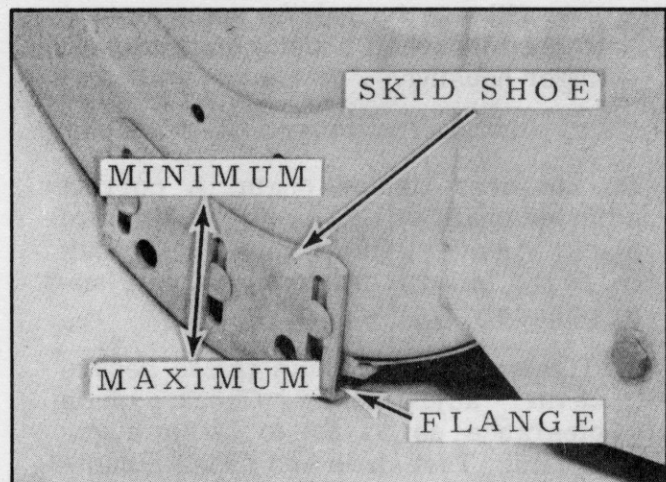


Fig.10

DISCHARGE CHUTE LOCK ADJUSTMENT

If discharge chute will not hold its position and tends to rotate, adjust lock nut on end of elbow drive tube eye bolt. Tighten lock nut 1/8 turn and check rotation of drive tube by turning chute crank. A small amount of resistance

should be encountered. If chute still tends to rotate, repeat adjustment. Do not over-tighten nut; tighten until chute holds its position.

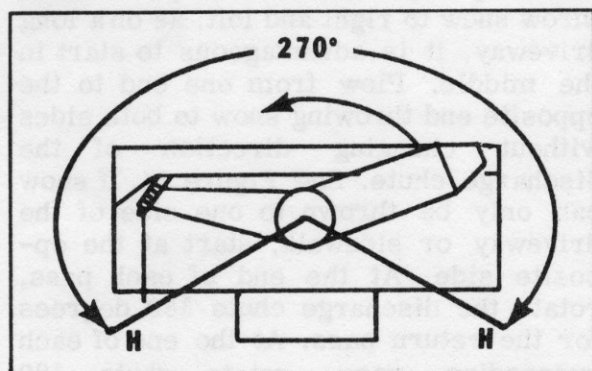


Fig. 11

Snow Thrower chute has a discharge radius of 270 degrees by turning the rod crank. Chute stop bolt should stop it from exceeding discharge points (H).

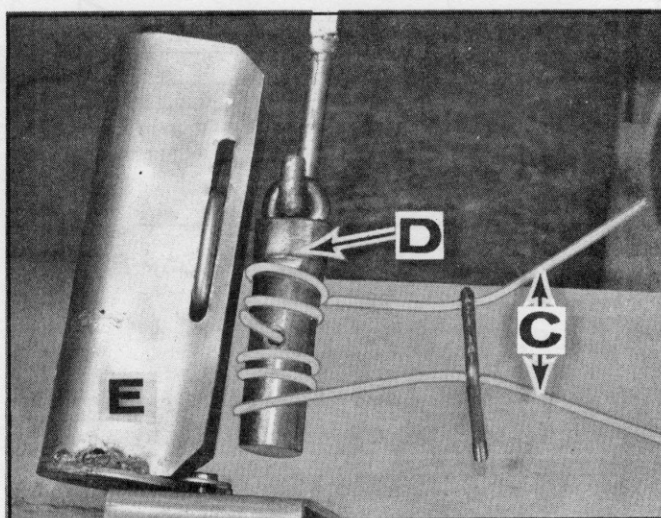


Fig. 12

CABLE HOOK-UP

Cable (C) is wound around tube (D) 2 1/2 turns each way; both ends of cable should be equal length. This will allow equal angle of discharge spout both directions.

Loosen carriage bolt (A); moving stack drive bracket (B) in direction of arrow (C) will loosen cable tension. Adjust bracket (B) in the direction of arrow (D) to tighten tension on cable (E) (See Fig. 13).

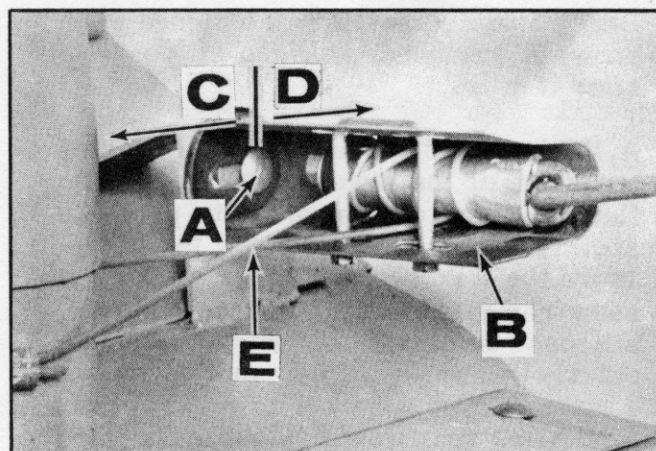


Fig. 13

HEIGHT CONTROL

Normal operation of the snow thrower is with the skid shoes resting on the working surface, but in extremely deep snow the thrower can be fully raised to remove top layers of snow first. After starting the auger, drive ahead into the snow and stop the tractor to allow the thrower to clear the snow. Reverse the tractor and lower the thrower to the ground. Drive tractor ahead and repeat the process to remove the balance of snow. Working with repeated passes into and out of drifts at 45 degree angles will eventually move even the deepest of snow piles.

⚠ REMEMBER - For best results, take a few minutes to completely understand the equipment and procedures.

OPERATING SUGGESTIONS

Before the first snowfall, the area in which snow removal is to take place should be cleared of all stones, sticks, etc., which might be picked up by the auger.

Mark any obstacles which might become hidden by snow to prevent driving tractor and auger into them.

Operate the tractor and snow thrower in a clear area, first before removing snow. The more familiar you become with the snow thrower, the better results you will have in its use.

OPERATION

Best possible results are obtained when snow is removed as soon as possible after it falls.

A light coat of wax applied to the inside surfaces of the auger housing, the deflector, and discharge chute prevents snow and ice from sticking to it. Re-apply the wax several times during the snow removal season. Aerosol ski wax, silicone or teflon* sprays are particularly easy to apply and effective.

The AP86 rear weight box must be used with the Snow Thrower. The separate instruction sheet provided with the weight box includes tips on loading, as well as installation procedures. If additional traction is necessary, tire chains may be added easily.

Whenever possible discharge snow down wind.

Do not attempt to remove ice or hard packed frozen snow. (The projectiles discharged could cause injury or damage.)

Always overlap each pass slightly to assure complete snow removal. A frozen or stuck auger or discharge chute must be loosened or thawed with care.

DO NOT attempt to free auger by turning the started motor on and off more than once or twice and do not leave a started motor on for more than a moment.

⚠ WARNING: Before attempting to free any part, remove the power cord from the PTO receptacle.

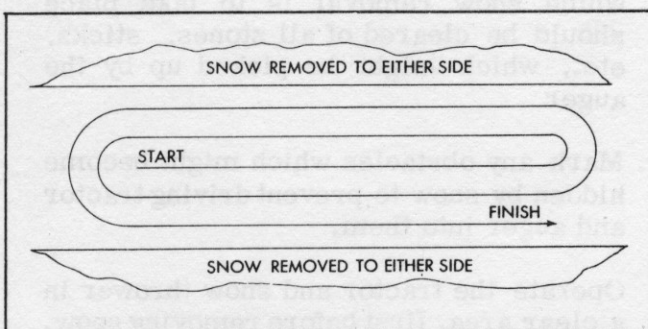


Figure 14. Discharge To Both Side

A definite pattern of operation is required to thoroughly clean the snow area. This pattern will avoid a second removal of snow and avoid throwing snow in unwanted places. Where it is possible to throw snow to right and left, as on a long driveway, it is advantageous to start in the middle. Plow from one end to the opposite end throwing snow to both sides without changing direction of the discharge chute. See Figure 14. If snow can only be thrown to one side of the driveway or sidewalk, start at the opposite side. At the end of each pass, rotate the discharge chute 180 degrees for the return pass. At the end of each succeeding pass, rotate chute 180 degrees to maintain direction of throw into the same area. See Figure 15.

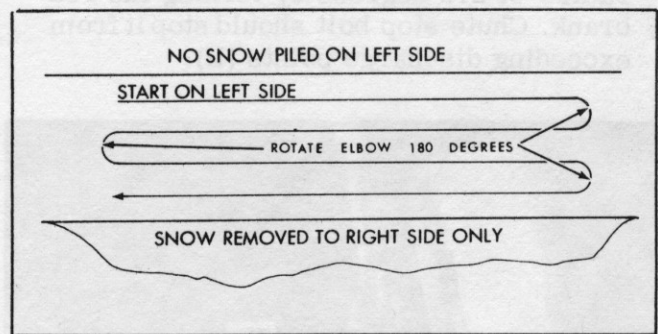


Figure 15. Discharge To One Side

ADJUSTMENTS

⚠ WARNING: Remove power cord from PTO receptacle before making any adjustments.

INSTALLATION

MOUNTING SNOW THROWER HEADER TO THE IMPLEMENT MOUNTING BRACKET

Move tractor forward until cross shaft of dual purpose mounting bracket (G) has been positioned close to mounting yokes (F). Slide Snow Thrower assembly onto cross shaft of mounting bracket and secure yoke assembly to the cross shaft with two clevis pins (H) and hair pin cotters. (J).

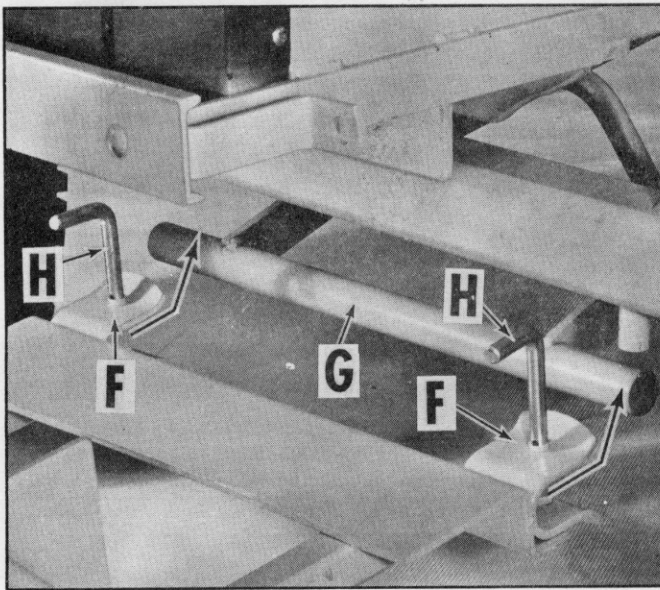


Fig. 16

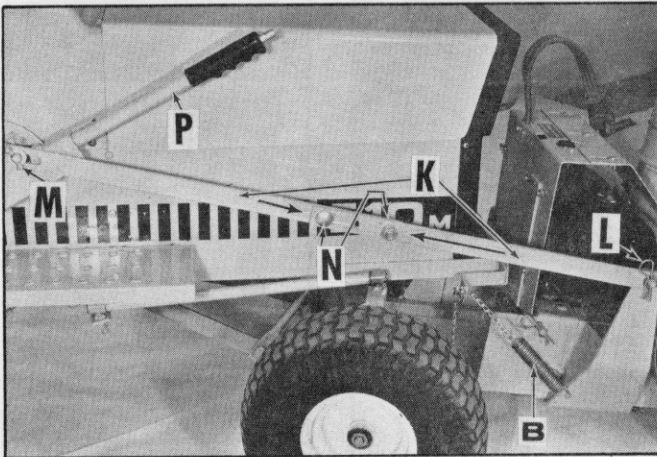


Fig. 17

Assemble the two lift bars (K) together threading 1-1/4" carriage bolt at (N) each way on lift bar as shown. Insert a lock washer and hex. nut onto carriage bolt, keep hex. nuts slightly loose

at this point. Push tractor lift handle (P) forward. Place lift bar over pins at (M) and (L); insert a 1" flat washer onto pins and secure with cotter pin. Take the slack out of the lift bars (K) as shown by arrows and secure setting by tightening hex. nuts at (N).

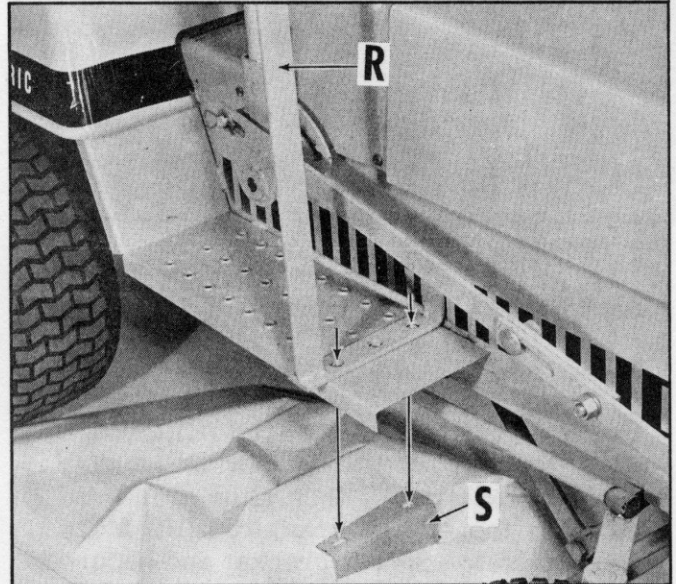


Fig. 18

MOUNTING CRANK ROD SUPPORT

Place crank rod support (R) over front three holes on foot rest. Align mounting bracket (S) under foot rest in the position as shown (Fig. 18). Insert 1-1/2 flat washer onto two 1-1/4 hex. head bolts; thread bolts down through mounting bracket (S). Secure with 7/8 flat washer, 3/8 med. lock washer and hex. nut.

INSTALLATION

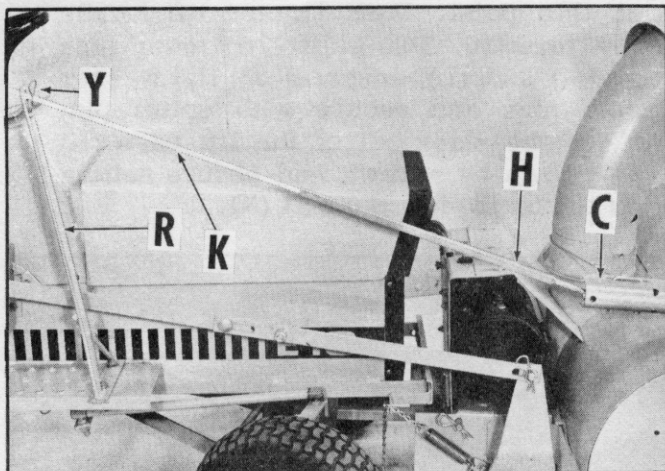


Fig. 19

INSTALLATION OF CRANK ROD

Insert crank rod hooked end (H) through eye bolt in cable tube at discharge chute bracket (C). Slide crank rod (K) through support bracket (R) place a 1" washer onto crank rod (K) then slide crank rod (K) into the end of crank rod (H). Move washer up to support bracket and secure with hair pin cotter (Y).

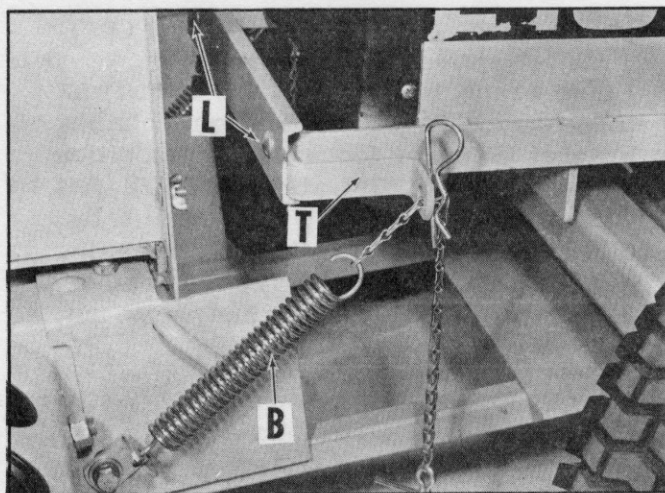


Fig. 20

INSTALLATION OF LIFT ASSIST SPRINGS

Remove bumper on tractor; slide chain anchor brackets (T) between tractor frame and bumper. Align holes & re-thread carriage bolts (L); secure with hex. nut.

Attach spring (B) to angle bracket on left side. On right hand side attach spring (B) to hole in lift bracket. Thread toggle chain through chain bracket and attach it to lift spring (B) as shown in (Fig. 20). Repeat procedure for opposite side of tractor. Raise Snow Thrower with tractor lift lever to highest position. Then pull toggle chain through angle bracket exerting slight pressure on the lift spring and lock into position by inserting hair cotter pin in lift chain.

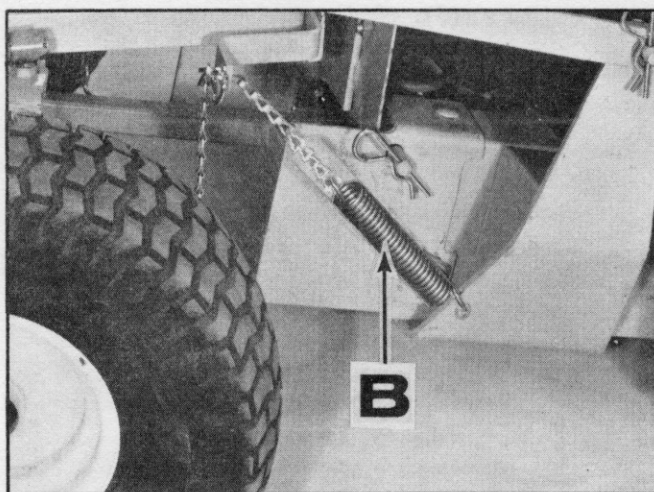


Fig. 21

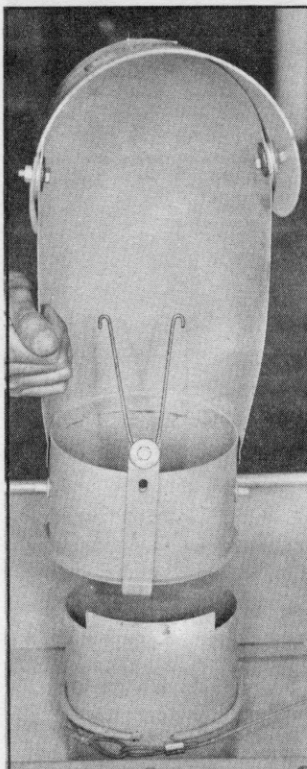


Fig. 22

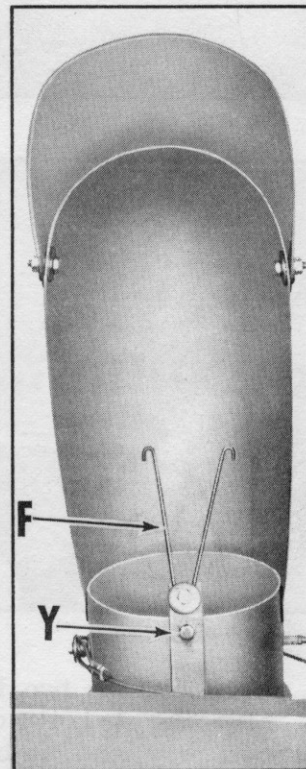


Fig. 23

Drop deflector spout onto stack with header in position as shown (Fig. 22).

Then rotate spout 180 degrees on stack.

Install finger deflector as shown (Fig. 23) with cap screw claw washer and nut; tighten securely. Thread 1/2" stop bolt through hole (Y) in stack; secure with hex. nut.

Loop both ends of stack control cable over bolt (X) as shown in (Fig. 24).

NOTE: Installation of stop bolt (Y) is very important since this will prevent the operator from accidentally turning the discharge spout on himself. Finger deflector (F) also should be in place to prevent operator involuntarily reaching into spout which could result in injury to finger or hand-NEVER under any circumstances reach into spout when tractor and Snow Thrower are running!

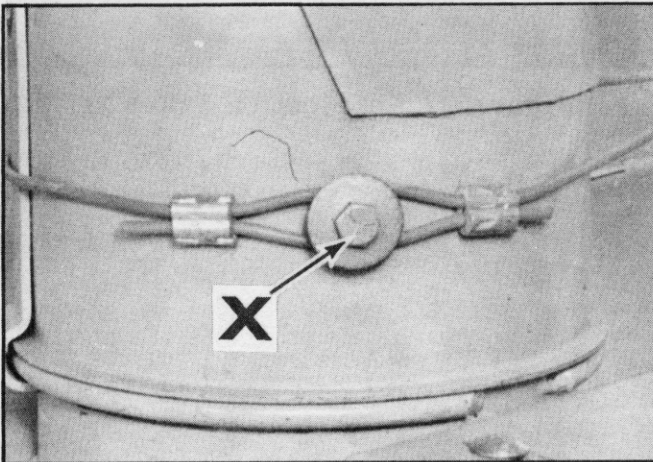


Fig. 24

The power cord can now be plugged into the PTO receptacle. Read operating instructions prior to putting snow thrower into operation.

SNOW THROWER REMOVAL

Drive the tractor so the snow thrower is as close as possible to the place where it is to be stored.

Remove power cord from PTO receptacle and follow the installation procedure in the reverse order.

STORAGE

At the end of the snow season, the following steps are recommended:

1. Remove snow thrower from the tractor.
2. Wash off any salt deposit which may have dried on the exposed surfaces. Paint or cover exposed metal with a light coat of oil.
3. Lubricate the snow thrower as outlined in the Service and Maintenance section.
4. Store thrower in a dry place.

Remove all mounting brackets attaching hardware to them place remaining hardware in a small bag and store in safe place for next season.

SERVICE MAINTENANCE AND LUBRICATION

Lubricate these points each operating season and as required during the season with a good grade of 30 weight machine oil (10W-30)

1. Discharge spout pivot area.
2. Auger drive chain: Lubricate roller chain every 10 operating hours. It is very important that oil reaches inside each roller. Wipe off excess oil from chain.
3. Pivot and friction points: To maintain smooth and free operation, apply a few drops of oil as required to all pivot and friction points.

The auger and motor bearings are self-lubricating and no additional lubrication is required.

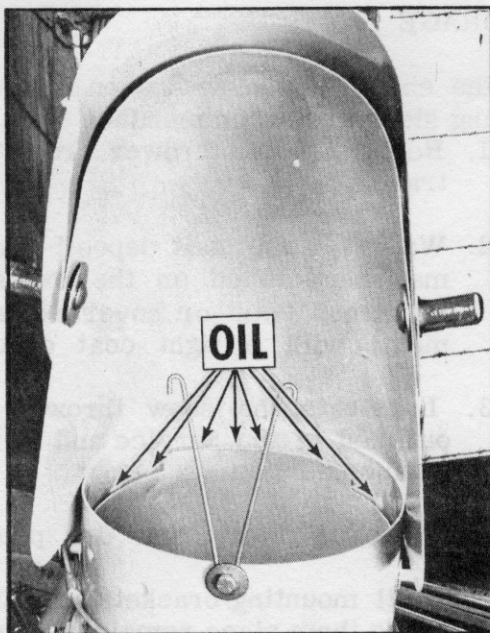


Figure 25 Discharge Spout Lubrication

Oil discharge spout every 10 hours of operation around the entire opening as arrows show.

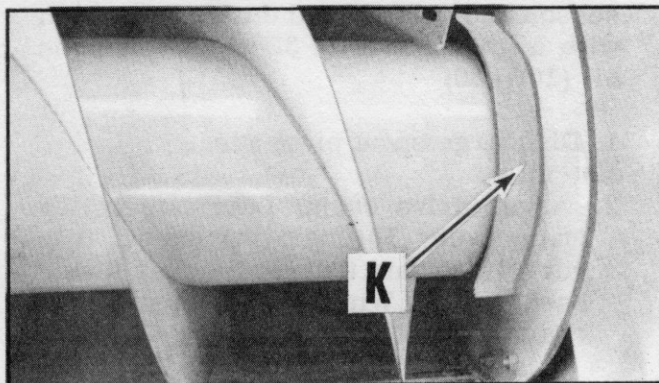


Figure 26. Oil - Auger Chain

⚠ WARNING: Before attempting to oil chain remove the power cord from the PTO receptacle.

Oil the auger chain at 10 hour intervals. Remove chain guard (K) on (R.H.) side of header.

Lubrication points (A) are lubricated through grease fitting. Lubricate these points before each operating season and every four hours of operation thereafter during the season with a good grade of pressure gun grease. Grease jackshaft until a slight amount of grease is showing at both ends of jackshaft housing.

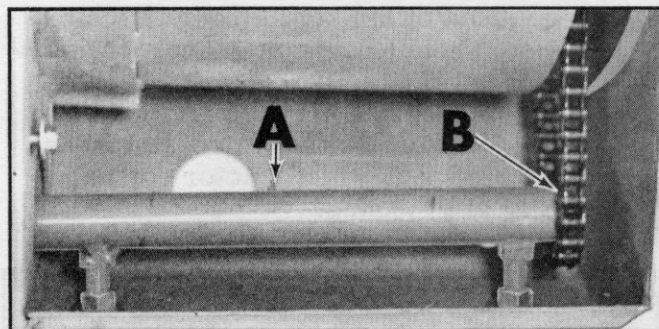


Figure 27 Lubrication Point (A)

WARRANTY

General Electric Company warrants that it will repair or replace without charge, F.O.B. factory, any part of the ELEC-TRAK Snow Thrower with which this warranty is furnished which proved to be defective in material or workmanship within 12 months in ordinary home use (3 months if in commercial or institutional use) following the date of sale to the original purchaser for use. This does not apply to any repair or replacement made necessary by improper use or maintenance, or by abuse or accidental damage.

The foregoing warranty states the entire obligation of General Electric Company with respect to said products and is in lieu of any and all other warranties, express or implied. NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE SHALL APPLY. IN NO EVENT WILL THE COMPANY BE LIABLE FOR INDIRECT OR CONSEQUENTIAL DAMAGES.

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GENERAL  ELECTRIC