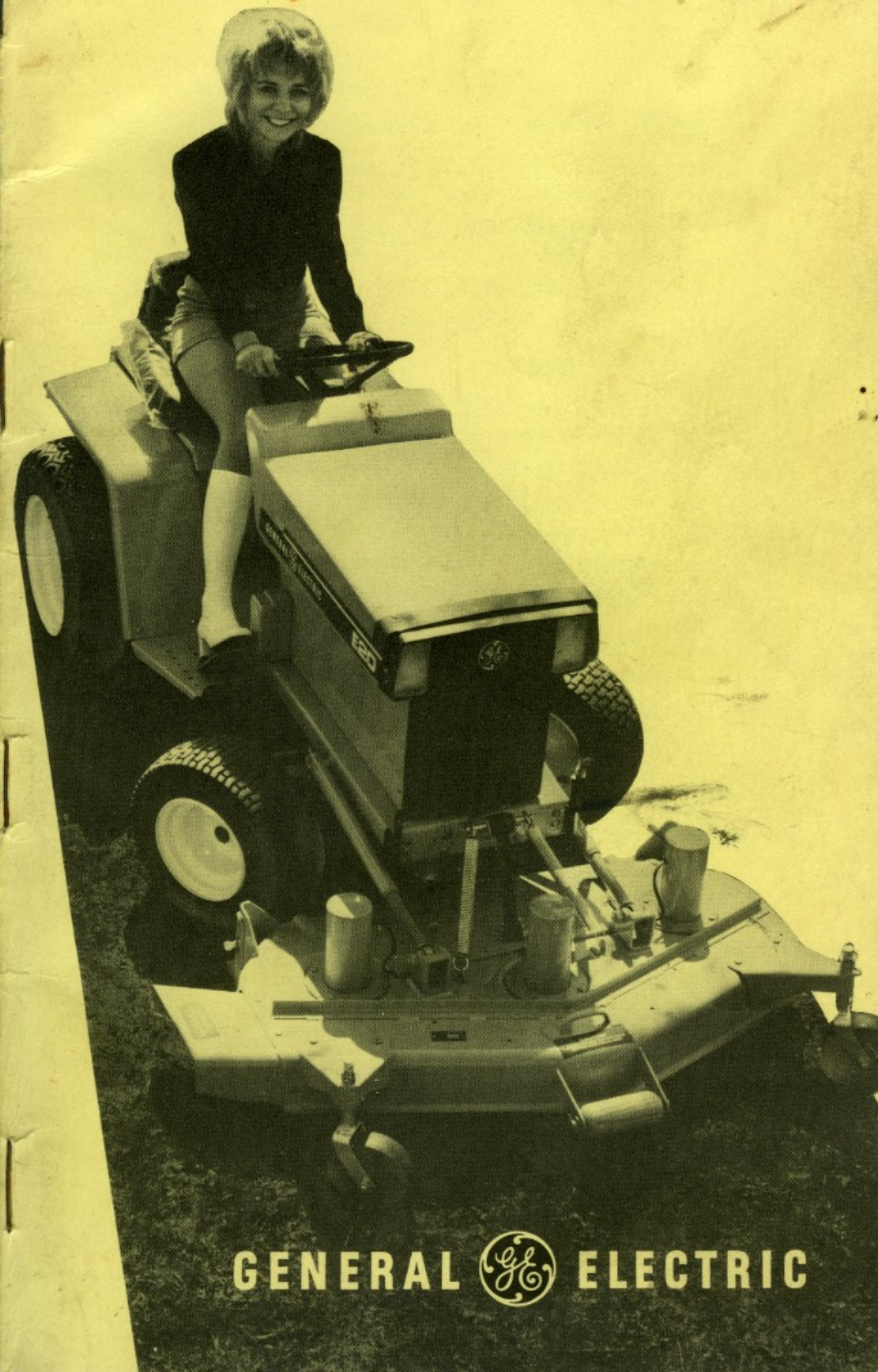


So you're thinking about a GE ELEC-TRAK[®] tractor

(or everything
you always wanted to know
about electric tractors
but were afraid to ask)



GENERAL  ELECTRIC

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GENERAL  **ELECTRIC**

Here's the Story...

Tractor buyers ask a lot of questions of our dealers about the ELEC-TRAK tractor. Rightly so. Because this all-electric tractor is a whole new concept in garden tractors. This booklet helps answer these questions. Questions about the tractor itself . . . how it operates . . . what its features are . . . and how its accessories work.

This booklet is not a substitute for the technical information in our Owner's Manual. It's a buyer's guide. Thus, reading this won't make you an electric tractor expert. But you don't need to be. General Electric ELEC-TRAK dealers are carefully selected to give owners the best possible service. They're trained by GE factory personnel and carry ample parts and accessories.

Contact your ELEC-TRAK tractor sales representative for additional information or assistance.



What's All the Fuss About?

Three basic ELEC-TRAK tractor models: E12, E15 and E20. Each model is designed for the homeowner . . . with a full line of plug-in attachments, from a giant snowthrower to a light-weight chain saw.

Hear no evil. ELEC-TRAK tractors are quiet. Now you can mow anytime day or night. Powerful, rugged ELEC-TRAK tractors easily handle tough lawn jobs without heat, noise, fumes or vibration.

Cordless. ELEC-TRAK tractors plug into any standard household outlet for quick recharging. Mow up to three acres—for about 7¢/acre—or haul heavy loads all day long on a single charge, with no extension cord.



Safety first. It stops when you stop. A safety switch immediately shuts down mower blades and drive if you leave the tractor seat.

How's this for starters? Flip a switch and ELEC-TRAK tractors start instantly. Whatever the weather. ELEC-TRAK tractor's tough, dependable power-pack is warranted for 5 years. Forget tune-ups, clutched belts and hazardous fuel.

In short. The whole family will find yard work fun with the ELEC-TRAK tractor. General Electric's ELEC-TRAK tractor cuts any lawn and garden job down to size.



Why Electric?

Operation

- Instant Start
- Single Lever Speed Control
- Front Power Lift Standard
- Simple, Easily Learned Controls
- Smallest Turning Radius in Class
- Super Traction and Pulling Power
- Effortless, Quick Change Accessories

Safety

- Easy, Safer Refueling
- Low Center of Gravity, Balanced Weight Design
- Safety Interlocks for Operator Protection
 - Automatic Shut-off When Seat is Empty
 - Instant Stop Mower Blades (Less Than 3 Sec.)
 - Controlled Starting Power
 - Brake Pedal Also Shuts Off Motor

Comfort

- Fumeless, Non-Polluting
- Quiet
- Vibration Free
- Cool Operation

Front Mounted Mower

- No Belts, Pulleys or Gears
- Cuts Grass Before Tractor Rolls On It
- Visibility Improves Control, Allows More Cut Per Pass and Permits Close Trimming
- Easy Flip-Up to Clean and Sharpen Mower
- Easy On-Off, No Lifting or Pushing
- Complete Floating Action—Follows Ground Contour Independent Of Tractor

Mobile Power Center

- Plug-in Portable Tools
- Independently Powered "Plug-In" Attachments

Take Your Pick

ELEC-TRAK MODEL	E12	E15	E20
Peak Horsepower Exceeds	12 hp	14 hp	16 hp
Speed Control	Electro ⁽¹⁾ (Hand Lever)	Electromatic ⁽¹⁾ (Hand Lever)	Torq-matic ⁽¹⁾ (Foot Accelerator)
Speed Range Selections	4	4	4
Speeds	0-6 mph	0-7 mph	0-9 mph
Electric Power Lift (front)	Std.	Std.	Std.
Lights (front)	Std.	Std.	Std.
Seat	High Cushion	High Cushion	High Cushion Adjustable
Power Pack			
Heavy Duty	Optional	Optional	Std.
Standard	Std.	Std.	—
Tires			
Front	4.80x8	4.80x8	6.50x8
Rear	8.50x12	9.50x12	10.50x12 High traction
Steering Wheel Diameter	12"	12"	15"
Width and Length	35x69"	36x69"	42x69"
Tractor Weight (approx.)	800 lbs.	850 lbs.	900 lbs.

⁽¹⁾ The speed controls vary in the degree and sensitivity of control from the 3 step Electro through the 7 step Electromatic to the almost infinitely variable Torq-matic.

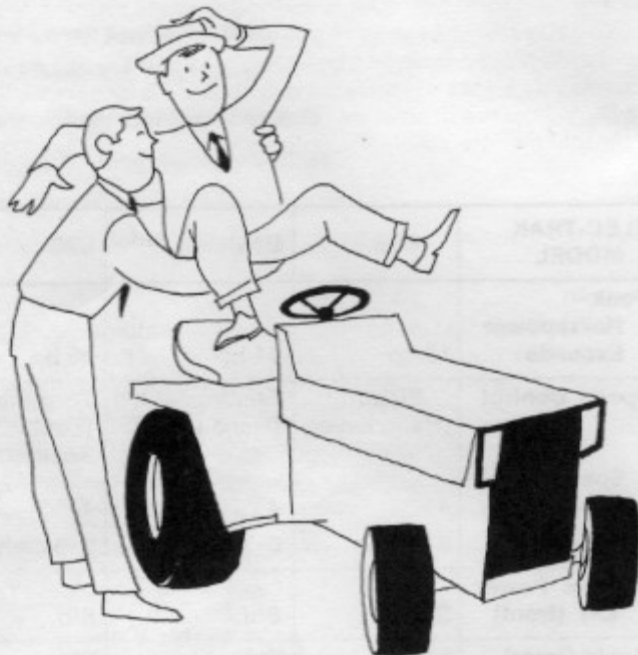
Face-To-Face With the Dealer

Customer

I'm interested in a garden tractor.

Salesman

Let me show you the new General Electric electric garden tractors. You know, these tractors are all-electric, with rechargeable batteries.



The ELEC-TRAK tractor makes very little noise. There is no vibration or exhaust like an engine. Each powered attachment has its own independent motor.

There is no high hump to climb over to get onto the seat. You can just step on. The seat was "human engineered" to accommodate both tall and short people.

And you'll notice the controls are located for easy accessibility. The electric lift switch located on the left side of the control panel (*demonstrate*) allows any attachment mounted on the front lift to be easily raised or lowered. This P.T.O. (power take off) switch just to the right turns on the P.T.O. outlet that puts power to the mower . . . or any other attachment that is plugged into the P.T.O. outlet. On the right side is the light switch for the headlights and dash light.

The fuel level meter indicates the *level* of charge in the power pack. The power use meter indicates the *rate* of power usage from the power pack.

Customer

How do you operate it?

Salesman

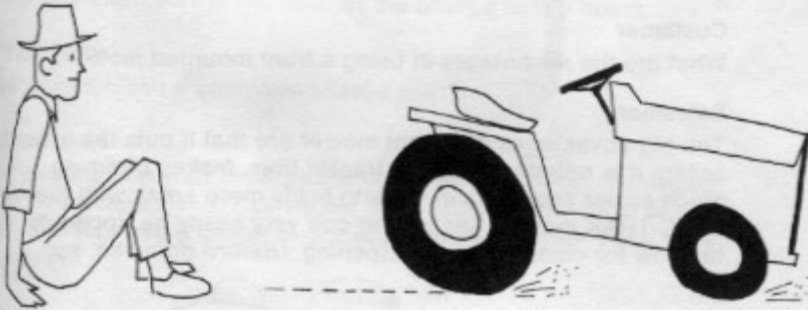
To start the ELEC-TRAK tractor, just turn the key on and then move the speed control lever (E12 or E15). *(Be sure the range selector is in neutral or wheels are jacked up).* Moving the lever forward makes the tractor go forward and faster. By moving the speed control backward, the tractor moves in reverse. Speed direction is controlled with the speed control lever on the E12 and E15. If the lever is pushed forward too fast, the control delays full power until the wheels are safely moving. This is called programmed starting. On an E20 the speed is controlled by a foot accelerator and reverse is accomplished by a switch on the control panel. A red light indicates when the switch is in the reverse position.

Customer

It looks easy enough to operate. How about safety?

Salesman

The ELEC-TRAK tractor has built-in safety features. *(Demonstrate)* You *must* be on the seat before this tractor will operate. If you get off the seat, power is removed from the drive and mower motors.



The mower blades stop in less than 3 seconds. When you get back on the seat, the tractor will not restart until the speed control is returned to the neutral position and mower will not start until the P.T.O. is turned "OFF" and back to "ON". Also when the brake pedal is fully depressed, it shuts off the tractor drive motor.

To restart you just return the speed control to the neutral position and move it in the direction you wish to go. *This feature prevents unintentional operation.*

Another safety feature is the power disconnect. When the disconnect is off, the ELEC-TRAK tractor can't operate and all power circuits except the lights are disengaged. *(Make sure you push in the disconnect as you turn it back on.)*

Face-To-Face With the Dealer

Customer

Is this a 12 hp tractor?

Salesman

The E12 is equivalent to a 12 hp unit. The E15 ELEC-TRAK tractor has greater peak power than 14 hp tractors of the same weight and size. The E20 is comparable to 16-18 hp gasoline engine tractors with added features. The chief advantage in power is the electric tractor's higher peak torque under heavy load and separate, full power motors on each attachment.

Customer

What are the differences in the three ELEC-TRAK tractor models?

Salesman

Primarily, peak motor power, degree and application of speed control, tire size and type, seating, steering and battery capacity.

Customer

What do they mean, "independently powered attachments"?

Salesman

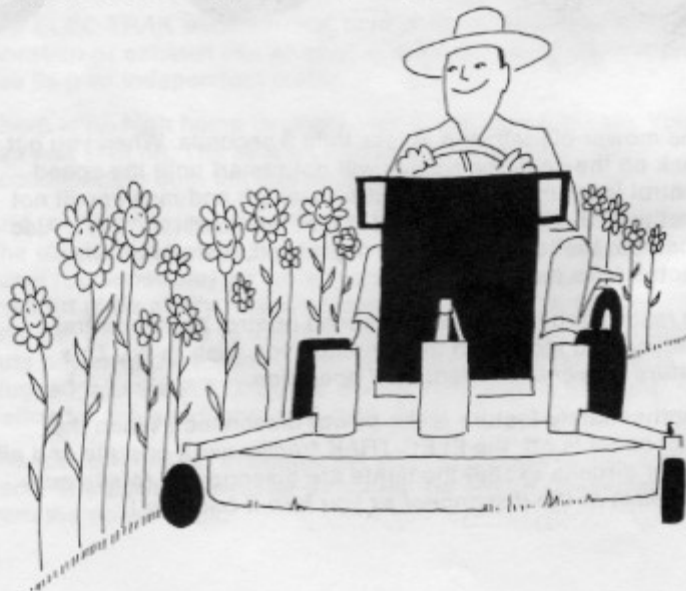
All of the powered attachments have separate motors which run at full power under most load conditions regardless of tractor speed or load. They provide even higher horsepower and therefore better performance than single engine-driven units. The performance is evident when you use the tiller, mow on an uphill grade or go into deep snow with the snow thrower.

Customer

What are the advantages in using a front mounted mower?

Salesman

The big advantages of a front mower are that it cuts the grass before it is rolled over by the tractor tires, makes trimming much easier and you can get into many more areas with the ELEC-TRAK mower. The mower can very easily be tipped up to allow for cleaning and sharpening. *(Before doing so, you*



have to remove the power cord from the tractor for safety.) Because you can see exactly where you are going, you have minimum mower overlap which allows for more grass cut with each pass. The front mounted mower can be removed from the tractor readily and without lifting in a few minutes so the tractor is ready to quickly take other attachments and accessories.

Customer

You said this ELEC-TRAK tractor has rechargeable batteries. How does it get recharged?

Salesman

Each ELEC-TRAK garden tractor has its own charger under the hood. You plug this charger cord into your house outlet and turn the charger dial to the correct battery age mark. The batteries are automatically recharged and the charger shuts off once the cycle is completed. You don't have to worry about storing or running out of gasoline or filling the gas tank on a hot tractor engine.

Customer

How long does it take to recharge the batteries?

Salesman

It takes about 5 hours to recharge a fully discharged power pack, but you do not have to wait that long to use your tractor. The tractor recharges about 20% per hour and you can remove the plug anytime if you want to do some more work. The charger cycle is actually longer to assure that all cells are equally charged up, but 95% of the charge is in 5 hours.

Customer

How much will a complete charge cost?

Salesman

It depends on your local power company rate. Most recharges will cost between 5-7 cents per acre. Most engine drive units of this size use a gallon of gas at about 35 cents for each acre mowed.



Customer

How many acres can I mow in one charge?

Salesman

Here is an ELEC-TRAK tractor fact sheet. You will note with the 42" mower you can mow at least 2-3 acres (2-3 hours) on one charge.

Customer

I only mow about 2 acres now, but I may enlarge my lawn to about 5 acres. Can I cut this larger lawn with the ELEC-TRAK tractor?

Salesman

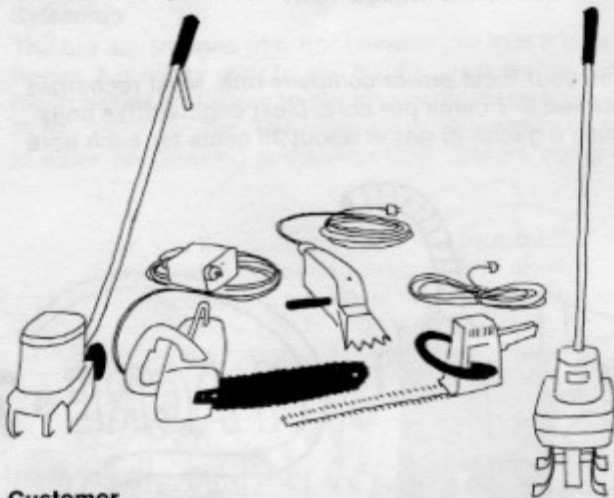
With the 42" rotary mower, you could do, say 3 acres in the morning and finish the other 2 in the afternoon after you recharge the ELEC-TRAK tractor for a few hours. Again, this unit recharges at about 20% per hour. In two hours you have about 40% of the charge replaced. Like most people with large lawns you will probably find that you will only mow for 2-3 hours at one time so the ELEC-TRAK tractor will easily do more than the job required. Pulling reel mowers with a 60" cutting width behind you can cut 3-5 acres on one charge.

Customer

What attachments are available?

Salesman

In addition to all the normal garden tractor items, the ELEC-TRAK tractor has many electric power tools that plug into the tractor. All of these tools on our display board operate directly from the ELEC-TRAK power pack. The 36 volt hand tools will operate 15-20 hours. The chain saw will operate 4-6 hours. You can even get a DC arc welder which plugs into the tractor.

**Customer**

I now have some 110 volt tools. Could I use them with it?

Salesman

Most of your 110 volt tools, like a drill, hedge trimmer and most hand circular saws, could be used with the optional ELEC-TRAK inverter. This 110 volt, 1000 watt AC inverter mounts underneath the hood.

Customer

Could I use this inverter to operate my furnace motor or water pump?

Salesman

No, but it will operate 1/2 hp circular saws, 1/4" drills, supplementary patio lighting, or other resistance loads.

Customer

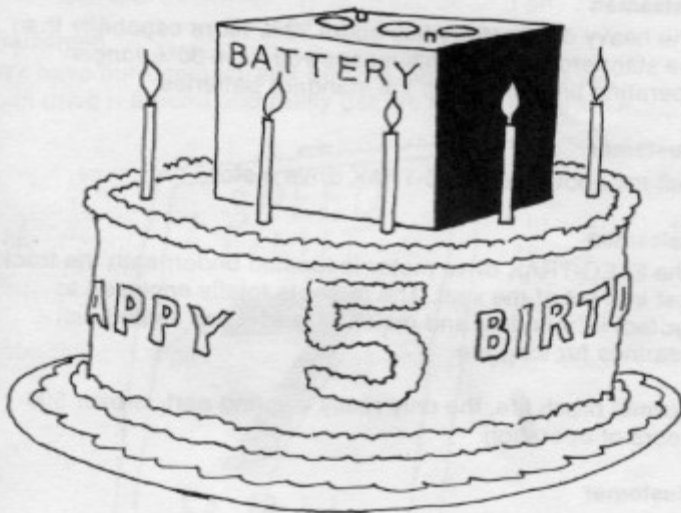
How many batteries in the power pack?

Salesman

There are six 6-volt batteries in every tractor. Four batteries are under the seat, the other two batteries are under the hood.

Customer

How long are the batteries guaranteed?



Salesman

Five years! The power pack will be replaced if any battery fails due to defects or if its performance falls below the standard test during the first two years in homeowner use. A pro-rata charge based on length of ownership is made during the last three years. For example, after 3 years it would cost 3/5ths of the cost for a new unit.

Customer

My car battery only lasts about 3 years. Why will these batteries last longer?

Salesman

These ELEC-TRAK batteries are not at all like a car unit and have been designed for high usage rate and many recharges. The cells of these batteries are constructed to give longer life at high output. A car battery wouldn't adequately power an ELEC-TRAK tractor for more than a year.

Customer

How much does it cost to replace the batteries?

Salesman

GE offers a special price to *ELEC-TRAK tractor owners only*, which equals about 1/3 off the retail price of the power-pack. At the end of five years, if one heavy duty battery unit fails, the cost of a new unit currently is \$_____. A standard battery would cost about \$_____ to replace. The pro-rata charge is based on this lower price also. After 3 years use, a heavy duty replacement unit would be 3/5's of \$_____, or \$_____, or a standard unit only about \$_____. Don't forget this is much like buying your fuel for years in advance. Also normal maintenance cost of a gas tractor can easily be \$40.00 per year.

Customer

What is the difference between the heavy duty and the standard battery?

Salesman

The heavy duty battery has about 30% more capability than the standard battery. This means you have *30% longer* operating time than with the standard batteries.

Customer

Tell me about the ELEC-TRAK drive motor.

Salesman

The ELEC-TRAK drive motor is located underneath the tractor just in front of the seat. The motor is totally enclosed to protect it from dust and moisture, and it has sealed ball bearings for long life.

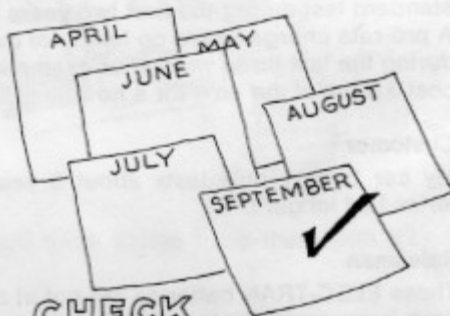
Normal brush life, the only really wearing part, is over 500 hours of operation.

Customer

Is there much maintenance required?



CHECK WATER



CHECK AXLES & BEARINGS

Salesman

There is no maintenance required on the drive motor. The only tractor maintenance is to check the battery water level once a month, and check the rear axle oil level and grease the front axle and wheel bearings every 100 operating hours or 6 months.

Customer

How long has the ELEC-TRAK tractor been on the market and how will it hold up?

Salesman

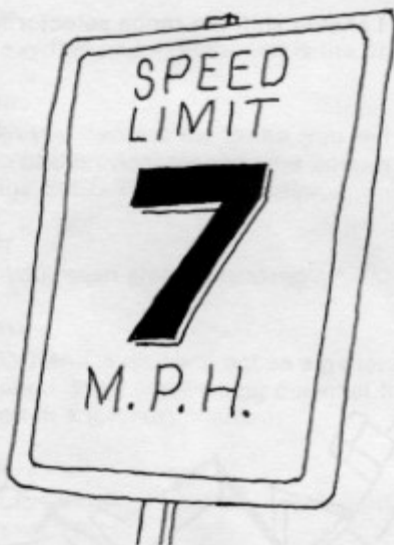
The ELEC-TRAK tractor has been in use since 1968 and available to the public since February, 1970. It has very few moving parts and as a result there are not many items that can wear which would require replacement. The design has rugged aluminum castings and a unitized frame for tough use. Many units are in commercial service.

Customer

Well, it looks pretty good!

Salesman

We have our demonstrator outside, let's go out so you can drive it around and really get the feel of this tractor.



(Outside with demo in neutral)

Okay, slide onto the seat, turn the key on, move the speed control lever forward to go forward and in reverse to back up. The further forward the speed control, the faster the tractor goes. This E15 has a top speed of about 7 miles per hour and the E20, 9 mph.

Customer

Is that all there is to operate it?

Salesman

Yes, the speed and direction is controlled with this one speed control lever.

Customer

What is this lever just below the seat?

Salesman

The lever below the seat is the range selector lever for the transaxle. You select the range for the task being performed. Most mowing is done in D₁, while tilling or heavy snow blowing would use L or LL. D₂ is for high speed mowing and transporting.

Customer

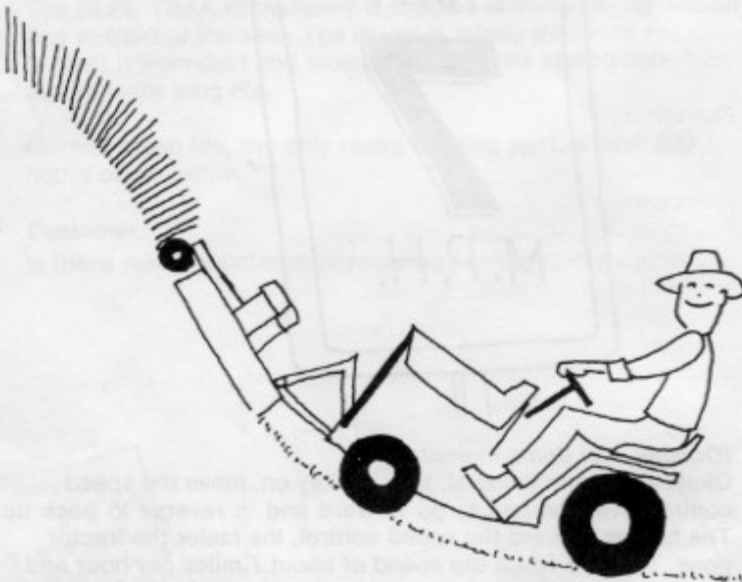
Do I have to change the range lever all the time when I am mowing my lawn?

Salesman

Under normal mowing conditions, you will not have to change the range selector. You will leave the lever in D₁ most of the time. If you have a really hilly section of lawn, you may want to shift to L for higher power at less drain on the power pack. Range selection is made when the tractor is stopped. On new units shifting of the range selector is easiest accomplished by momentarily moving the speed control lever to turn the motor on and off with the selector in N and, as the motor stops, turning the range selector can be easily moved to the desired range (LL, L, D₁, or D₂). (*Demonstrate.*)

Customer

How do I know when I should shift the range selector to a lower range?



Salesman

If you are mowing your level lawn in the D₁ range and you start to mow a hilly part, you may see the power use gage moving into the red area. If this gage continues to read in the high red area, then change the range selector to the next lowest range. From D₁ that would be to L (*Demonstrate.*)

Customer

The "P.T.O." switch turns the mower on?

Salesman

Yes, just turn the P.T.O. switch to "on" and the mower will operate. If you leave the seat or turn the key off and on, just turn the P.T.O. off and on again to restart.

Customer

What does this word "Drive" mean on the speed control? (E15)

Salesman

The ELEC-TRAK motor produces maximum torque and efficiency when the speed control is in the "Drive" position. (On the E12—Full Forward, on the E20 when the cruise control light is on.)

Customer

Should you always operate in "Drive?"

Salesman

When you want maximum range or torque, then operate in "Drive." For continuous mowing, it is best to be in the "Drive" position or above.

Customer

Did you say this pedal on the left is the brake?

Salesman

Yes, when you depress the brake, you will stop the tractor. When the brake pedal reaches the bottom position, it will shut off the ELEC-TRAK drive motor.

Customer

What do you mean electric braking?

Salesman

The ELEC-TRAK motor will act as a generator and hold the tractor speed down when going downhill if the speed control lever is left in a forward position.

Customer

What would happen if I put the speed control in neutral when I come down the hill?

Salesman

You disengage the motor when you move the speed control to neutral and only the gear train is in the drive system. To regain motor braking, you must use the foot brake, stop the tractor, then start the speed control forward and leave it in a forward speed position. To be sure you always have electric braking, you should leave the selector control in a forward speed position before you start down the hill. (E20, foot accelerator depressed.)

Customer

You said this was the E15 ELEC-TRAK tractor. Is this different than the E12S?

Salesman

The E12S is a special production run and has the same motor as the E15. When the E12 is available, it will have the normal, smaller horsepower motor.

Customer

What is the price of the three models?

Salesman

These units are competitively priced with like-rated gasoline tractors.

Customer

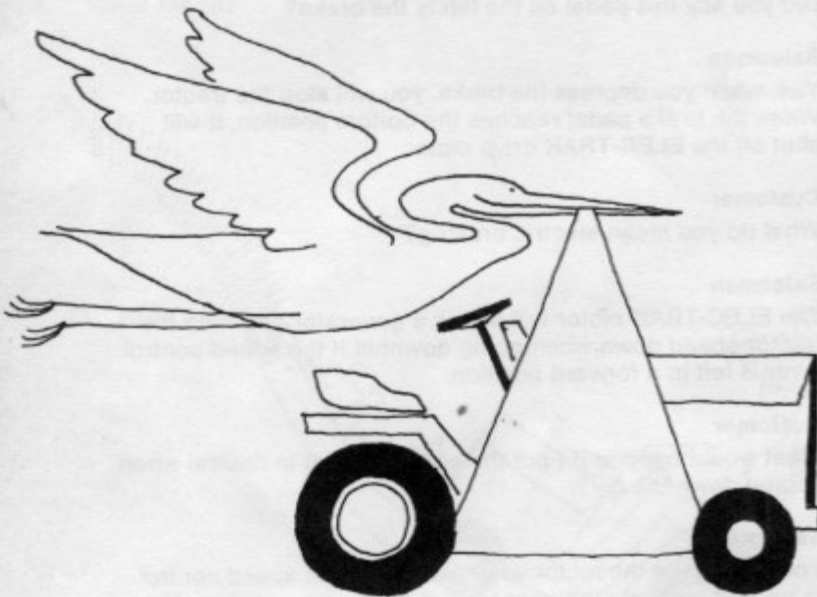
Does that price include the 42" mower?

Salesman

The 42" rotary mower is priced at \$_____ and would be the same price for any model. It features separate motor drive on each blade and uses no belts.

Customer

I would like to use it this weekend, can you deliver it any night this week?



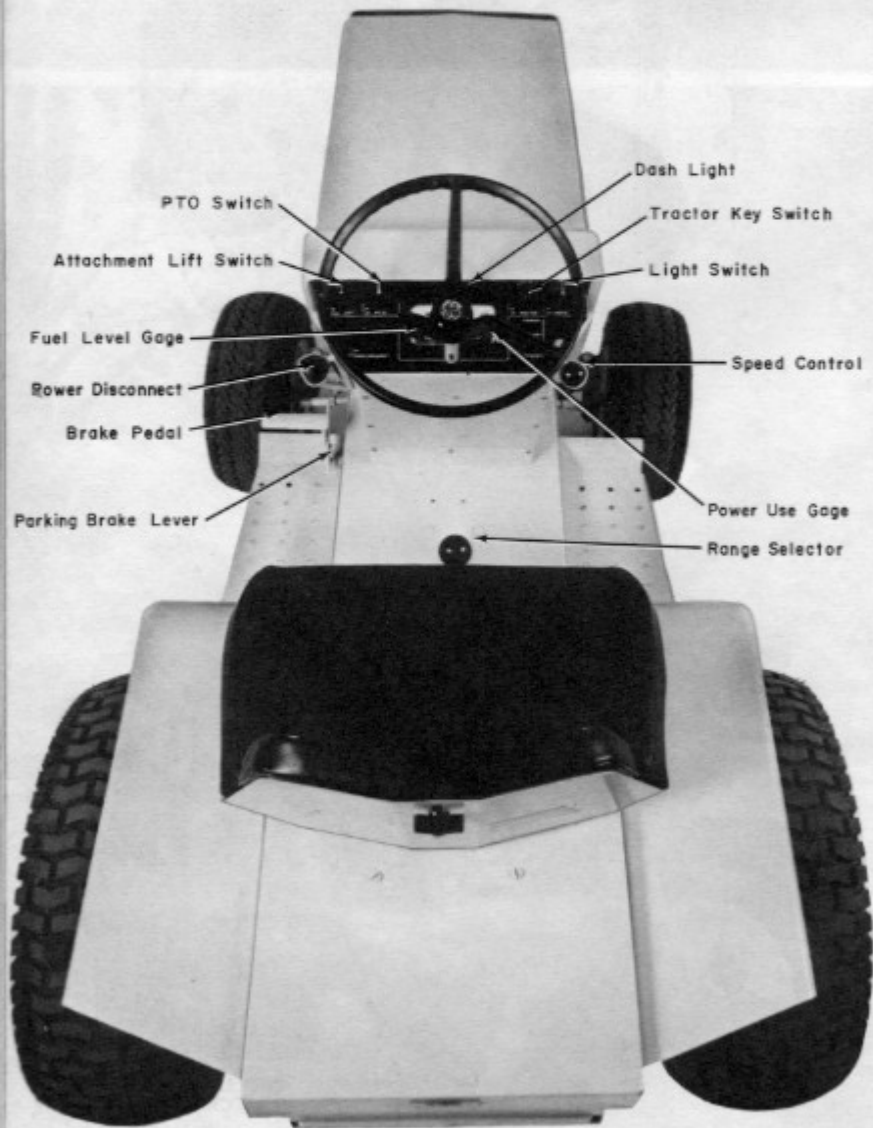
Salesman

Yes, I can deliver your ELEC-TRAK tractor tomorrow evening. Please review this ELEC-TRAK tractor Use and Care Manual and if you have any questions, write them on the enclosed piece of paper. When I come out tomorrow, I will answer any of your questions and go over the operation of the ELEC-TRAK tractor with you again.



Electric Tractor Jargon

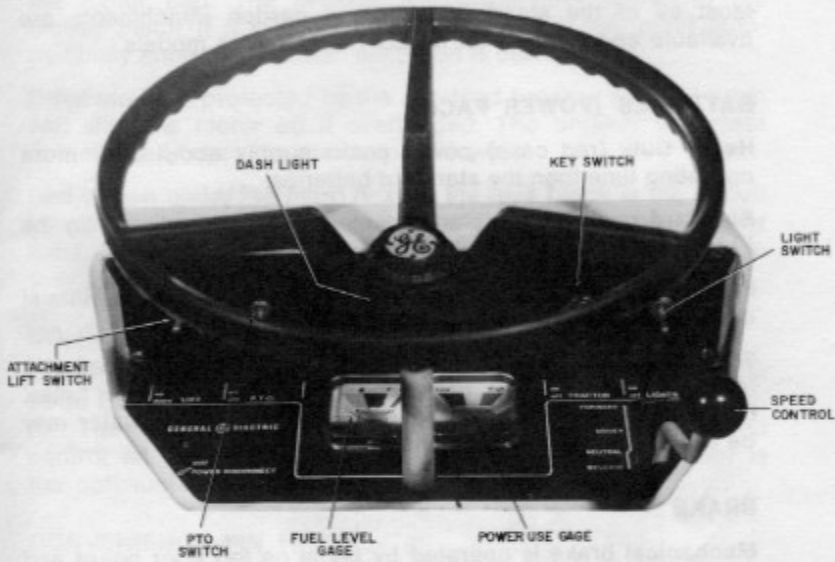
Tractor Overview



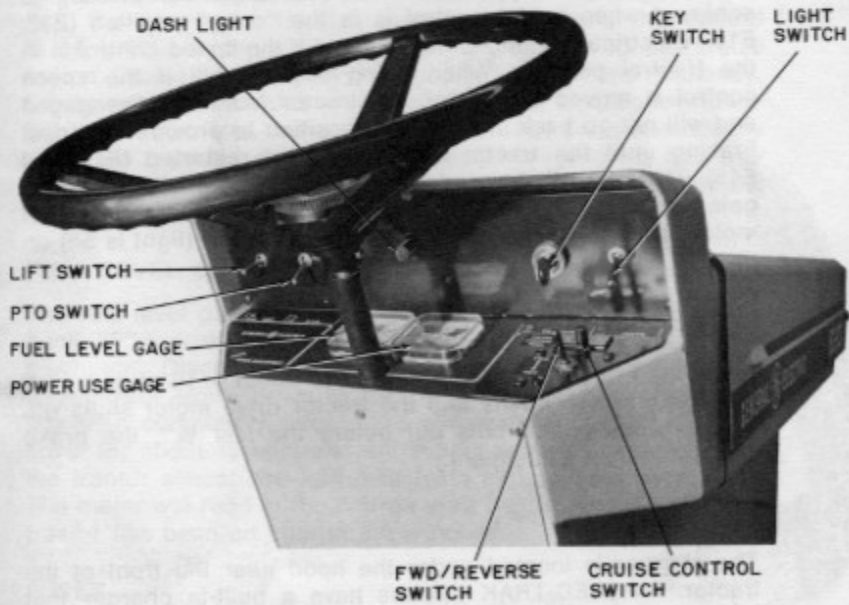
E15

Control Panels

E12 and E15



E20



ACCESSORY/TOOL OUTLET

The accessory outlet is the small, two prong, twist lock outlet located on the left side of the tractor. This outlet is for the ELEC-TRAK tractor hand tools, chain saw, powered sweeper, or other small accessory motors.

ATTACHMENTS

Most all of the standard lawn and garden attachments are available and fit all of the ELEC-TRAK tractor models.

BATTERIES (POWER PACK)

Heavy Duty (red case) power packs supply about 30% more operating time than the standard batteries.

Standard power pack (black case)—performance listed on the ELEC-TRAK tractor fact sheet.

Power Pack Warranty. Refer to Owner's Use and Care Manual or to Franchise Manual.

Water Level in the power pack cells should be maintained at a level approximately $\frac{1}{4}$ " below the lower ring in the filler holes. Distilled water is best, of course, but any drinkable water may be used for batteries, except high mineral water.

BRAKE

Mechanical brake is operated by pedal on left floor board and can be locked on by using the parking brake lever attached to the brake pedal. The power to the drive motor is shut off when the brake is fully depressed to prevent the high torque of the drive motor from overriding the brake.

Electrical braking is achieved when speed control is in any one of the speed positions. The best electrical braking is achieved when speed control is in the "drive" position (E12, E15). Electrical braking is not in effect if the speed control is in the Neutral position. When going down a hill if the speed control is moved to neutral, the tractor motor is disengaged and will not go back into a speed position to provide electrical braking until the tractor is stopped and restarted (E12 and E15). The E20 will have electric braking under all conditions going down a hill, provided the accelerator is depressed. Best motor braking is achieved in the cruise position (light is on) on the E20.

BRAKE SWITCH

When the brake pedal is depressed to about 9/10 of its travel, the brake switch opens and the tractor drive motor shuts off. (If the brake switch cuts out before the last $\frac{1}{4}$ ", the brake switch requires adjustment.)

CHARGER

The charger is located under the hood near the front of the tractor. All ELEC-TRAK tractors have a built-in charger that plugs into a standard household outlet. Ninety-five per cent (95%) recharge takes about five hours. With the charger set

to 1-2 year mark, it will run about 18 hours (to assure cell equalization) before it automatically shuts off. The recharge rate is about 20% per hour. The power disconnect *must be engaged* in order to charge the batteries.

CIRCUIT BREAKERS

Mower motor has an automatic circuit breaker located under the motor cap. The breaker will disconnect power to the mower motor if it is overloaded. The breaker will reset automatically once the overload condition is corrected.

Drive motor is protected by the overload breaker and will open and shut the motor off if overloaded. The breaker will reset automatically once the motor cools down.

Red button under the hood next to the fuse block is the circuit breaker for the accessory outlet and the charger. This breaker must be reset manually (push in) if it trips out due to an overload from improper charging or use of the hand tools.

CONTROL OPERATION

Operation in the drive position marked on the speed control of an E15 provides the best power and range for the E15 tractor. The optimum drive position for an E12 is with the speed control all the way forward. The cruise position (light on) is the optimum drive position for the E20.

CONVENIENCE PIN HITCH

Standard on all 1971 and later tractors. The convenience hitch is an extension bracket that bolts to rear pin hitch point. This extension allows for easy hook-up of trailing attachments.

CRUISE CONTROL

Once the foot accelerator on the E20 is in the mid-speed position, the cruise control light comes on allowing the control to be locked in the cruise position by depressing the cruise button. Cruise position provides maximum power and efficiency. Cruise position provides maximum electrical braking for down-hill operation. The cruise control will shut off automatically when the operator moves the accelerator beyond the half way point or turns the key off or switches to reverse or applies the brake.

FUEL LEVEL GAGE

The fuel level gage indicates quantity of charge in the power pack. "F" indicates a full charge and "E" indicates a complete discharge. Discharge is also indicated when the mower or snowblower slows down to the point of poor performance or power. A completely discharged power pack, if allowed to recover for about 15 minutes, will supply enough power to drive the tractor almost one half mile (with attachments turned off). The meter will read in the charge area (white section) after the tractor has been on charge a few hours.

FUSES

All fuses are located under the hood on the fuse block. Fuses are for the light, lift and control circuits.

HORN

An electric horn kit is available that mounts underneath the front hood. The horn button mounts on the right side of the control panel.

HORSEPOWER

The ELEC-TRAK tractors provide more peak power than most equivalent horsepower gasoline tractors. The E12 is comparable to 12 hp, the E15 to 14 hp, and the E20 to 16-18 hp gasoline tractors.

HYDROMETER

A hydrometer is a float level instrument for determining the specific gravity (charge condition) of the battery fluid.

INVERTER

The inverter converts 36 volts D.C. ELEC-TRAK tractor power to 110 volts A.C. The inverter is an optional item and mounts underneath the hood and has a maximum capacity of 1000 watts at 110 volts A.C.

IMPLEMENT BRACKET

The implement bracket mounts on front of tractor and is required when mounting a dozer blade, snow blower, home-owner lift, and other front lift attachments. It *is not* required for the mower.

LIFT

Front electric lift is standard on all units and will raise or lower all attachments by activating the lift switch.

Rear electric heavy duty lift is an optional mechanical device on all units, but is required for the rototiller.

Rear manual lift is an optional mechanical device on all units that stabs into the rear of the tractor for lifting of attachments (moldboard plow, disk harrow, etc.).

LIFT SWITCH

The lift switch is located on the left side of the control panel and allows for easy operation of the front lift.

LIFT STRAP

The lift strap is a nylon webbing used on both front and rear electric lifts to raise and lower attachments (be sure it is threaded properly for the attachment you are using).

LIGHTS

The front head lights and dash light are operated by the light switch located on the control panel. An optional tail light also is operated by the light switch, when installed.

MAINTENANCE

Normal maintenance requires checking the battery level once a month. Any drinkable water except high mineral water can be used for the batteries. Grease the front steering assembly every 6-12 months and check the transaxle fluid level once a year.

MOWER (ROTARY)

Rotary mower is a three spindle 42" width of cut, front mounted mower. Each blade is driven by its own motor. The mower plugs into the P.T.O. outlet for power. The mower is convertible to either side or rear discharge.

Rear discharge mower is best suited for well groomed lawns or swept lawns and it offers safety advantages with all discharge down and under the tractor.

Side discharge mower is best suited for long limp or wet grass and leaving the clippings on the lawn. The large space between the mower front and the blades without front baffling, and the rear baffle vacuum action for a second cutting, combined with the broad scattering of the discharge, give the cleanest lawn appearance.

Mower housing cleaning and **blade sharpening** are easily accomplished by disconnecting the mower power cord and lifting the mower housing upright by using the front handle.

MOWER GUIDE BAR

The stabilizer bar stabs into the front of the tractor and is used in conjunction with the front mounted mower.

OWNER'S MANUAL

The Owner's Use and Care Manual is included with every ELEC-TRAK tractor. This manual must be read and understood by the new owner before operating or maintaining the tractor.

P.T.O.

The power take off (P.T.O.) outlet is the large three prong outlet located on the left side of the ELEC-TRAK tractor. All of the large motor operated attachments plug into this outlet.

P.T.O. SWITCH

The power take off (P.T.O.) switch is located on the left side of the control panel. When the P.T.O. switch is turned on, the power is supplied to the attachment plugged into the P.T.O. outlet. If power is interrupted by the seat switch or shutting off the key or power disconnect, the P.T.O. switch must be turned off, then on again to resume operation. (Return to off-safety circuit.)

POWER DISCONNECT

The power disconnect is located on the left side of the control panel and when disengaged, all power is removed from the tractor electrical components except the lights. *The disconnect must be engaged in order to charge the power pack.*

POWER PACK

The power pack consists of six, 6-volt units, standard or heavy duty, weighing about 60 pounds each.

POWER USE GAGE

The power use gage indicates power drawn from the power pack. For normal operation the meter should read in green or yellow area except for heavy snow removal or ground breaking. Operation in the red area is not recommended for long duration.

POWERED ATTACHMENTS

Each powered attachment has an independent motor which draws its power separately from the power pack, thus allowing full power to the attachment and the tractor at all times.

PROGRAMMED STARTING

An automatic start sequence is incorporated in the E12 and E15 speed control circuits to prevent too rapid starts due to pushing the hand lever all the way forward on start. The E20 control has a more sensitive foot pedal control which operates much like the accelerator in a car. Power is supplied as demanded from the foot pressure. Lifting the foot removes all drive motor power. The E12 will not allow full power to engage if the load is too high for the range (D₁, D₂, etc.) selected. If the tractor does not move as normal upon starting, a lower range must be selected.

QUIETNESS

As opposed to gasoline engine-powered tractors, the quietness of the ELEC-TRAK tractor encourages use during the early morning and in the cool of the evening. It also eliminates disturbances around homes, hospitals, schools and nursing homes.

RANGE SELECTOR

The range selector handle is located in front of the seat area and is used to select the four transaxle ranges LL, L, D₁ & D₂. The LL range is the highest torque, lowest speed. The D₂ range is the highest speed, lowest torque position.

Shifting of a new tractor is best accomplished by putting the range selector in neutral and then moving the speed control to momentarily start the tractor drive motor. When the speed control is back to neutral (off) and the motor almost stops, the range selector will move easily into the desired range (LL, L, D₁ or D₂).

RETURN TO OFF SAFETY CIRCUIT

The speed control (hand or foot) must be returned to the neutral position in order to restart the tractor if the operator gets off seat, applies brake fully, or turns the key off. Also, if P.T.O. is on, it must be turned off and back on in order to operate an attachment. This system is designed to prevent unintentional starting of either the tractors or the attachments.

SEAT SWITCH

The seat switch is located underneath the seat deck. (Rear power pack cover.) The operator must be on the seat before the tractor or attachments will operate.

SLEEVE HITCH

The sleeve hitch connects to the rear of the tractor and is used to pull all standard types of garden attachments (moldboard plow, disk harrow, etc.) having a sleeve type hitch. The sleeve hitch is used in conjunction with a manual or electric lift to raise the attachment.

SPEED CONTROL

All forward and reverse operation, and control of speed on an E12 and E15 are accomplished with the single control lever located on the right side of the control panel. On the E20 a foot accelerator controls all speeds, while forward and reverse directions are accomplished by a switch on the control panel.

TRACTION

Overall design and power pack weight provides maximum weight distribution on the rear axle for optimum traction.

TRACTOR MOTOR

The tractor drive motor is a totally enclosed 36-volt D.C. sealed bearing motor. The motor drives the transaxle by a matched set of direct coupled drive belts (E15, E20). The E12 uses one belt.

TURNING

The ELEC-TRAK has a 39" wheel base and a 47" turning radius for maximum maneuverability.

WARRANTY

Refer to Franchise Manual or Owner's Use and Care Manual.

WELDER

The welder is a three heat portable unit that plugs into the P.T.O. outlet. The welder will handle up to $\frac{3}{8}$ " welding rod and will weld steel plate up to $\frac{1}{2}$ " thick.

WIDE TRACK

By removing the rear wheels and reversing them 180° from their shipping position, a 6" wider rear track is obtained. This wider rear track gives better stability on side hill operation.

What Every New Owner Should Know

Speed Control Operation

- **E20**—Foot pedal accelerator control and cruise control in four speed ranges.
 - **E15**—Seven forward speeds in four speed ranges. Programmed start if lever pushed to full speed.
 - **E12**—Three forward speeds in four speed ranges and motor protection preventing full power if range is too high.
 - Three reverse speeds in each range.
 - Most efficient operation:
 - (E12) full forward
 - (E15) drive
 - (E20) cruise control
 - Programmed start (E15)
 - Return to neutral
-

Range Selector Shifting

- Four Ranges, D₂, D₁, L, LL
 - D₂ top speed
 - LL low speed maximum torque
 - Shifting technique
-

Control Panel

- Lights, PTO, and lift switch
 - Fuel level meter
 - Power use meter
-

Safety Interlocks

- Seat switch
 - Mower return to off
 - Speed/control
 - Brake
-

Charger

- Dial setting at 1–2 years
- Power disconnect engaged
- (Live) 110–120 volts AC outlet 15 amps or more
- Reset breaker (red button)

Front Lift Strap

- Proper Threading
-

PTO and Accessory Outlet

Mower

- Blade sharpening
 - Cleaning
 - Installation and removal
-

Wash Tractor

- Wax to preserve finish
-

Tractor Use

- Hilly area—rear tires outboard position
 - Reduce air pressure in tires
-

General Maintenance

- Add water to batteries only after charging
 - Five grease fittings (front axle and wheels)
 - Three fuses (lights, lift, control)
 - Check list Operator's Manual
-

ELEC-TRAK Operator's Manual

Give to purchaser with blank sheet for questions

- Review with dealer upon delivery
-

**REMEMBER, SIGN DEALER DELIVERY FORM AND SEND
IN WARRANTY REGISTRATION**

Tractor Facts

PERFORMANCE

Mowing: (on one charge)

- 60-inch 3 gang reel mower 3 to 5 acres
 - 42-inch rotary mower* 2.5 to 3.5 acres
- * (At approximately one acre per hour)

Hauling/Lawn Sweeping:

- 300 lb. load in 2 wheel cart 5-6 hours @ 3-4 mph

Snow Blowing: (0-30°F)

- 42-inch single stage
 - Light snow (2-8 inches) up to 6-10 driveways
 - Medium snow (9-17 inches) up to 3-5 driveways
 - Heavy snow (18-24 inches) up to 2-3 driveways

Tilling:

- Ground breaking and pulverizing:
 - @ 4" depth 2 to 2.3 hrs. up to 20,000 sq. ft.
 - @ 6" depth 1 to 1.2 hrs. up to 10,000 sq. ft.

Portable Power Tools:

- Power drill, hedge trimmer, lawn edger, cultivator 15 to 20 hours
- Chain saw 4 to 6 hours

BUILT-IN BATTERY RECHARGE: (from standard 110V, 15 amp household outlet)

- Complete recharge (95%) Approx 5 hours*
 - 75% recharge Approx. 3½ hours
 - 50% recharge Approx. 2 hours
- *(Charger runs longer for full battery equalization)

MODELS:

Model	Weight	Width & Length	Peak hp exceeds	Max. Speed
E12	795	35"x69"	12 hp	6 mph
E15	850	36"x69"	14 hp	7 mph
E20	895	42"x69"	16 hp	9 mph



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Lawn & Garden Equipment
SPRING HOUSE, PA. 19477
Mitchell 6-0129

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GENERAL  ELECTRIC