



# ***Electrak***<sup>®</sup>

**Garden Tractor**

**ROTOTILLER**

**OWNER'S USE AND CARE MANUAL**



**GENERAL**  **ELECTRIC**

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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.

## INTRODUCTION

Congratulations! You now own a fine product produced by the General Electric Company, which has been built to assure you 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 <sup>Ⓣ</sup> Rototiller 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 Rototiller. To complete the Rototiller and make it operable, two accessories are required: Tiller Mounting Bracket, AP52, and Electric Lift (Rear), AP59.

This manual has been carefully prepared to instruct you in attaching, operating, maintaining, and lubricating your Rototiller. IT IS VERY IMPORTANT THAT EACH OPERATOR FULLY UNDERSTAND 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 Warranty Registration Form to General Electric before your Warranty Registration can be sent to you. To assure proper warranty coverage, be sure that the dealer prepares this form 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 Elec-Trak tractor Warranty Registration and model and serial number of your General Electric Rototiller.

Remember to specify model and serial number when ordering parts.

## 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.

<ul style="list-style-type: none"><li>-Become familiar with the location and function of all controls.</li><li>-Be sure the work area is clear of objects which might be picked up and thrown.</li><li>-Regulate travel speed according to ground conditions.</li><li>-Don't forget to set the brake and shut off attachment power before you leave the tractor.</li><li>-Don't drive too close to creeks or ditches.</li><li>-Watch out for traffic when near roadways.</li><li>-Stay alert for holes and other hidden hazards.</li><li>-Watch where you're driving! Pay attention!</li></ul>	<ul style="list-style-type: none"><li>-Beware on steep slopes! Reduce speed on all side slopes and sharp turns to prevent tipping or losing control.</li><li>-Don't attempt to operate tractor when not in seat.</li><li>-Don't carry passengers.</li><li>-Keep children and pets at a safe distance.</li><li>-Don't wear loose-fitting clothing that might get caught in moving parts.</li><li>-Never attempt to get off the tractor while it is in motion.</li><li>-Don't stop or start suddenly when going uphill or downhill.</li></ul>	<ul style="list-style-type: none"><li>-Keep tractor in good operating condition.</li><li>-Remove key before leaving tractor.</li><li>-Plug tractor charger cord into a normal 110 volt, 3-hole receptacle. Do not use a 2-hole adapter unless properly grounded.</li><li>-Keep hands and feet clear of all rotating equipment.</li><li>-Disconnect power cord from PTO receptacle before handling power attachments.</li><li>-All safety devices are for your protection. Do not attempt to defeat them.</li></ul>
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## OPERATION

### General

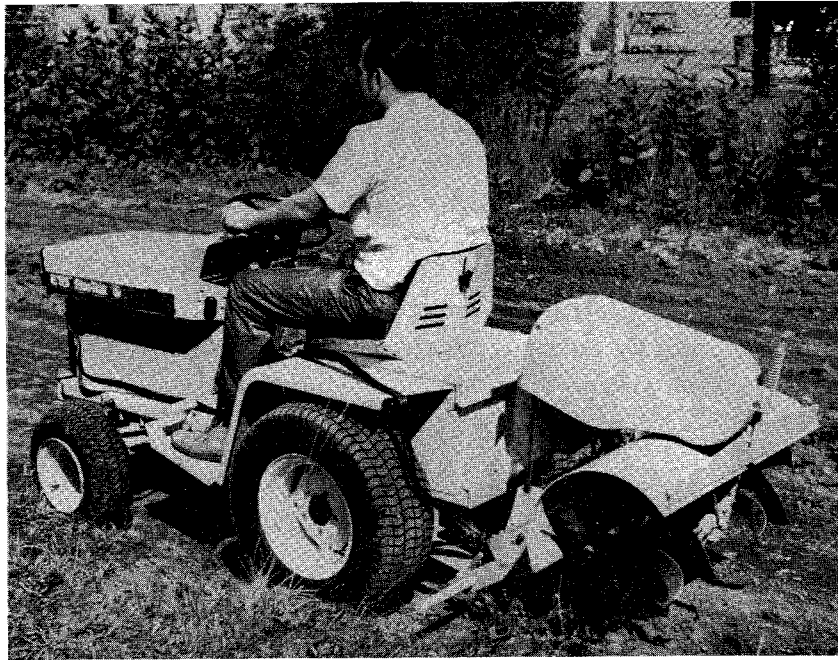


Figure 1. Elec-Trak Rototiller

The right and left hand side of the tractor or the Rototiller is identified when sitting properly on the tractor seat.

Prior to initial use of the Elec-Trak Rototiller, the user 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!

The power pack should be fully charged before any tilling is performed. This will allow the maximum area to be tilled and extend the serviceability of the power pack. Since all tilling operations require larger amounts of power than are encountered in operations such as mowing, the electrolyte level in each cell of the power pack should be checked and adjusted at least once per week or every 5 tilling discharges.

### Ground Speed

All tilling should be done with the range selector in the lowest (LL) range. This permits proper soil pulverization and retards surges in forward speed due to the rotary motion of tiller tines.

**CAUTION:** Never reverse tractor with tiller tines in the soil. This could result in equipment damage.

## OPERATION

### Depth Control

Raising and lowering of the Rototiller to a desired height is made with the electric or manual rear lift. Once the desired height is reached, the depth control chain should be attached to the upper end of the lift so a minimum amount of slack remains in the portion of the chain fastening to the Rototiller frame. (See Fig. 2.) With the chain attached properly, run the lift down to remove all tension from the lift belt.

**CAUTION:** While raising or lowering the Rototiller, prevent the depth control chain from fouling by holding it to the side of the lift mechanism.

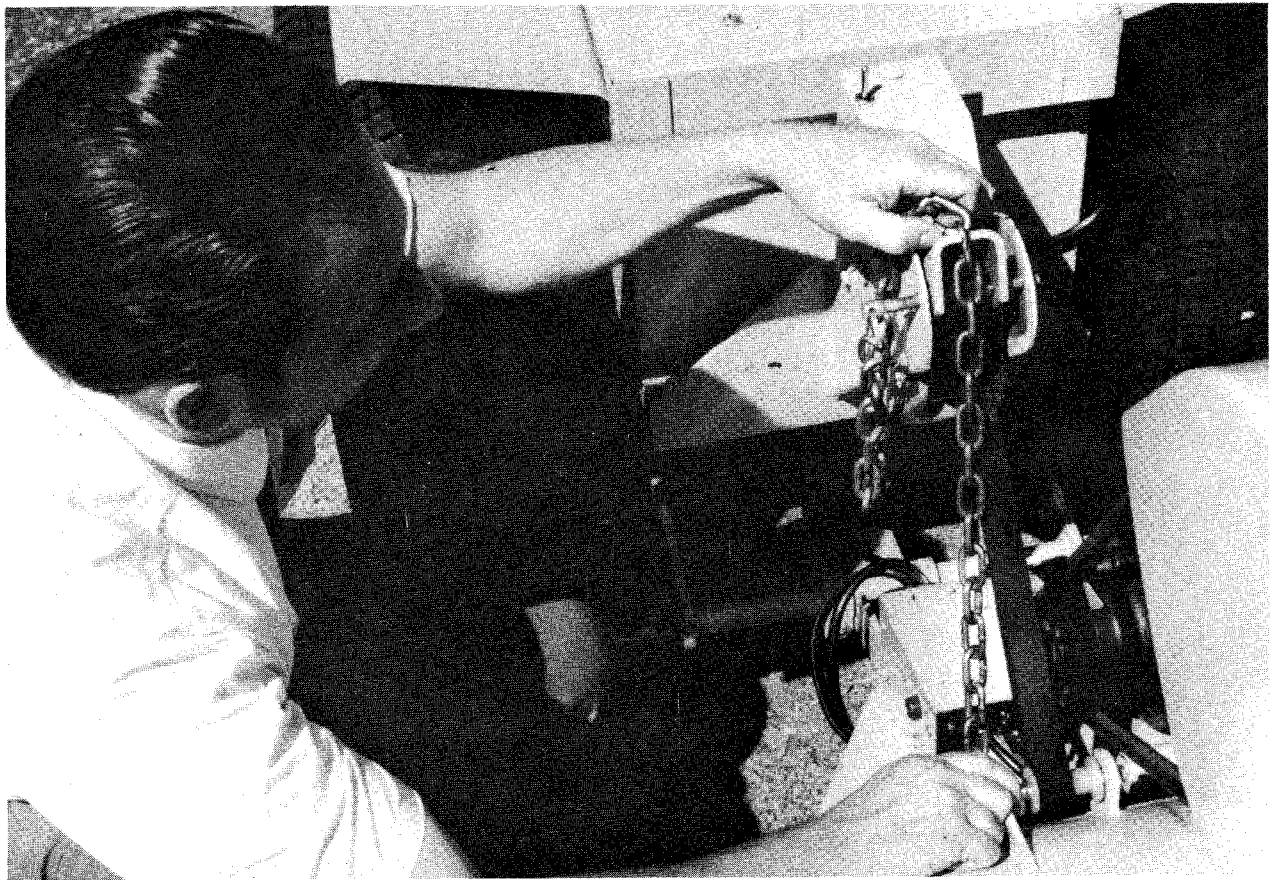


Figure 2. Depth Control Chain

The tiller will penetrate soil to a maximum depth of about six inches. On the initial pass, full depth tilling may be restricted if the drive chain housing drags on the soil surface. Subsequent passes will allow full penetration and, because the housing and tractor tires will sink into the loose earth, additional tilling depth will result.

## OPERATION

### Efficiency and Economy

In any tilling operation, depth of till and forward speed should be regulated to keep the power use gauge indicator in the yellow zone most of the time. Continued tilling with power use gauge indications in the red zone will result in power interruption to the tiller motor by opening a circuit breaker. The circuit breaker is located on the left side of the tiller just forward of the tine housing. (See Fig. 3.) 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 tiller can then be restarted in the usual manner.

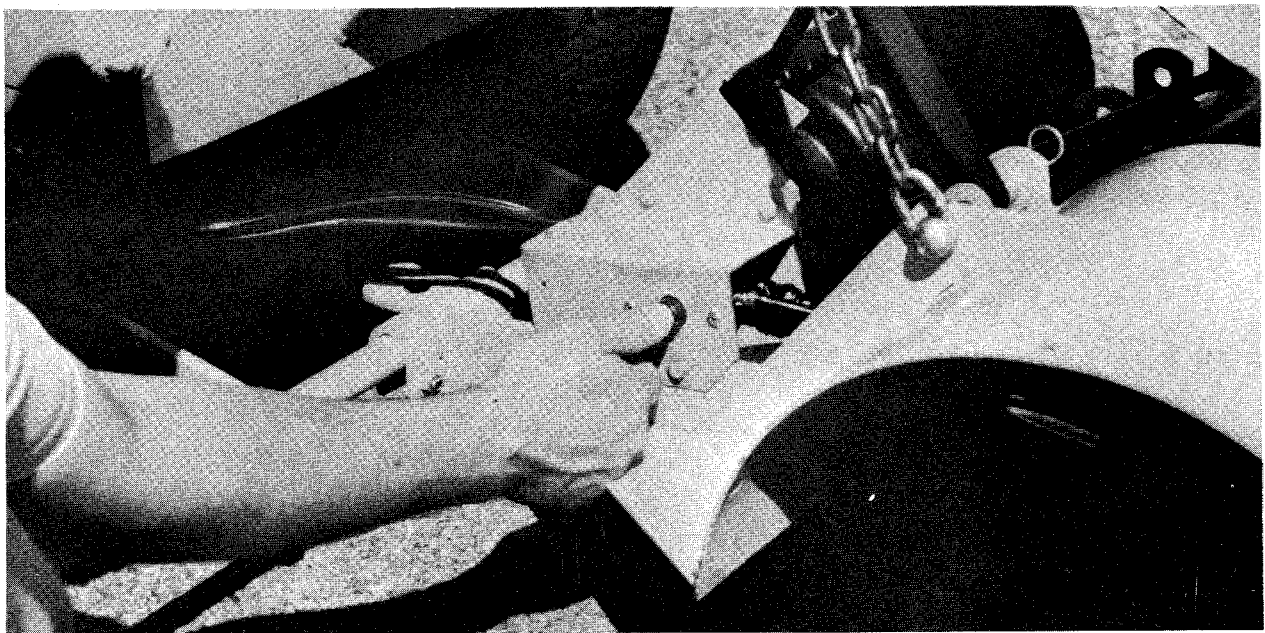


Figure 3. Manual Reset Circuit Breaker

### Rototiller Starting

To begin tilling action, stop the tractor with the tiller over the tilling area starting point. Start the tiller 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 Rototiller from starting if this procedure is not followed. Should the operator leave the seat or turn the switch to "off", another interlock interrupts Rototiller power. For all normal use, the PTO switch should be used to turn the tiller "on" and "off". To restart, the PTO switch must be turned to "off" and then to "on". Refer to your tractor manual.

**CAUTION:** Before leaving the tractor for any reason, turn PTO and key switches to "off".

## OPERATION

With the tiller running and the tractor stopped, lower the tiller until the tines engage the soil. Continue to lower the tiller gradually so as to not overload the attachment. (The rate of penetration is dependent on the type and condition of the soil.) Just before the desired tilling depth is achieved, attach the depth control chain as outlined in the Depth Control section and continue to lower the tiller until all tiller weight is on the chain and the lift belt becomes slack.

NOTE: By applying the foot brake while lowering the tiller, the tractor will remain stationary.

Release brake fully and move the speed control to the proper position while the tines are rotating. If the tilling is too vigorous, due to very hard or rocky soil, stop the tractor and raise the tiller several inches.

The preferred method of stopping the tiller is with the tines lifted out of the ground; however, should any emergency arise, stop all motion immediately before taking intermediate steps.

CAUTION: Never continue to power the electric lift after its upper limit has been reached. Damage may occur to the lift or other equipment.

### Tilling Aggressiveness

The "aggressiveness" of the tiller or its effectiveness in entering the ground is determined by the position of the mounting bracket hitch bar. Two positions are available; lower for minimum aggression and upper for maximum aggression. (See Fig. 4.)

Generally, for garden soil which has been tilled before, the lower position may be used. For tilling in soil or hard ground, the upper position may have to be used until one or more passes over the area have been made. Then the lower hitch bar position can be used if further soil pulverization is desired.

Refer to the Tiller Mounting Bracket Instructions for adjustment of the hitch bar position.

Mounting Bracket Hitch Bar Position	
Position	Use
Lower	Previously worked soil Sandy soil
Upper *	Sod Hard packed soil Rocky soil Clay-bearing soil



## OPERATION

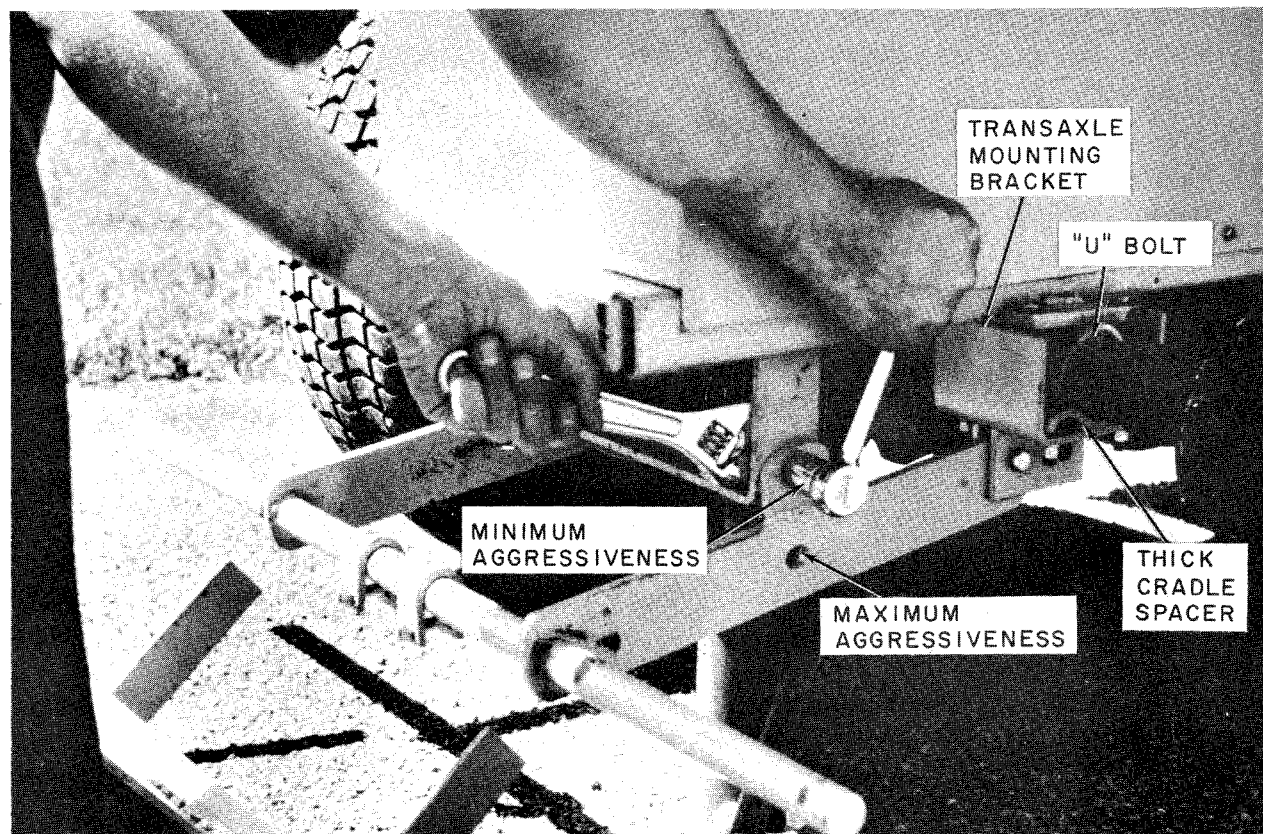


Figure 4. Hitch Bar Installation and Adjustment

### Transporting

Before transporting the tiller, use the lift to raise it to its maximum height and attach the depth control chain to the top of the lift so the shortest possible length of chain remains between the tiller frame and the lift. Lower the lift to remove all weight from the lift belt.

**WARNING:** With the tiller in the raised position, the front tractor wheels support less weight, so steering effectiveness is reduced. If hills must be climbed, drive up backwards and avoid side hill travel.

### Operating Tips

Widely varying conditions prevent instructions on specific tilling procedures, but some of the guidelines and tips available follow:

- Never till immediately after a heavy rain or rainy period or too early in the Spring.
- On virgin soil protect the equipment and have it worked initially by larger sized farm equipment.

## OPERATION

- Remove any large stones and debris encountered or visible on the tilled surface.
- While on a flat surface, lower the tiller until the tines just touch the surface. Draw the depth control taught and attach it to the lift in the usual manner. Mark this link permanently. This establishes the ground level reference and allows depth to be increased by adding more links below the lift attachment point. One link equals approximately one inch of depth in soil. Set the chain and lower the tiller until the lift belt becomes slack.
- The pattern shown in Fig. 5 should be followed for typical homeowner's vegetable gardens. The second pass should follow the same pattern, but start from left to right.
- If jamming occurs, shut the PTO switch "off", remove the power cord from the PTO receptacle and dislodge the jammed piece.
- Clean tilling area of high grass or weeds by burning or cutting and removing before beginning tilling operation.
- If sharp turns are anticipated, lift tines from the soil before turning to prevent tiller damage.
- The tiller can be attached to the hitch bar to provide tilling to the left, right or center of the tractor. With the flexibility, any row crop cultivating may be carried out. Refer to the Installation section, page 10.

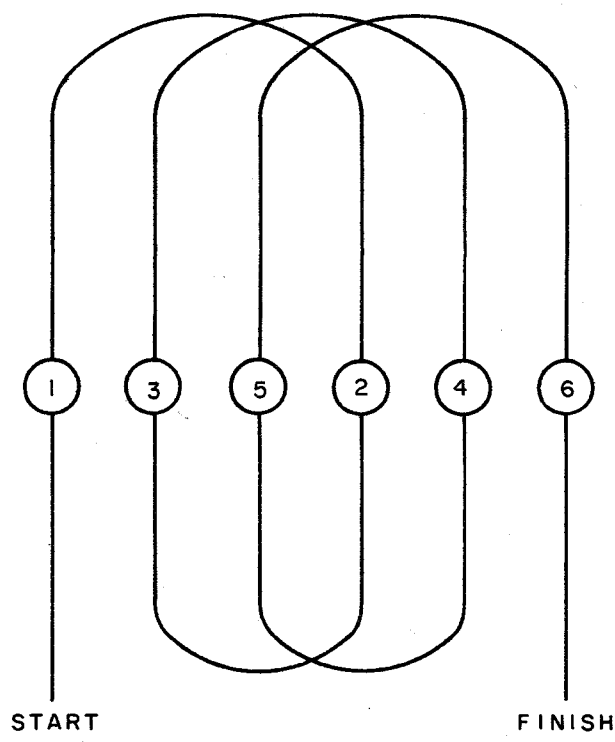


Figure 5. Tilling Pattern

## INSTALLATION

### Tiller Hitch Bar Installation

Block the front tractor wheels and jack up the rear of the tractor evenly before removing the rear wheels.

Identify the right transaxle mounting bracket as that with the cut "cut out" made to accommodate the drive belt pulley. Position two "U" bolts with their curved surfaces facing upward to conform to the transaxle axle hubs -- one inside the transaxle frame mounting pad and one outside the pad. (See Fig. 4.)

Install a thick cradle spacer on the outside "U" bolt and a thin one on the inside "U" bolt with their curved surfaces facing upward to conform to the transaxle axle hub. Hold the transaxle mounting bracket in place and secure with four lock washers and nuts. Do not tighten nuts at this time.

Repeat assembly procedure for the left mounting bracket.

Secure hitch bar to mounting brackets with clevis pins and hair-pin cotters, so the cotters are on the inside of the brackets.

Raise hitch bar to align bar holes with tractor rear draw bar holes (sides of draw bar). Use the upper pair of hitch bar holes to give minimum aggression and the lower pair for maximum aggression. See page 6, "Aggressiveness."

With the holes aligned, secure hitch bar in place with bolts, lock washers and nuts. Tighten nuts finger tight. Adjust mounting brackets as they are tightened so that no binding occurs. Tighten nuts and bolts holding hitch bar to draw bar.

### Electrical Lift Installation (Rear)

Initial installation of the rear electric lift requires the wiring of the rear power cord receptacle to the tractor power pack. This installation is to be performed by your Elec-Trak dealer only.

The lift arms enter the frame openings at the rear of the tractor. Push the assembly in until flush with the rear of the frame. (See Fig. 6.) Connect the lift plug with the lift power cord receptacle.

## INSTALLATION

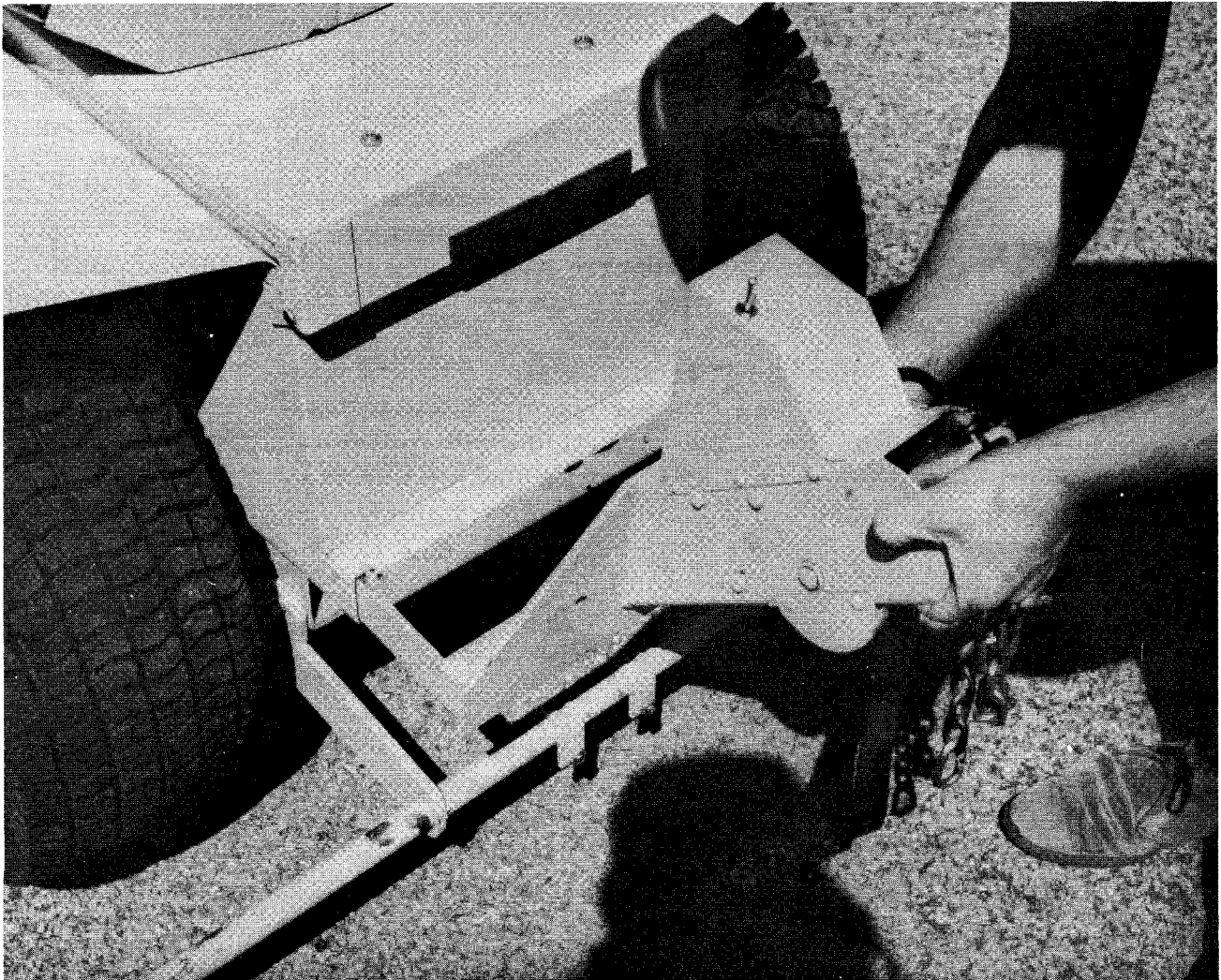


Figure 6. Electric Lift Installation

### Attaching Tiller to Hitch Bar

Block up the front of the tiller so that each mounting clevis is at about the same height as the tiller hitch bar. Drive the tractor the slowest (LL) reverse speed into the tiller so that each clevis engages the hitch bar at the same time. Mounting may be made so tilling can be performed to the left, right, or center of the tractor. Refer to Figs. 7 and 8 for the center and right mounting configurations. Left-hand mounting is the opposite of the right-hand mounting.

Drop the "L" shaped clevis pins through the clevis holes and secure each one with hair-pin cotters. •

## INSTALLATION

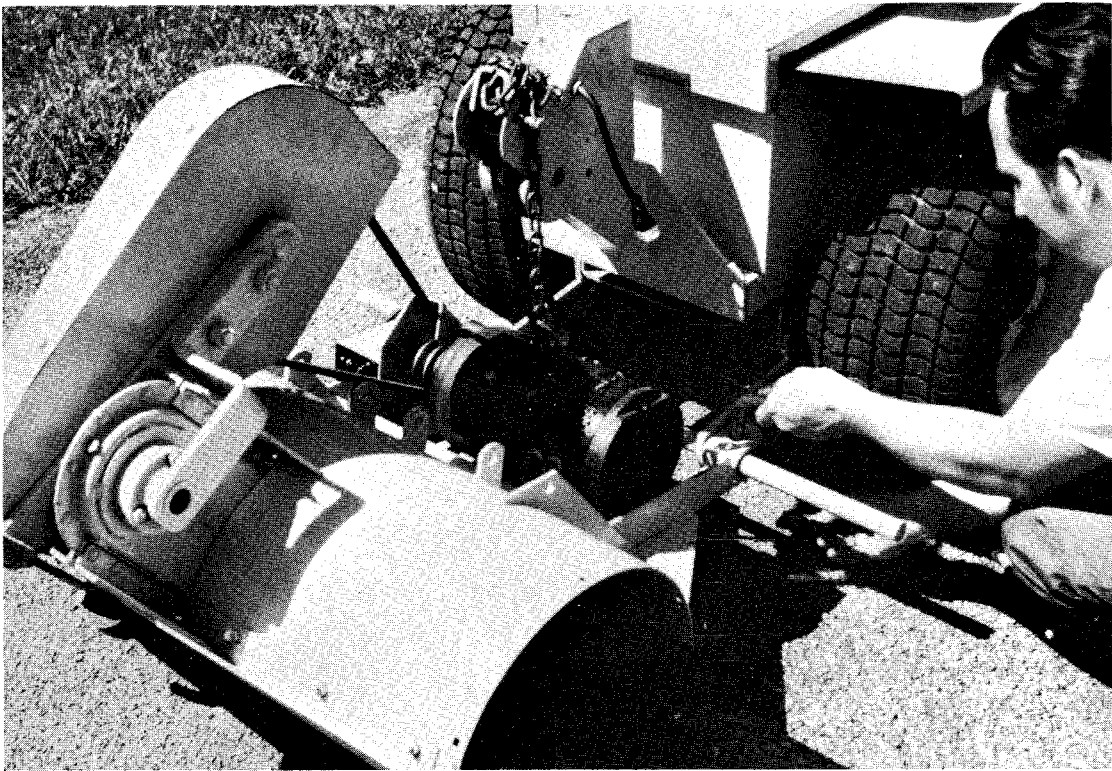


Figure 7. Tiller Center Mounting

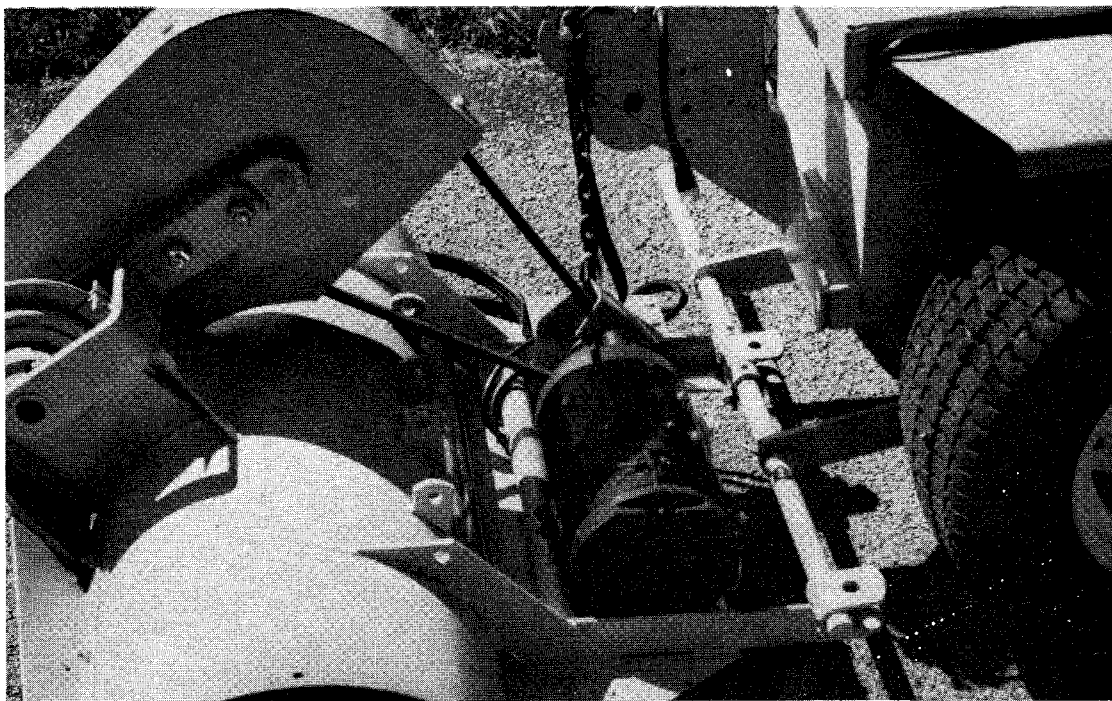


Figure 8. Tiller Right-Hand Mounting

## INSTALLATION

Run lift belt out approximately 30 inches, double it back on itself, and hold its looped end and limit bracket at top of the lift assembly inside the depth chain locking bracket. (See Fig. 9.) Pass the 3-1/2 x 1/2 inch clevis pin through the aligned holes of the lift, chain locking bracket, limit bracket, and lift belt loop.

NOTE: The limit bracket spacer and clevis pin hole are closer to one edge. This edge should be installed towards the front of the tractor.

Use the corresponding clevis directly below the lift to attach the lift belt. Pass the 4-1/2 x 1/2 inch clevis pin through the end link of the depth control chain, the clevis and lift belt. (See Fig. 10.) Secure this clevis pin with the spring pin.

Position the tiller motor power cable over the left tractor fender, fitting it along the front corner of the rear battery box, along the top edge of the frame, to the right of the brake pedal, and into the PTO receptacle. (See Fig. 1.)

CAUTION: Be sure PTO and key switches are off before plugging in the power cable.

Remove block and prepare the tiller for transporting. See page 7.

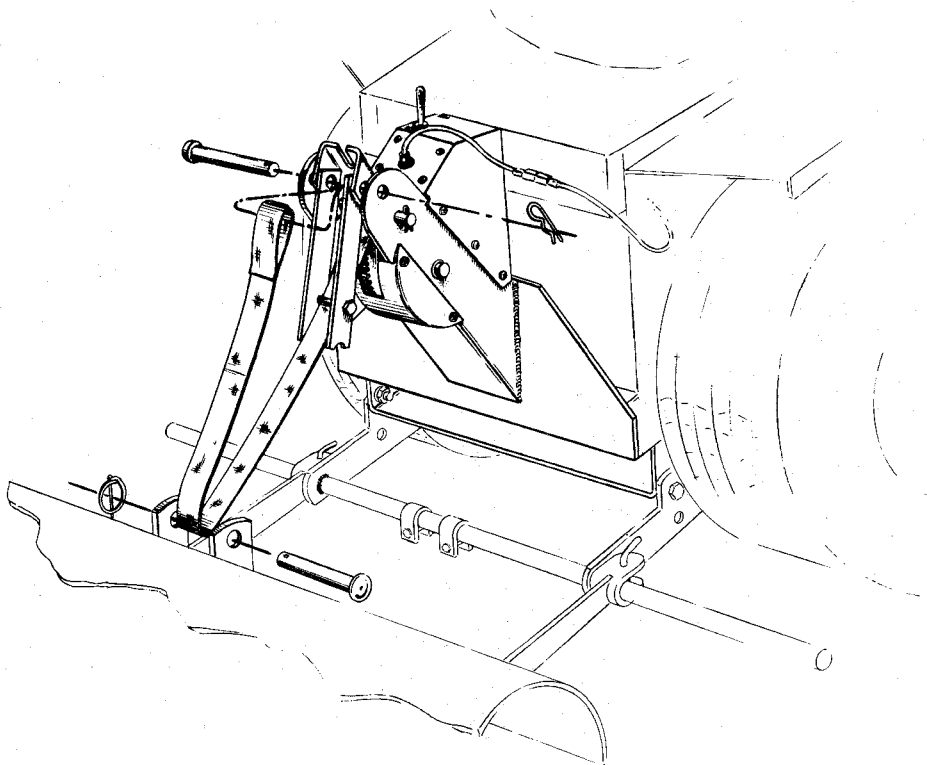


Figure 9. Lift Belt Threading



## INSTALLATION

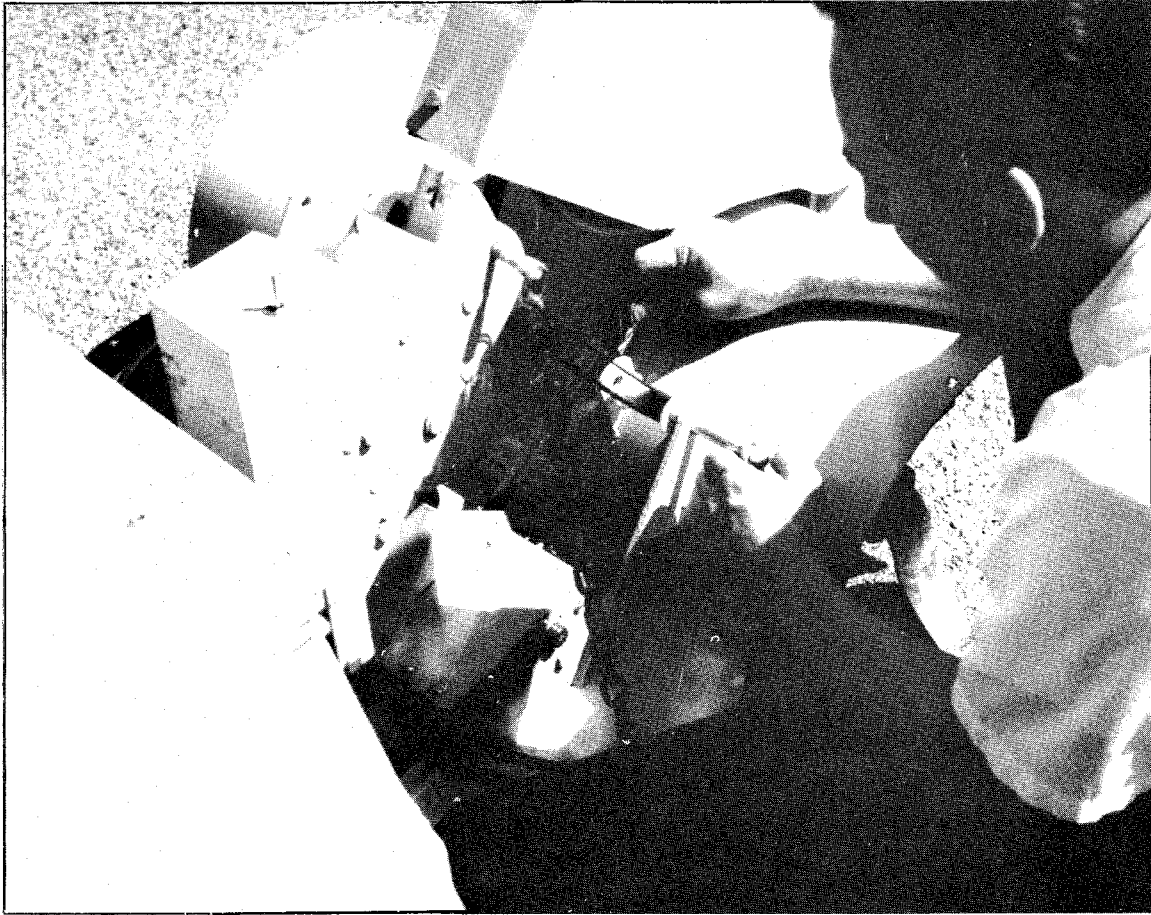


Figure 10. Attaching Lift Belt to Tiller

### Removing the Tiller Hitch Bar

When it becomes necessary to remove the tiller hitch bar, remove the bolts securing the hitch bar to the tractor draw bar and the hair-pin cotters and clevis pins attaching the hitch bar to the transaxle mounting bracket. It is not necessary to remove the transaxle mounting brackets.

## SERVICE AND MAINTENANCE

### Service and Maintenance

A few drops of 30 weight machine oil should be placed in the oil cup on the upper sprocket axle before each seasonal use. (See Fig. 11.)

A light coating of 30 weight oil should be wiped on the drive chain before and after storage periods.

For greater than average use, lubrication frequency should be increased accordingly; and before storage, the drive chain should be cleaned, lubricated, and adjusted.

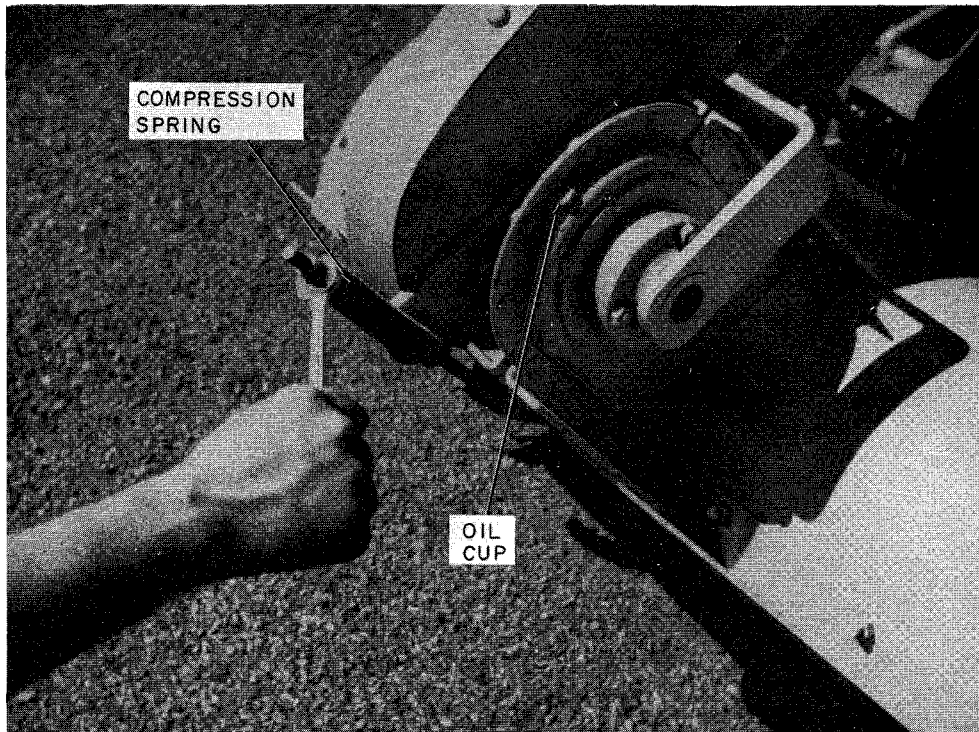


Figure 11. Belt Tension and Oil Cup

### Adjustments

The Rototiller drive belt provides protection to the motor by slipping slightly when small rocks or patches of hard soil are struck. Should the belt start slipping when tilling normal soil, its tension should be increased.

**WARNING:** Under no circumstances should any work or adjustments be performed on the tiller until the power cord has been removed from PTO receptacle.

Belt tension is increased by turning the nut on the threaded stud shown in Fig. 11, so as to compress the spring. When the desired tension is reached, turn the top nut down to the other to lock them in place.



## SPECIFICATIONS

Tilling Width . . . . . 32 inches

Tilling Depth . . . . . 6 inches

Tine Speed . . . . . 120 rpm

## ROTOTILLER WARRANTY

General Electric Company warrants that it will repair or replace without charge, f.o.b. factory, any part of the ELEC-TRAK Rototiller with which this warranty is furnished which proves to be defective material or workmanship within 12 months in ordinary home use (30 days if in commercial or institutional use) following the date of sale to the original purchaser for use. This warranty does not apply to repair or replacement made necessary by normal wear from use or 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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